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THESIS ABSTRACT

In Part One, the nature and development of the type of expressive English writing found in many junior and some secondary schools, frequently called 'creative writing', is examined. Views and definitions of creative writing, the psychological foundations behind child-centred school activities, and ways of helping the development of creative writing, are discussed within the context of personal growth rather than mere development of a skill. Current psychological opinion and experiment on the nature of creative behaviour in relation to general intellectual ability is considered, and there are reviews of anecdotal as well as more scientific approaches to problems of developing and marking English writing.

Two investigations are reported in Part Two. The first is into the development of creative writing ability. Writing was sampled from the 1965 intake of five secondary schools at the beginning, middle and end of the children's first two years. The work of random samples of 10 children from each school was assessed by a team of five judges to form a multiple impression mark for each of the 50 children. A statistically significant improvement over the first two individual years, and a highly significant improvement over the first two years was found. However, differences in the quality of writing between 4 of the 5 school samples were found to be statistically insignificant after analyses of co-variance over any of the three periods. The girls' grammar sample had a significant superiority in a first year and the two-year period analyses over both the other grammar samples and the two secondary modern samples. Quantitative developments are also investigated.

The second investigation examines the effect of varied and strong sensory stimulation, and the absence of it, on the writing of three groups, each consisting of 24 11+ secondary modern boys who were taught in different ways, samples of writing being drawn at the beginning and end of a 12-week period. A statistically significant difference was found between Groups III and II: the experimental Group III achieving the best results, and the sensorily 'deprived' but more intelligent Group I doing better than the third Group II, which had been less adequately stimulated than Group III.

Recommendations for further research are made.

THE CREATIVE ELEMENT IN SECONDARY SCHOOL CHILDREN'S WRITING

JOHN CHARLES CONDER

THESIS SUBMITTED FOR THE DEGREE OF MASTER OF EDUCATION, UNIVERSITY OF DURHAM 1968

The Search.

They wander and wander over the sand,
Just to have hold of the little childs hand.
They didnt know who was going to be there,
Girl or boy, Dark or fair;
The kings found the baby lying in the hay,
And they called this morn,
Christmas Day.

Written by a boy, aged 10.
Christmas, 1966.

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The Heads and teachers of the five English Departments co-operating;

And lastly, but for obvious reasons, not the least, to —

The present five judges, and Mr. Len Davies, teacher and 'judge 4a', who died in the summer of 1967.

1

INTRODUCTION

This thesis examines first the type of expressive English writing found in many junior and some secondary schools, and frequently called 'creative writing', and reviews the present theoretical and experimental standing of psychological work on 'creativity' and its significance for creative writing in schools. Secondly, it gives an account of two investigations concerned with secondary school children's creative writing. The first investigation is concerned with finding out from representative samples of children's writing drawn from five secondary schools in a West Riding mining area whether any significant trend in writing is discernible during the children's progress through the first two years in their schools. The second, and subsidiary, investigation tests the hypothesis that exposure to a strong and varied sensory stimulation and an eight-week programme of creative writing and thinking is likely to result in a significant improvement in the creative writing of first year secondary modern boys.

Since the first essays of the children in the developmental investigation covering the first two years of their secondary school lives were written within three weeks of entry into secondary school and after a six weeks' holiday period, one can consider the first sample as having been written by very unsettled junior children who have been compelled to draw upon their junior school experience of English writing.

The limitations of time imposed on work intended to form part of a thesis has confined the developmental part to a two-year view of writing, though it is hoped to continue drawing annual samples to complete a five

and possibly six-year survey of the entire English writing growth of the children in the samples.

Professor Niblett has recently pointed[1] to the need for universities and their students in higher education to become more concerned with contemporary issues, and about "the direction of progress of the country, about progress in human life," rather than in merely training the "professionals and the technologists to do whatever a society seems to be asking for in a particular decade." This investigation has come about partly through a desire to attempt a study that might have some practical future value, and partly because of the writer's involvement in some of the recent developments in 'personal' or 'creative' writing, (used in schools to mean writing that is original, inventive, containing imagination - though not unreal fantasy usually, in short, a child's personal written creation). In an anthology of such writing - 'The Excitement of Writing', - the proportion of primary to secondary schools in the West Riding that had been asked to include illustrations of creative writing from their schools in this book is itself possibly significant of a countrywide rather than a county trend: two infant schools, ten junior, two secondary modern and two grammar schools. The high proportion of primary schools is commented on by the Chief Education Officer in a short preface. "The book is in the main concerned with work from Junior Schools, the age-group which has made the greatest progress in recent years in this County."[2]

Concern, unease, and outright discontent have often been voiced about not only the formal, analytical, syllabus-orientated type of work seen in secondary schools, but more importantly, what is felt to be the result of this type of utilitarian approach. The general standard of the

[1]Niblett, W.R. (1967) 'Higher Education: Home and Away.' 'The Times Educational Supplement,' 15 Sep 67.
[2]Clegg, A.B. (1964) 'The Excitement of Writing', p.xiv. Chatto and Windus.

school-leaver's spoken and written English is felt to be far too low. Further, on a plane above that of communication, there is a feeling that we must do something to prevent the apparent inhibition that lifetime workers in the field of art, such as Ehrenzweig (1967)[1], point to, attributing what they claim to see as the child's loss of its formerly free creative expression to an increasing development of its analytical faculties.

The Schools Council has stated that it desires to form a clear impression of development in English communication over the total period of school-life "to research into the development of writing ability," to find out what "pupils can achieve at the ages of 6, 9, 12, 15," and to explore the "advantages of 'experience centred' as distinct from 'language centred' teaching of composition,"[2] amongst other aspects of English work in schools. But "as far as the English programme is concerned, the most urgently needed surveys fall into two main categories: first, the present position of English in the schools and colleges, and secondly, the attitudes of all concerned towards teaching and learning English."[3]

As one might expect, trends of thought about the need to investigate thoroughly the present position of English in schools, coupled with such proposed school changes as the introduction of schools for children aged 9 - 13, have reinforced existing prejudices in the junior schools about the likely growth of English writing ability in the children who leave their schools at the age of 11.

[1]Ehrenzweig, A. (1967) 'The Hidden Order of Art.' Weidenfeld and Nicholson.
[2]Schools Council Working Paper No. 3. 'English: A programme for research and development in English teaching.' H.M.S.O. 1965.
[3]ibid, p.17.

While some of these views may be justified by reality, they are as subjective as the material of English writing upon which prognostications fall so freely. There are indeed many difficulties in the way of anyone who might wish to try to determine, in a more objective way, the existence of any trends in English writing standards of Secondary School children, as they pass through their schools. The difficulties seem to form themselves under three heads: difficulties of assessment and definition of creative writing; difficulties due to the variableness in the consistency and strength of creative performance to order; and difficulties in obtaining co-operation from schools who do not wish to participate in the study, and annual inconvenience to the schools who, from the time they are first approached, show the utmost willingness to help in the investigation at a time in the year when they are regularly busy with examinations.

The first of these difficulties is due mainly to the type of writing being considered - creative writing. It is often regarded as the touchstone that allows children's verbal fluency to develop in a written state. The Schools Council has said about English in general that "it is intrinsic to the subject that methods and materials must always be highly personal."[1] This is especially true of creative writing, where methods and results can be shredded by differing value judgements, and about the many aspects of creative writing where there are still considerable misgivings felt by those whose syllabus and inclinations cannot admit its possible validity. Agreeing on the criteria of what is generally accepted to be a good piece of creative English writing by any one child, let alone in relation to its fellows, has not been made easier by the now extensive American creativity literature which has burgeoned forth

[1]Schools Council Working Paper No.3 (1965) p.19.

with many differing views on what creativity means. Indeed, though the concept of a creative person can be useful provided its limitations are recognised and accepted, the whole ground of the debate on creativity is challengeable; and, as will be seen in chapter 3 below, evidence against the likelihood of the postulated existence of a separate dimension of creative ability, apart from conventionally-held views on general intelligence, is extremely strong.

Then, too, there is the question of fundamental importance for studies involving assessment, namely, what reliance can be placed on any isolated samples of children's writing that might set out to be imaginative, but which, it can be argued, are likely to be so beset by undesired internal and external influences as to be completely unrepresentative pieces of work.

Even difficulties arising from educational controversy are liable to thrust themselves up, no matter how diplomatically one may step, and deserve mention here in order to emphasise the delicacy necessary when educational research involves drawing work from different types of school. The headmasters of the first two grammar schools, containing boys, that were approached by the writer felt that they could not take part in the study. The headmaster of the first said he was very suspicious of jargon, wanted to know about the methods by which the original writing of his boys was going to be judged, and, turning to "very real problems of a more practical kind", timetable planning arrangements precluded even discussing the writer's proposal "until I know far more about our own position next Autumn." The second grammar school headmaster was genuinely sorry he could not cooperate, but he felt sure there exist people eager to seize upon anything apparently detrimental to the grammar

school system, though he felt satisfied about this writer's "neutral objectivity" as far as the investigation was concerned. Additionally, he felt the criteria likely to be used in the assessments were so at variance with the theoretical operational criteria of his grammar school that it would be highly probable that any results from his school's contribution would be poor in contrast with those from "other types of secondary school."

Nevertheless, such difficulties have to be met and placed in perspective against the importance of attempting to examine as fully as one can, the growth in English oral and writing ability that is so basic to most intellectual development that takes place during school age. The Schools Council succinctly draws attention[1] to the threefold importance of English: as the means of communication; as an important contributing influence to personal development (through increasing aesthetic awareness and imaginative understanding of human actions and motives beyond the children's immediate circle); and, through a developing facility with the medium of words, to be able to fulfil a need to create. This last aspect can be added to by pointing to the sheer joy and remedial influence that an academically backward and socially deprived child experiences through 'succeeding' in an 'intellectual skill' such as writing, and being given public recognition for it.

To illustrate this last point, the following piece of writing was written by just such a person - a ten year-old girl with a Schonell reading age of 7.1 years, who could so easily come to be regarded as 'hopelessly backward' in the tool skills of reading, writing and number work, and socially undesirable from the point of view of clothes, family background and indeed the whole non-school environment in which she normally moves about. A one-day

[1]Schools Council. (1965) ibid p. iii.

school trip to 'the Strid', a place near Bolton Abbey in the Yorkshire Dales where the young River Wharfe is squeezed between wooded, narrowing rocky banks,stimulated this writing on the next day at school. To be able to read it, the writer had to have the girl reading most of it aloud while he spelled again a majority of illegible words. Apart from any remedial effect on the girl's school attitudes, this attention and public praise for a vigorous piece of writing - formerly concealed under unintelligible spelling - had a beneficial effect on the girl's personality around the school, and on her English work in particular. Her spelling improved throughout the following year, probably because of her increased enjoyment of writing and an awareness of the need to put fine words and ideas in a form that others could recognise. The combination of poor spelling and an inhibiting and pointless correction of it in a boring and repetitive way were carefully kept out of the girl's experience. Thus, when motivated, her words were able to flow in an unrestricted way.

The Strid.

> The Strid was thundering with anger and horror, ready to crush people to the moss rocks. the foam bubble up viciously as though he has just enjoyed crushing some persons bones. and when the creamy foam dose bubble up it seems holey, as though its been whip to a tastey crem. the swiseld water swhiseld round to make gaint holes in the ground. Just a little slip youll see all that will happen to me
>
> A girl, aged 10.

There are many who claim that such a flow as this girl now regularly offers, and (perhaps even worse) the more complex and highly creative fluency of children of above average

intelligence, will both shrivel up two or three years later. To determine whether there is any truth in this is really the main subject of this thesis.

PART ONE

CREATIVE WRITING: SURVEY OF PRACTICAL, THEORETICAL AND EXPERIMENTAL WORK.

THE NATURE OF CREATIVE WRITING AND ITS STIMULATION AMONGST CHILDREN AGED 9 - 14.

(a)Professional Division of Opinion about Creative Writing.

A full consideration of the differing views about the intellectual abilities or ability labelled by the word 'creativity' is of importance in any study of writing that is of a creative type, and is offered in chapter 3. However, an even prior place must be given to an examination of the type of writing that has become such a focal point of attention amongst those concerned with English work in Schools. The examples of children's work used to illustrate parts of this chapter are mainly from upper junior school children. The reasons for this are that the present writer knows not only the writers, the particular stimulus or environment at the time the scripts were written, and that the work has minimal teacher correction, but secondly that these scripts illustrate points common to writers of the lower secondary age range. Any advance in age over the ages represented by these examples ought, in theory, to result in more maturely developed writing.

The first issue of the new Department of Education and Science journal 'Trends in Education' contained seven articles, of which only one dealt with a specific area of the curriculum. This one article considered English writing, and especially that of secondary children. In it, Wilkinson (1966) set himself the task of reviewing "the heightened interest in children's writing." For teachers justifiably nervous of gimmickry and 'educational' bandwaggon movements of the moment, he attempts to shed light on the "unreal destinctions and false antitheses" which are apparent in the English teaching world's "irrational

division ... the closing of which is of primary importance to the health and liveliness of the subject."[1]

Ignorance of what is usually meant by 'creative writing' plus an entrenchment of professional pride with increasing school experience become manifest on the one hand. On the other, extravagance in depth and breadth of claims combined sometimes with strong verbal attacks on what are considered to be 'unenlightened' old-fashioned users of English textbooks, have guaranteed a lack of understanding and gathering suspicion. Further, the use of the word 'creative' with its overtones of preciousness and its cliche vagueness, so convenient for cloaking almost anything one might wish with a safety from uncomfortable scrutiny, has justifiably made many clear-thinking teachers of English uneasy at the very least.

(b)Creativity: A Distinction between Lower Creative Behaviour and Higher Creative Behaviour.

At the outset then, it is imperative to present a definition of the senses in which the term 'creative' is used in this thesis, and particularly its application as a name for a type of writing.

Many people would accept the simple statement that 'creativity involves making something.' The difficulty of obtaining agreement on a further and more precise definition of 'making something' still remains. Whether the creation be on a purely intellectual level or whether it results in observable expressive behaviour as well, there are those who would say creation takes place in any daily activity in which a difficulty or problem is sensed and wrestled with until a constructive solution (i.e. one that is acceptable by at least a fairly sizable body of informed opinion as being constructive and utilitarian) is offered. As Torrance (1965) says, "Throughout the process

[1]Wilkinson,E.(1966) 'At First Hand' in 'Trends in Education', No. 1, January, 1966. H.M.S.O.

there is an element of responding constructively to existing or new solutions, rather than merely adapting to them. Such a definition places creativity in the realm of daily living and does not reserve it for etherèal and rarely achieved heights of creation."[1]

This initial condition of the mind and its subsequent process is a prerequisite of creative thinking, but Torrance's definition also fits the initial process involved in simple problem solving, and if creativity is to continue to be regarded as a meaningful concept, it must be regarded as being on a higher level than that of simple problem solution. There must be also an element of unique and personal recombination of conscious and usually partially unconscious thought structures, or schemata.

With this qualification in mind, one can amplify Torrance's definition by proceeding with Ghiselin (1963) to consider the resulting products of creative thought. He considers that in seeking a definition of creativity, "the crucial matter is the product, in itself and in relation to other products of the mind."[2] And in considering this product, one should acknowledge that it is possible to create products which are essentially reproductive in that they only further develop or extend an established body of meaning or experience. This creativity - the most common type - observable in a salesman who puts into his work a new combination of already-known elements through giving them a personal quality of his own, often seen in children who write about some personal experience in unique ways, may be termed, after Ghiselin, as a "lower secondary sort"[3] of creativity. Whether or not there is a

[1]Torrance, E.P.(1965), 'Rewarding Creative Behavior', p.8. Prentice Hall.
[2]Ghiselin, B.(1963), 'Scientific Creativity: Its Recognition and Development.' p.37. John Wiley and Sons.
[3]ibid p.42.

continuum in the sense that creative behaviour can be placed anywhere along it, depending on the quality of that behaviour, is open to dispute. And because creative activity has usually a strong personal basis, its products are not usually assessable by objective measurement. However, admitting this considerable difficulty, one can also point out that there are rare occasions of unanimity about some creative actions of the highest order, and that a continuum can be said to exist, joining creative behaviour that is clearly of an essentially reproductive nature with that behaviour, much further along the continuum, which is universally acknowledged to be a restructuring of a whole universe of meaning, by at least an expert body of opinion. This latter type of creativity is termed by Ghiselin as "the higher, primary sort", which is of a similar type to Einstein's relativity theory which "reconstellated a large area of understanding. Whatever its relation to the established universe of meaning, the higher sort of creative action invariably brings into the mind an unfamiliar light."[1]

(c) Creative Writing in Schools.

In this thesis, reference to creative writing usually implies a lower order kind of written creative expression. It is a lower secondary form of creativity in that most children compose combinations of words and phrases that may be unique and personally novel in their own experience, but their intellectual and aesthetical standards of expression are of a similar type to those found in the writing of children of a similar age.

As one would expect, these creations from the immature minds of most junior and secondary children are far below the standards of creative expression of either

[1] ibid pp. 42 and 43.

mature adult writers or the rare, highly gifted child writer or poet who shows unmistakeable promise of one day possessing a full, mature literary ability of its own.

Having said this, it is worth remembering that though most children's writing - in this writer's opinion - lies at the lower end of the 'creativity continuum', and usually compares poorly with adult literary creation, yet no detraction should be made from the absolute and intrinsic value of such children's writing to their personal and literary development.

One of the features common to most creative writing behaviour - apart from the essential condition of uniqueness of expression in an individual's experience at a conscious level - is the drawing upon immediate experience and imaginatively moving away from the initial stimulus. Robert Frost (1962), who wrote "The coupling (of poetic ideas) that moves you, stirs you, is the association of two things that you did not expect to see associated",[1] and who wrote the poem 'Stopping by Woods on a Snowy Evening', so much enjoyed by children sensitive to the power of snowflakes in a silent, awesome, wintry dusk, would probably have enjoyed the unconscious echoes of his own poem caught by a boy in the following words. They were written in response to a view, from the classroom window, of a wet and misty English summer day, five months after the boy had been touched by the spell of Frost's words. They are a good example of the way children can experience something, and move from it imaginatively, and unexpectedly, in ways impossible for a teacher to foresee.

[1]Robert Frost, (1962), 'Between Prose and Verse', in 'Atlantic Monthly', April, 1962.

"A world of snow mist and rain.
These misty woods are ever endless white;
Against raving blizards I do fight.
The closing mist crawles sleepily round me;
O I do wish that someone would find me.

The delecate thread of tearing snowflakes
Beat down on me in mighty volleys.
Now I go back onto the white washed
Road to watch the snowdrenched cars."

A Boy, aged 10.

This form of writing, called 'creative writing', whether in poetry or prose, is in contrast with other types of writing. Though the different 'types' can tend to merge, children usually maintain a distinction between creative writing and narrative description - the other form of writing chiefly found in schools - which is concerned with strictly factual recording. There may be a limited amount of imagery used to amplify but rarely to depart imaginatively from the subject. A third type of writing - fantasy writing - is not often used by junior children when left to choose what writing they wish to do, but after the age of 11 it becomes increasingly popular, and is used with a strong framework of realism around which the secondary school child can project itself away from the original stimulus. This type of mixed writing could, perhaps, be called 'creative-fantasy writing' to distinguish it from the type of writing usually termed fantasy writing which has little realism about it. The latter, normally resulting in straight-forward narrative with little imagery and expression of emotion, is still encouraged by teachers and educational research workers who, when they require 'fantasy writing' prod out titles usually involving dreams,

winning a large sum of money, or reminiscing on 'Dr. Who' lines about some form of inter-planetary activity.[1] Apart from boredom arising from the same recurring titles, children have no motivating opportunity for direct experience of any of these types of events, other than from secondary sources.

Thus, in this thesis, 'creative writing' is understood to refer to children's writing activities that are not in narrative form, not in factual description form, and that are not stimulated by titles remote from the child's personal experience and accordingly give neither opportunity for the child to identify itself with the stimulus, nor a chance to explore human relationships imaginatively. As a possible means of discovering some insight into the motivation of children in this age-group, both subject-matter and the child's treatment of it are to be examined as part of the main investigation, but at a later date.

As for the term 'creative writing' itself, this writer considers it to be the most suitable one of those in common usage, because it does simply distinguish the main stream of children's personal writing of a free, creative nature from narrative (reproductive), factual description (objective), or fantasy writing in which unreality plays so large a role and is too difficult for lower secondary school children to handle successfully. The advantages of the term outweigh the teaching world drawbacks mentioned by Wilkinson (1966) and outlined on pages 9 and 10 above, and also the disadvantages arising from the psychological use of the word 'creative' with its criticised connotation of a distinctive creative ability apart from general intellectual abilities.[2]

Mention has already been made on pages 13

[1] For example, as in Sampson, O.C.(1964) 'Written composition at 10 years as an aspect of linguistic development.' BJEP 34.2, pp.143 - 150.

2 Reviewed in chapter 3A below.

and 14 above of the part that direct sensory stimulation plays in the motivation of junior school creative writing. To a lesser extent, this role of sensory stimulation still exerts a strong influence in motivating the secondary school children in four of the schools contributing to the main investigation.[1] In the fifth school, this type of introductory stimulation prior to writing is regarded as essential for secondary modern boys, though the writer had evidence, in the course of his methods experiment in this school, for this not being the case in at least one class's work. Further, it is noticeable that although the opening words of a few of the scripts in the main investigation's samples are in some form of sensory response, most are not. This is despite the suggested procedure for drawing the samples[2], (as one of the schools' ordinary English periods), heavily emphasising the four main sensory modes of seeing, hearing, touching and smelling. This could possibly be a consequence of the creative writing being elicited by a secondary form of stimulation (only a title and a few introductory words), but sensory description does not seem to occur to the same extent, in these samples of secondary writing, as it does in that of junior children. However, this is mere subjective speculation.

The following samples from 11 and 12 year-old children were taken from the minority of the main investigation's scripts that contain the kind of sensory introduction often seen in creative writing.

> I woke up in a small room with only a small window near the ceiling. I looked about me. My eyes were still funny with being in the darkness....
>
> (Script T.5; a girl aged 11)

> The sun disappeared behind a large dark cloud at the seaside, and large drops of rain began to fall.

[1] According to the English Depts. of the 5 schools. [2] Appendix B.

A wind came from the north. A rather strong wind, I thought, and tossed the waves like a person tossing a feather.... (Script T.18; a girl aged 12)

The walls were slimy with green weed. I have no chance of escape if I leave the waterbucket. It is dangling on a thin nylon rope.... (Script U.43; a boy aged 12)

I was in a place where the buildings were all massive, tall, and it was the biggest town in the district. The aroma of fish and chips were coming from the round the corner where I was stood.... (Script U.13; a boy aged 11)

The criteria for assessing the creative writing[1] in both investigations - and suggested to the judges as offering a generalised but usefully focussed reference standard - include the three aspects of pictorial quality, creativeness and feeling for words, as amplfied below:

"(a)Pictorial Quality. Do you see, hear, feel the actuality of the experience presented?

(b)Creativeness. To what extent is what the writer has written new, original, individual?

(c)Feeling for Words. To what degree does the writer use words (i)strikingly and (ii)effectively?

In short, how interesting to you the reader is the piece of writing?"

Other criteria, less generalised and so specific as to intentionally leave no room for personal impression have been devised by Torrance and his co-workers at Minnesota. Based on a detailed six-point scale by Yamamoto (1961)[2] under the headings of Originality, Interest, (richness in expression, etc.), Organization, Sensitivity, Imagination, Psychological Insight, a detailed 23 point marking

[1]After criteria suggested by the London A.T.E. Composition Group prior to 1950, when O'Malley,R. reported it in 'The Use of English', and now in 'English in Education', ed. by Jackson and Thompson. (1962). Chatto and Windus.

[2]Yamamoto, K.(1961) 'Scoring Manual for Evaluating Imaginative Stories.' Bureau of Educational Research, Univ. of Minnesota.

scale has been devised by Torrance, Peterson and Davis (1963)[1] for determining who, in their view, are creative persons in a general sense rather than a literary one. However, as reported in chapter 3B below, Torrance, Peterson and Davis' scale was used by Goldman and Clarke (1967)[2] who obtained "a high level of reliability in judgements of creative writing .... for the individual and independent assessors, so long as the criteria for scoring are clearly understood." As implied by the opening sentence of the present paragraph, this writer does not feel that obtaining high reliability in marking through a prgressive narrowing down of the judges' attention to specific points in creative writing is more important than obtaining a set of poorly correlated results which, nevertheless, because they are subjective assessments, stand a better chance of more accurately identifying, through a summed five-fold subjective impression, creative writing. Just as a painting is more than a collection of constituent parts - colours and techniques - so creative writing is more than the sum of its components. Examination of these components can yield useful information about contributing influences upon the writer, as well as about the writer's intellectual abilities and possibly his personality: but this does not give the onlooker an integrated view of the artistic creation. Most of Torrance's aims are directed towards helping teachers, and other interested persons, to discover, if possible, from a child's school behaviour, its potential creative ability. For all these reasons, if Goldman and Clarke's conclusion means unambiguously what it says - "the Revised Originality Scale for Evaluating Creative Writing appears, therefore, to furnish a useful guide for the interpretation and scoring

[1]Torrance,E.P., Peterson,R.G. and Davis,D.J.(1963) 'Revised Originality Scale for Evaluating Creative Writing.' U. of Minn.
[2]Goldman,R.J. and Clarke,D.F.(1967). BJEP 37.1, pp.115-117.

of imaginative stories,"[1] this writer cannot agree with such a conclusion. Further research with comparative methods of marking might, indeed, validate the scale in a way that mere reliability of marking could never do, provided that the scale was compared with other criteria that permit a subjective measurement of some creative production such as writing.

(d) Teaching Method from a Psychological Understanding of Child Behaviour.

One of the difficulties in understanding what it is that the protagonists of creative writing are trying to say is that, often, they themselves have stumbled on a 'successful method', or re-iterate at second-hand what they have heard and seen elsewhere. Too often in education, highly vocal transplanters of methods and innovations do so without an understnading of either what is possibly happening psychologically within the child, or how - in the case of creative writing - general success with the skills to be acquired is dependent on a fluid educational experience that is permitted to be really adaptable, whenever feasible, to any strong, unexpected child interest. This involves a topical awareness of such interests which can be allowed to find expression in written work, and is far removed from mere reliance on 'a method'. By itself, some method dependence would soon lead to hollow activity, with no moderating and quickening principles behind it.

The great educators of history owed their insights into successful educational theory and method to keen observation of child development, combined with an awareness of individual and society needs. Today, the teacher can draw upon the work of such men as Plato, Aristotle, Cicero, Quintilian, Erasmus, Vives and Montaigne, and consider the present relevancy of their principles and theory. As regards

[1]Goldman and Clarke (1967) ibid p.116.

our knowledge of child development, modern psychological experiment and theory has contributed increasingly accurate insights into such fundamental aspects of child development as perception, maturation, learning and memory, and motivation. Further, our understanding of the varied views about intellectual abilities and personality can give invaluable help, additionally forcing an awareness of the need to consider children as separate and mentally unique individuals. Coupled with this, perhaps the second greatest service that psychology can perform to a teacher is to make that person aware of the almost infinite complexity of the individual's mental life, and so approach the child with more humility and less certainty of feeling that "the teacher knows best" in every learning situation. This is not an argument for abrogation of responsibility; rather it is an attempt to substantiate the need for the teaching of junior and lower secondary children to maintain a compromise between the motivation of the child by allowing it to pursue what it is interested in and ensuring that, as far as possible within this formidably difficult situation, the acquisition of the basic tool needs of the child takes place to equip it - appropriately to its abilities and aptitudes - for a 'full' life in society.

A teacher of English could, if he possesses intuition, sensitivity and a natural teaching ability in general, manage without any formally acquired understanding of psychology. But he would, it is suggested, benefit more than most other subject teachers (because the 'content' of English is mainly concerned with human situations) if he were acquainted with the work of the main systems of the science.

(e)Flexible and Topical Organisation within the Subject.

A fuller knowledge of psychology helps

teachers to make allowance for the emotional as well as the intellectual uniqueness of each child in relation to its chronologically-grouped fellows, with the probable independent development of the child's mental abilities such as verbal, numerical, and spatial, from one another to a slight degree (because of the influence of the child's 'general' intelligence) and from its chronological age to a marked degree.

And the logical extension of this divergence of ability, between and within children, has resulted in a re-organisation of teaching that has moved away from a maximum to a minimum of work directed towards one whole class unit. Individual and small group methods have been used for a considerable time in infant school work, and over the last decade, increasingly throughout junior schools. A recent B.B.C. Study Programme series on education[1] featured Dr. F. Hilliard and 'a geography teacher' of a large comprehensive school that was encouraging, amongst unstreamed pupils, an individual and group approach. Apart from the school being forced to develop classroom work on these lines if it was not going to neglect either end of a wide distribution of ability within one class, the obvious implication of the whole programme was this informal approach was a new phenomenon in a secondary school. This inference, if it was intended, is not wholly true, but it certainly is correct to say that most secondary schools - except possibly some of the new middle schools - still maintain individual subject organisation that regards the whole class as one homogeneous learning unit, which it never is, even in the highly streamed school where one is still left with a class of 30 - 35 children with widely differing mental strengths from one another, even though their I.Q.s may range narrowly.

[1]Broadcast in September, 1967.

As well as the advantages of increasing efficient learning from a lesson organisation that allows children to work on individual learning experiences, one can go one step further back and consider the value of good motivation of individual and groups of children. In this writer's experience, provided the timetable is flexible, the most 'brain leaping' experiences are the unexpected events which intrude without warning, or the experiences novel, which, whether from the past or in the future, are close at hand with a freshness that radiates from the individual, or group, or even the whole class. The immediate intruding experiences are hardly likely to occur propitiously in a timetable-ordained slot at the beginning of an 'English' period. For the junior or a middle school where a class-teacher is left growing with his class for the greater part of the curriculum, there is no problem, provided the teacher is alert for the less dramatic invasions. A sparrow on the wall outside the window, a cloud of such intense anger that it clearly gives a few minutes warning for activities to be switched, minds to be calmed, and senses to become razor-sharp, ready to flash back or fear with wonder at the crescendo that will shortly and surely rip his pupils' attention from his own pre-arranged activity. All such experiences demand alertness; a willingness to see that these incursions are more potentially valuable than anything he can have foreseen and arranged - and therefore he uses them; and lastly (and for any type of school, the pre-requisite condition) that there shall be time for the event to be followed by some form of expressive work - whether silence of wonder, oral or written. However, where there are bells they must be obeyed. And in the school or streams geared to academic progression, there is a rigorous

discipline that reaches its own hand across all. It is a difficult argument to follow, let alone accept, that attention to sentence construction and the parts and pieces of language, from 11 to 16 or 18 years of age, really will help a child's verbal development to progress in an immediately usable, fluent way. One first yearsform of one of the grammar schools in the investigation has, so it would appear from casual conversation with one of its members, apparently spent the first three weeks of English periods in a first term "doing subject and predicate". And apparently, too, 'subject and predicate' won the day despite the reported "unusual happenings" during those English periods of a mongrel dog seeking its mistress, a jet bomber shaking a vase off a ledge to shatter (doubtless with despondency at 'subject and predicate') on the floor, and of course, the tremendous excitement of the girls themselves, experiencing for the first time with relatively mature senses and powers of expression the possibly overwhelming novelty of their new (and last) school.

While there is at least some kind of defence for a secondary teacher doing this type of work with new academic children who are to be put through external examinations at all too short a distance, and missing such topical, strongly motivating opportunities for growth in writing ability,[1] this situation of lost experiences which offered valuable chances to motivate and excite children into written expression is not confined to the teaching of academic classes. A few years ago, an article was published in the 'Times Educational Supplement' written by a secondary modern male art teacher about the hazards of working out of doors with

[1]It is to be hoped that there was, at least, a sensitive awareness of, and reluctance to miss, these reliable sources of motivation.

a class of children. Amongst other incidents, he told how he had embarked with a class on drawing a tree. Everything was fine until a dog wandered up and, according to this teacher, wrecked the lesson. The present writer only remembers the article because the week previously he had been reading pre-selected poetry outside the school to his own class when precisely the same thing had happened; a wandering dog wheeled the children's eyes and attention away from the poem and after its own gambolling movements on the grass. But instead of trying to restrain the disorder negatively, the writer remembered - during a short hiatus of indecision - that the book being used contained a poem called 'Lone Dog'[1], and this would be suitable for reading the instant that the stimulation from the dog began to pall. As one might expect, the poem was enjoyed immensely.

Now there is nothing especially remarkable or difficult in accepting and using stronger intruding stimuli than those which we, as teachers, have carefully arranged to help children in some learning situation. And English is supremely adaptable in this way because the very interruptions, distractions and intrusions often are, or refer to, parts of life which have a strong emotional influence over children of all ages. Surely the only valid way to regard English in schools of any type is as the vehicle, the means, by which we can experience, re-live and explore more deeply and at leisure, those relevant and compulsively attractive events of life which hold meaning for children of varying ages and abilities. Then, English no longer remains an empty shell, regarded by teachers as an invaluable skill to be acquired, and sometimes even as

[1] 'Lone Dog' by Irene McLeod, in the anthology 'Happenings'. Harrap, 1964.

an end in itself, but regarded by children as just another subject to do with school.

Perhaps one of the reasons why teachers seem to be reluctant to temporarily abandon their own pre-arranged lesson in favour of something that child interest is obviously engaged upon is that most teachers strongly feel that their own planned activity already contains a considerable 'interest' element for children. This will be true on most occasions unless the teacher is guilty of self-delusion, but it cannot be emphasised too often that any motivation coming from the child is usually likely to result in a far more efficient learning than any learning coming from the child 'interest' element thought of and introduced by the teacher.

One really ought to go right back to the training source of some of this inflexibility, assuming that the pre-suppositions of a teacher's attention to topicality, child-centredness and child-originated work are correct ones. Teachers are trained to thoroughly prepare, and adhere to, lessons within a detailed scheme of work during their teaching practices. Clearly, there is an element of administrative convenience involved: subject lecturers must have an idea of when a student is possibly taking a lesson of interest to them. Further, adherence to a limited lesson aim is also under examination, and this adherence is possibly as much as many students can manage. However, what would happen to a student who is teacher enough to recognise some impromptu, vivid situation arising, and abandon the pre-arranged activity to follow the children's motivations instead? One can but speculate on the mental flexibility of an Education or English lecturer whose first action on entering a classroom is to examine the prepared lesson notes, while concurrently attempting to link them

with what is going on in the room. Probably most observers, one likes to think, would see that the student was bravely recognising an unexpected 'gift' situation and trying to develop it. If the student has assessed the likely motivation arising from a really child-exciting event, the result should be guaranteed, and praise ought to flow. And even if the whole inevitable artificiality of teaching practice, the inexperience of the student, and the fear of censure, all combine to prohibit a more flexible approach, the undesirable nature of these influences upon such informal approaches to the 'real' events that impinge themselves on children ought to be made clear to every student so as to make them aware of alternative possibilities to the teaching practice routine.

Most of the above argument and speculation presumed a universally experienced stimulation of sufficient intensity and of a suitable nature to motivate the whole class. While such events do occur as frequently as once or more times each day for the teacher who can recognise them, time must be allowed for more individual motivation arising from some personally-affecting event that the teacher will know nothing about. As remarked before, this is easily permitted in the primary and middle school type of class-teacher, flexible timetable situation in which there is variation of times of activities depending on the continued state of involvement in those activities. Integrated curricular work in the junior school is a peculiarly suitable setting for an individual child to be able to incorporate its more personal creative writing within the framework of the day. Such a system of working has been described elsewhere by the writer.[1]

In most secondary schools, an English period is set aside for work in the library, and this could be used,

[1]Conder, J.C. (1967) 'Experiences in Integrated Curricular Work, with some Team-Teaching Opportunities, in the Junior School.' A.T.C.D.E. Divinity Section Bulletin No.3, 1967. p.6.

and often is, to provide any additional stimulation that might be necessary for personal writing. If no library period appears on the timetable, or this period is sometimes required as a library activity period, each class should be allowed at least one other period a week for writing on a personally chosen topic.

The inexperienced teacher often wonders about the best courses to adopt with the verbally backward or socially unstable child who never seems able to feel strongly about anything for long, and consequently unsettles the children who want to write. Many factors are at issue here, but the short answer must rest with the teacher's ability or luck in finding some activity which will interest the poorly motivated roamers for long enough to allow the highly motivated writers to immerse themselves at least in the beginning of their own work. From then on, the teacher's prime role, while maintaining a suitable atmosphere for individual work to be pursued, should be to offer help to any who continue to be unsettled.

When a child does desire to write on some topic of its own choosing, and feels strongly enough to ask permission to do so - in the cases where the teacher's chosen topic is unsuitable for that child's suitable 'blend in' of its own thoughts - consent ought to be given. Unfortunately, not many secondary children have enough courage to make such a request, partly because of the uniform nature of the teacher always setting the lesson activity of every subject on the curriculum, and partly because, even if the child had courage, was motivated enough, and such an alternative did present itself, peer pressures towards conformity usually would prove too much. This is especially so when one remembers that the kind of child who is likely to want to write on subject-matter of

its own is frequently verbally sensitive because it is generally sensitive to the whole environment in a way that makes peer pressures assume fearful proportions. Thus, the onus rests almost completely on the secondary school English teacher to provide a suitable timetable space for the whole class.

The writing done by the 'backward' girl on 'the Strid' (pages 6, 7 and 8 above) and the poem below, written by a highly intelligent boy of 10 years of age, with a Schonell reading age of 13.7 years, were both made possible during an informal activity period. Both children wanted to write on their own chosen ground. The girl, apart from her school experiences, normally was never taken to beautiful or stimulating places, and the boy was deprived in the family sense, his mother having died suddenly, two months before he wrote this poem.

The Dying Spear Point.

Little leaf.... thy point has gone,
Broken off by careless hands,
Gone.... to the distant earth below....
Far beneath thy waving strands.

Red, gold, amber, green,
Here a touch of brown beneath
You wave at me from your stalk long dead
Now shining amber, with a touch of red.

Clear green you shone before,
With the buds of seed galore
Now what has happened, to thy stalk?
For it shines white like peppered chalk,

Men have come with their knives,
Motor mowers and great scythes
The dreaded cutters chopped you down
And bid you rot upon the ground

So little blade of slender grass
Step aside and let men pass
Never stay in their way,
Or you will be flattened every day.

A boy, aged 10.

While one should give due weight to the 10 year-old boy's high intellectual abilities, and also to the ability he had frequently demonstrated, before his mother's death and a short while after the time of writing this poem, to comment in unusual and often humourous ways, it seems to this writer that much of his personal grief and mental confusion has unconsciously entered and worked through into the imagery stimulated by the school gardeners' mowing of the lawns outside the classroom window. This sublimation through creation might be a psychological interpretation not substantiated by what was really happening inside the boy's mind. However, on a non-speculative level and in both the boy's and the girl's case - one year apart in time - there was no doubting the immense satisfaction they felt firstly, in the performance of their work, and secondly, in this writer's praise and the pleasure given to the other children who heard it read.

The opportunity, by which both children enjoyed writing, had importance on a far higher plane of personal development than that of mere practice in communication. It is quite possible, in the boy's case, that such opportunity to express himself in any way he chose, helped to minimise unseen and unconscious ill-effects, and helped him to come to terms with the tremendous changes in his world.

(f)Development of Stimulus Perception as a Basis for Creative Writing.

Because of common misconceptions on the part

of, perhaps, a majority of the population about the nature of the way the creative writer's words flow out in what must seem like a river of words, it is necessary to point out that although children's words increase quantitatively in a rapid way up to the age of 10/11 and less rapidly thereafter[1], only the rare and most verbally gifted child uses imagery as a natural embellishment without any teacher's literary or technical influence.

Such writings as 'the Strid' and 'The Dying Spear Point' do not just 'happen' in a verbally sophisticated form, even though the inspiration of the writing may come solely from the child. For example, it would be most unlikely for a girl with a reading age of 7, no matter how strong her initial motivation to write may have been, to notice and remember to include in her writing[2] such notes and observations as the noise of the water, (it 'was thundering'); the fact that the rocks were covered with moss, (more effectively expressed as 'the moss rocks'); what the water looked like, ('the foam bubble up viciously'); the circular pot-holing action of the water on the boulders, ('the swhiseld water swhiseld round to make gaint holes in the ground'). The more verbally able boy does not need to invent an onomatope like 'swhiseld' because he finds apt expressions for his thought from a wide vocabulary. His writing, though, weaves his maturer, sympathetic, personified contrast of the life of a grass blade with its dead state through the same framework of keen observation as the girl showed. ('Thy point has gone'; the colours of growing and cut grass; the movement; the presence of 'buds of seed'; the machine's 'cutters chopped you down').

Making use of the keen powers of children's observation has been reinforced by the considerable amount

[1]According to the evidence of Ford (1954) with New Zealand children, and reported in chapter 3B, section 2 below.
[2]See page 7 above.

of psychological work that underlies the idea of 'maximum sensory stimulation' (stimulation through as many modes as possible). This idea is examined in the 'methods' experiment in Part Two of the thesis. 'Behaviouristic'[1] work on perception generally, experimental work examining the relationships between heredity, maturation and early learning[2], the theory and experiment of Piaget[3] on the development of children's intellectual powers, and such neurological theory as Hebb's schema of neural action[4], all have served to support and give fresh impetus (through the work of colleges, departments, institutes and council advisers) to what has often been an intuitive movement in schools.

Whether from intuition or from practical extension of psychological work, the habitual re-turning of the child to the need to use as many senses as are practicable during some experience has served to deepen that experience, and to provide the child who does not find writing easy with almost a standardised procedure. The resulting success - and there usually is some feeling of achievement even by the child who only manages a straightforward description - in turn reinforces the preliminary observation and sense perception work which assumes the power of a conditioned stimulus, inducing an appropriate 'set' before the activity of writing.

[1]Used in the sense that Hebb does, to distinguish this type of psychological method from the particular, narrower, application of 'behaviourism' to the theory of the same name. See Hebb, D.O. (1958), 'A Textbook of Psychology' p.3. W.B. Saunders Company, Philadelphia and London.

[2]Such work as that of Senden (1932), on congenital blindness, cited by Hebb in 'Organization of Behavior' p.18 et al. Riesen (1951), on rearing chimpanzees without pattern vision, Chicago Med. School Quart. 1951. 13, 17-24. A review of the role of early experience is presented by Beach, F.A. and Jaynes, J. (Psych. Bull. 1954) 51.239-263.

[3]Particularly relevant is Piaget, J. (1947) 'The Psychology of Intelligence' p.99 onwards; 'The Child's Conception of Number' (1952). [4]Hebb, D.O.'The Organization of Behavior' (1949) J. Wiley.

It is a relatively simple step to lead even verbally 'backward' children into seeing obvious connections between parts of the experience perceived strongly through one or more modes and other similar experiences, aspects of life, or objects. The combine harvester is 'like a monster', or more sophisticatedly, 'like an all-devouring, roaring beast'. And this, of course, is where the variety, the open-endedness of such writing can be encouraged. The teacher points to some aspect of the experience and questioningly turns children's minds off on to closely and more remotely associated elements of their own previous experience.

Within such an educational context, one of the means of assessing a child's imaginative ability in writing might be through an examination of the extent to which the writing moves away from the stimulus. Unless the stimulus is so rich or unusually enticing that it would be fitting for a piece of writing to remain 'stimulus-bound' one would expect a highly imaginative person to depart rapidly from the given stimulus, or to introduce so much new thought into the given area as to heavily overlay it beyond recognition. The qualification should be noted, however, that creativity (using the word in the sense of artistic creation) is not to be equated with power of imagination only. The latter is <u>one</u> of the main qualities evident in the thought of those who are generally accepted to be creative people. But evidence in chapter 3A below demonstrates that there is a high correlation between creativity (as measured by open-ended creativity, or 'divergent thinking' tests) and 'g' intelligence up to a threshold level of IQ 120/140, as well as personality traits such as persistence with an activity over a long period.

Used to an imaginative kind of writing experience, it is little wonder that in even a piece of descriptive writing in which imaginative deviation is neither

expected nor particularly encouraged, the highly imaginative child will strain at the leash to get away from the stimulus. The following writing was written four years ago by such a boy, and is included in the book 'The Excitement of Writing.'[1] The boy was at the present writer's school, and is now at the local boys' grammar school. It is not known how his creative writing has progressed[2], but this particular passage of writing aroused considerable interest at the time it was written, and was one of the contributing influences behind the conception of the West Riding anthology. The boy's class had before them a stuffed stoat from the West Riding Schools Museum Service, and were told to describe the stoat by their fourth year class teacher. (The latter was a lady of many years' teaching experience who was used to formal methods of teaching almost entirely, and was highly efficient in terms of combining the academic standards and methods required by the 11+ tests with the less formal approach of the rest of the school).

A Stoat

Neddle-like fangs are enclosed in a snarling vicious mouth. This ferocious enemy is unwanted by many a hen, rabbit, and mouse. Ready to pounce on an unwary animal offering a challenge to all his foes. Only swiftness and bite, lie between him and starvation. His back is arched in fury. Fore legs are stiff, hind legs bent and ready to pounce, tail low and curved. Tinted brown and grey, not at all like his pure white winter coat. His black shiny eyes glint evilly. Grey whiskers streak backwards like his stroked fur. Brown, tan, fawn, and nut brown are also the colours in his summer coat. How delicate and innocent, the teeth may seem, but once they sank into the flesh of a frightened animal. The tiny paws once

[1] p.31. [2] This factor was one of the stimuli behind the conception of this research - what <u>does</u> happen to writing like this?

carried a living stoat over the countryside.

A boy aged 11.

Throughout the writing the boy imaginatively describes the parts of the stoat before him, but constantly returns to the head, as though what he considered to be its cruelty and savageness fascinated him. No matter what body part his eyes are drawn to, his imagination, like a compass, swings off and away back to the head: the three sentences describing the stoat's coat and whiskers are almost interpolations in the way they seem to disturb the boy's absorption with what seems to him the cruelty and death-dealing nature of the stoat.

In concluding our view of the place of the stimulus in creative writing, following Piaget (1947) and his pointing to the way that children change, at lower secondary school ages, from concrete to more abstract, formal reasoning, one would imagine that a less strong sensory stimulation might become necessary, and eventually almost redundant as far as its strong sensory elements are concerned. This writer doubts this, feeling that a strong sensory impact remains valuable to adult and child alike; the difference lies rather in the ensuing mental behaviour after stimulation has made its impact, with the more mature thinker ranging freely away, while the more immature thinker deals hardly at all with abstract comparisons and extensions of the stimulus. At the time of writing, no research has been done to examine these inter-relationships, other than the subsidiary investigation of the present thesis, using a varied stimulus approach for each of three first year secondary modern school forms.

(g) The Teacher Variable: Desirable Qualities of Alertness, Encouragement of Creative Activity, and Provision of Varied Means for Creative Expression.

Probably the most important variable affecting

the growth of creative writing is not ('of course' one feels like writing[1]) any particular method or system, but rather the influence of the teacher.

Positive encouragement and criticism rather than repetitive and inhibitory teacher-marking of such features as spelling, grammar (though spelling and grammar are not themselves inhibitory if given individually as and when children fell the need for such help), and colloquialisms, can be offered in many ways. While this writer cannot agree with those who would never criticise creative writing in any way[2], he nevertheless feels that an absence of criticism is better than the systematic procedure of red ink marking of everything wrong, and usually without the child present. Apart from the simple fact that a child just cannot remember a great number of corrections of spelling mistakes (apart from a correlation between IQ and the number of mistakes made), nor many of the shorthand comments made by many teachers, it should be placed in situations where it wants to write far more than one teacher can possibly cope with on a close, careful marking basis. The present inverse relationship,in too many schools that practise rigorous marking of most writing, between the number of mistakes and verbal ability operates in such a way that the very type of child who needs additional help and encouragement becomes negatively reinforced and becomes conditioned by the word "writing" to expect boredom, laborious difficulties, indifference by himself and his teacher to his writing that so unfavourably contrasts with the more literate in the class, and worst of all, punishment by additional imposition of boring corrections or public scorn and shame.

[1]From personal experience of the effects of different teachers on the same children, and increasing research evidence such as from the report 'Streaming in the Primary Schools'(1967) N.F.E.R.
[2]Such as Ashton-Warner, S.(1963) 'Teacher.' p.63. Simon and Schuster Inc.

For a beneficial influence to be able to operate, the teacher must be on the alert to reward immediately any sign of growth in originality, any sign of unusualness or richness in ideas, whether oral or written. If the teacher is not consciously on the alert for signs of the nascent sensitivity of a child to its surroundings, such delicate germination will pass unnoticed, except perhaps in a perfunctory way, because it is usually overlaid by the rush of the lesson's activities, or the feeling of 'stop all else' that surges up in all teachers from time to time, when faced by a mounting pile of papers or books that have to be worked through. Hourd and Cooper (1959) mention this problem of teachers not having time to savour thoroughly the possible full meaning of a child's creative writing; they are too pre-occupied with the habitual marking activity.[1]

In addition to these administrative circumstances, part of the explanation of teachers not noticing, and so not appropriately rewarding, signs of increasing awareness and responsiveness of children in their creative writing, might well be that suggested by Lovell and Shields (1967)[2]. "It would seem that using Terman's Personality Rating Scale, teachers seem to think of Originality in these pupils (50 8 to 10 year-old children drawn from two large cities in the north of England, with WISC IQs of 140+) in terms more of reasoning ability than they are in terms of inventiveness or unusual ideas; or it may be that 'creativity' measured by these tests (divergent thinking, open-ended tests) is too specific and at times too trivial to be noticed by teachers." If both or either of these suggestions are true - and they probably are close to the correct diagnosis of the attitudes of most teachers to 'cleverness' in the academic sense that they themselves have been used to since their own childhoods -

[1]Hourd, M.L. and Cooper, G.E.(1959) 'Coming into their Own.'
[2]Lovell, K. and Shields, J.B.(1967) 'Some Aspects of a Study of the Gifted Child.' BJEP 37.2, p.207.

then both a change of attitude as it concerns creative writing, and an alteration and lowering of perceptual thresholds to be able to discover and help potentially creative children is desperately needed.

Thus, if budding sensitivity to life in general and people in particular is to be reinforced, if the teacher is to help some feature of his own classroom or school activities serve as a reinforcing agent for children's openness to, and awareness of the finer experiences of life such as love, unselfishness, wonder in the perception of beauty, truth and goodness, or at the sheer complexity and variety of life, then that teacher must be ready to be seen to react enthusiastically at any sign of these things in a child's general behaviour. Then children will know better a mental attitude, which if truly experienced - and insincerity soon shows up - will lead to a personal richness that will, in turn, partly show itself in their creative writing. Children will not fear writing for a teacher who shows more concern for the value of an experience, for its quality and enjoyment, or, perhaps repulsion from or fear of that experience, as they would do for a teacher wielding a red pen, or worse, a cutting edge of sarcasm. The girl's writing about 'the Strid' was impossible to read because of unintelligible spelling. Yet she read it out without any fearful stumbling, letting her words glow with meaning and trapping even the straying minds in the far corners of the room.

By accident of random sampling, a boy whom this writer encouraged four years ago by reading a piece of writing he had written at home out to the whole school is one of the sample of ten children from the boys' secondary modern school taking part in the main investigation. When he

was nine years old, he brought to school the following poetical prose, written on the back of a rather grubby piece of paper which in all probability had been cut from the flyleaves of a book because they had no paper in the house. The appearance alone was enough to destroy the boy's chances of a fair reading from a great many teachers, and this particular teacher did not have time to examine the writing more carefully until later in the morning.

The Wind passes by

Calmly the wind passes by. the larbornen tree in our garden droops its pretty fingers. The sky pale grey silently passes by. The gloomy houses are dark and stuburn. The deserted streets fill my mind with dull thoughts. Dark has fallen over me and another day has begun.

A boy aged 9.

Apart from the quality of the writing - he had not done anything like it at school up till then - interest also lay in the circumstances under which the boy had written. He lives in the same street that the girl-writer of 'the Strid' lives in, and it is part of a 450-house N.C.B. estate which is as gloomy as the writing suggests. The 'larbornen tree' is wishful thinking, for the garden consists, like so many of its neighbours, of rank, trampled grass and battle-scarred hedges. The boy was looking out of the window at dusk, and one wonders, incidentally, what significance the last sentence has? The television was on, loud of course, the older brother was having an argument with a younger one, the mother was ironing and trying to arbitrate, and it is little wonder that the baby was yelling. (These conditions were diplomatically extracted by indirect comments, and were later checked with the older brother because it all seemed too

Dickensian to be true). The value of creation to a sensitive child in such surroundings must be immeasurably high, but the amazing feature of the whole episode is that something so peaceful and quite full of penetrating thought for a nine year-old boy, could emerge from these conditions, and it serves to demonstrate the power of strong motivation surmounting unhelpful and trammelling circumstances of a culture that does not value literary or varied verbal activity highly. Empirical evidence supports this statement. 76 ten year-old children attending this boy's junior school, which exists to serve the N.C.B. estate, were tested with the Tomlinson (1953) 'Junior School Test' - a highly verbal group intelligence test, which as Vernon (1960) says, "depends largely on the capacity to read words written on the blackboard."[1] Only 5 of 61 children coming from homes on the N.C.B. estate gained IQ ratings of 100+. ($P = <.001$; χ^2 test with Yates's correction).**(Private house children - 11/15 with 100+ I.Q.s).**

Four years later, the boy is still clearly enjoying writing, and is capable of a spontaneous 'switching on' to order in the classroom conditions of his boys' secondary modern school. Further, it is to good effect, as this script in the most recently drawn sample (at the end of his second year in the secondary school), as well as his previous ones[2], show.

V.43. The Stranger.

It was a bitter cold night. All was silent except for the ghostly moans of the distant fog horns in the docks. I remember many a winter's night when I used to stare out to sea and watch the flickering of the far away lighthouse, and the twinkling of the boats. The stars were comforting, as they stared down from the cloudless sky. Now everything was silent and still as I stared

[1]Vernon,P.E.(1960)'Intelligence and Attainment Tests.' p.88, U.L.P.
[2]For the marks given to this boy's scripts by the judges in both markings see the marks for codes T.43, U.8 and V.43 in Appendices H and M.1.

across the calm sea. Not a thing stirred. Cold chills went through my body making me hug into my warm coat. Suddenly I heard a hair raising scream which nearly made my heart stop beating. I looked around me, nothing stirred. Maybe it was just a seabird fighting, I thought to myself, with unease in my mind. I tried to pretend it was nothing and began to stare out to sea again. But something kept whispering in my mind and taunting me to go and investigate. All the coldness had no effect on me now. I was only thinking of one thing and it wouldn't let me rest. I just had to investigate. Plucking up courage I stood up and began to walk slowly down the path. My eyes were straining to keep on the path leading down to the beach.

Unfinished.

Any high assessment of this script is verified by the cumulatively more objective summed ratings given it by the five judges, and shown at Appendix M.1.

In the light of the discussion on pages 33 - 34 above on the degree of freedom from the stimulus subject being a possible criterion for judging an imaginative person, it is interesting to note that this script does not even arrive at the point of mentioning 'the stranger'.

One can imagine the devastating, inhibiting effect on young writers if - instead of receiving teacher recognition of promising creative effort, and encouragement of future growth - a red line had been crossed through their work, or there had been put at the bottom merely the words, 'Keep to the subject.' Such a seemingly insensitive comment is neither so unlikely nor, indeed, undesirable from the point of view of an English teacher in a school where English is regarded as solely an invaluable communication tool, necessary for the broad academic advance that a child must make

if it is to be able to deal with the closed-ended reasoning of a 'right or wrong' nature across the whole range of G.C.E. subjects. Subject adherence, and singleness of purpose are vital in most school and life pursuits, but balanced fanciful and imaginative practice, in any type of open-ended activity, is surely worth preserving amongst those who are in a school or adult society where individual mental choice is increasingly restricted. Individuality, and the need to go where the spirit wills, seems to this writer to be an indispensable premise of creativity. Edward Wilkinson (1966)[1] refers to a sign that specialist teachers of English are doing their utmost to adopt a freer view of English writing's place in secondary schools of an academic nature when he draws attention to the investigation by Mittins (1960), on the presence of individual authenticity as an influence on modern assessment of written work of children being judged for suitability for grammar school entrance.[2] (The present writer had already noted this research, and made use of its material as an assessment 'warm-up' for the main investigation's 1st. Marking by the five judges[3]; the original 3 compositions used were written in 1924 and not 1934, as Wilkinson says). If this reported change in marking emphasis is allowed to find reflection in English teaching in schools concerned with academic progress, it may be because creative writing encouragement has been found to meet G.C.E. standards more effectively than the more traditional methods of English work have done in the past.

Poor reading ability is obviously a great handicaptin the growth of written word fluency. If backwardness in reading does not hinder the flow of thought into

[1]Wilkinson, E.(1966) 'Trends in Education'. 1. pp.25 - 26 HMSO.
[2]Mittins, W.H. (1960 'Marking Composition.' Chap. VII of 'English in Education', ed. by Jackson, B. and Thompson, D. pp.177 - 183. Chatto and Windus. This research is reviewed fully in chapter 3B below.
[3]See the suggested use of the three scripts, as at Appendix D.

written words it is because teachers of such children have been most careful to avoid any emotional, negative bonds being built up between the child and writing activities. However, successful writing by backward readers such as the writer of 'the Strid' is despite difficulty in writing words that one knows others may not be able, or have the willingness to make time, to read them, is despite a relatively poor vocabulary, and is despite the high probability of their verbal weakness in reading being part of a generally below average mental structure.

Encouragement of reading, and growth of reading ability is considered to be an essential foundation for creative writing. Thus, reading of books during formal, teacher-ordained reading lessons is no more important than reading at any time the child has the time to do so in the primary school. In secondary modern schools and average or below average IQ streams in comprehensive school, reading is encouraged through the use of 'library periods'. Most grammar schools feel unable to offer timetable space to an activity in which their pupils have, by definition of their being in the school, attained what is regarded as a high enough tool ability for them to be able to cope with fresh learning adequately in the rest of the curriculum. Reading for enjoyment, for aesthetic pleasure, has to be practised by the child in its own time, or in English periods 'dealing' usually with English literature within the narrow confines of reasoning and memorising for a future examination. If these activities become enjoyable, it is often due to a vitalising influence from the teacher, in which analysis plays a minor part and enjoyable understanding at the level of a secondhand experience a major part. In this connection, it would be interesting to see how far, in all types of schools, and over a wide area of the country, the 'set books' of the English curriculum consider

experiences that are not too far outside the understanding and direct personal experience of the children concerned. And do these books treat their desirably adult situations in terms which a pre-adolescent child will be able to understand? Child motivation should be a paramount concern of examiners and teachers, if one accepts that no real learning will take place unless the child can see a useful function - in his own understanding of life - for such learning. There is nothing novel in the view that literature should be selected and presented with this in mind: that it be within children's understanding of human experience, and that the children who are being introduced to any poem, story or play are, first, being offered something to be enjoyed, and secondly,because most will have enjoyed it as a real life experience projecting them outside school, they will probably want to enjoy further and more subtle, finer points of that experience. The novelty, unfortunately, arises when one sees few signs of such activity within secondary schools that are working to examination targets, particularly with the country's more intellectually able children.

If enjoyment of literature in secondary schools had been widespread, through an apt selection and presentation to children, it would not be unfair to expect hundreds of thousands of adults to reach regularly, and with enjoyment, obviously, for Wordsworth's or Shakespeare's creations today. (They reached[1] for them, after all, in their millions when they were children). Or more fundamentally, how many people have had their understanding and insight into human life deepened or enriched by their

[1]This writer would not go as far as the cynic who might spell this word as 'retched', because he believes it likely that children are too mystified or bored through piecemeal dips into some literature that has no apparent relevence for them: they may be so bored that they do not even understand the parts which are possibly comprehensible to them.

childhood literary experiences? It is, of course, impossible to determine the answer to such a question. But it does seem to be commonly accepted in current debate on secondary school English that children have been more alienated from later literary enjoyment than they have been attracted to further growth in literary activities.

Other curricular influences on creative writing, apart from those in the specifically English part of the curriculum, are placed by this writer in as exact order of importance as it is possible to place subjectively such intensely personal activities: drama that is part of P.E. 'movement' and which is compulsory for the whole class (in a way that the formal secondary school dramatic work can never be where it is confined to a few interested children who perform the annual play) is an invaluable influence on children's imaginative development in that the class is able to extend the previously mentally-bound enjoyed experience into a vivid, physical experience linked intimately with the mind. (Experiences from history, literature, religion, etc., could be valuably reinforced); music, either as a background or as a stimulation in its own right; expressive media of an art and craft nature - paint, clay, wood, fabric, charcoal, etc. - serve to complement and stimulate creative writing; and finally, any unique or annual school event usually has a considerable influence on children for quite a period before and after its appearance.

Two observations need making about the above. It will be obvious to anyone that, with the possible exception of music in a liberal school, as far as the academic child is concerned, all these experiences are regarded as of secondary importance to the child's mental development. In so far as this reflects society's expectations from the academic school-leaver, again the school can hardly be held responsible.

However, within the limitations of minimal timetable space in the academically streamed school, and far more freely in other types of secondary school, a second limiting factor occurs. This is the relative isolation of the secondary teacher from his colleagues working on different parts of the curriculum. Thus, although the child's creative writing may gain indirect benefit through imaginative development in drama (unfortunately usually non-existent in the more traditional boys-only school, as well as for boys in [illegible] mixed schools where they are usually segregated off in the direction of purely physical activities); through art and craft (but boys, again, are often compelled because of lack of timetable space to choose between art and woodwork, with the latter only too often a disciplined making of joints and preparation for creation of a set and practical nature, while the girls' needlework syllabus follows a similar and equally predictable pattern, though their medium lends itself to greater flexibility); the teacher of English rarely knows what preceding experiences the children he sees before him have just had. Ideally, staff meetings on a weekly basis could help him overcome this lack of co-ordination in learning that has taken place around the English period. But even if such meetings took place, there is no way for the English teacher to know accurately how the children who have just experienced what should have been a highly interesting experience have reacted to it. This is because motivation depends as much on the teacher and his personality and methods as on the subject-matter being considered.

All that one can safely assert is that children probably have a beneficial, imaginative development taking place in them, through such liberal and creative aspects of the curriculum as can be given timetable space, and that

these fringe (in some schools) activities possibly have a carryover effect on children's creative writing. Where children have been highly motivated in another part of school life, this can be given opportunity of being expressed by inviting its recall in creative writing, with emphasis placed on sensory experience to avoid repetitive narrative and encourage vivid remembering of the experience. Where one encourages a conscious link-up between school experience and the creative writing lesson, alternative stimulation should be suggested in case of lack of interest or too great an interval between that event and the chance to write about it.

Once again, the middle school class teacher who, like the primary school teacher, has children in the same classroom for the greater part of the curriculum, has an enviable position in that he is - fifty years after Whitehead wrote the words[1] - able "to eradicate the fatal disconnection of subjects which kills the vitality of our modern curriculum. There is only one subject-matter for education, and that is Life in all its manifestations. Instead of this single unity, we offer children - Algebra, from which nothing follows; Geometry, from which nothing follows; a couple of languages, never mastered; and lastly, most dreary of all, Literature, represented by plays of Shakespeare, with philological notes and short analyses of plot and character to be in substance committed to memory. Can such a list be said to represent Life, as it is known in the midst of the living of it?"[2] And while Whitehead is certain that in education wherever you exclude specialism you destroy life"[3], nevertheless, he goes on to argue that specialist activity should be directly related to practical activities of life that are useful[4], that "specialist training takes place - or

[1]Whitehead, A.N. (1917) 'The Aims of Education' in 'The Aims of Education and Other Essays', Ernest Benn Ltd.
[2]ibid p.10. [3] ibid p.16. [4]ibid p.17.

should take place - at a more advanced stage of the pupil's course.... and that the specialist study is normally a study of peculiar interest to the student. He is studying it because, for some reason, he wants to know it. This makes all the difference. The general culture is designed to foster an activity of mind; the specialist course utilises this activity. But it does not do to lay too much stress on these neat antitheses. As we have already seen, in the general course, foci of special interest will arise; and similarly in the special study, the external connections of the subject drag thought outwards."[1]

Emphasis has been placed on Whitehead's thinking about the content and methods of school education because if any difference does appear to develop in children's creative writing on transfer between schools, it may be more than coincidental with the transfer.

For there is a change in the whole genus of education that takes place when a child passes from a primary school,(with its integrated work joined together by the teacher's influences and emphases in a very similar way and with identical aims to those quoted above of Whitehead,) to a secondary school (with watertight subject and teacher compartments, geared moreover to a reinforcingly exacting examination octopus. It is only half the answer to say that this is the creature of the sea of society in general,or universities or employers in particular. The creature's appetite can be fully and more efficiently satisfied if it does not first stupify by rote ritual those coming to it. Apart from any evidence that may arise from such narrow areas of research as the present investigations may cover, it is clear that there is some powerful force at work within the nation's secondary schools, causing a drift away from science to arts activities.

[1]Whitehead, A.N. (1917) ibid p. 17 and p. 18.

The reasons behind the drift have not been identified. It would appear that the drift has been developing over a number of years; if it continues, between 1967 and 1971 there will be an 8% decrease in the number of science sixth-formers.[1]

The final aspect of the secondary school English teacher's work which, it is felt, has a strong influence on creative writing is the actual attention paid by the teacher to the development of oral and written vocabulary, and the emphasis in these of children's use of unusual combinations of language and ideas, together with an increasing use of imagery.

Where teacher enthusiasm is present, and this enthusiasm regards creative writing as one of the main means of helping children develop their written English, there should, desirably, be a higher oral example from the teacher than usual. This oral example will be part of attempts to stimulate, along unusual lines of expression and underlying thought, the oral and written language in the classroom or wherever the class happens to be; this in turn should help give much deeper insight into any experience. The use of vivid and unusal imagery to describe everyday classroom events quite possibly has a feed-back value for the teacher himself, as well as giving the children an unusually fresh view of the over-familiar. Sentences like "Whisper your pen along the paper carefully in this writing," "This poem shouts at you in joy," "Dream your eyes out into the mist," certainly make a change from the usual teacher directions to "Write carefully," etc., which have a decreasing effect with increasing repetition. One cannot avoid re-iteration of guiding instructions and directions amongst children. One

[1] According to press reports of the forthcoming Dainton Committee Report due out in the Autumn of 1967. Hudson (1962, 1963) has been interested in arts/science school populations for some years, and his work has been reported in chapter 3A below.

can avoid verbal repetition 'ad nauseum' which, perhaps, might be one of the contributory factors behind the apparent decrease in sensory alertness with the onset of adolescence's own powerful forces of peer and sex awareness, day-dream predilection and a conscious or unconscious playing-down of anything associated with the expriences of younger life. It can be argued that this is a matter in which a teacher's personality will dictate what is said, and the way it is expressed, rather than a matter in which any set injunction can be applied. However, as a guiding principle, even the relatively prosaic teacher, perhaps pressed into 'helping out' in English, can consciously go out of his way to use a lively, oral approach in his English work, with benefit to himself as well as to his pupils. As for the specialist English teacher, no one should be better equipped than he, of course, to manage a natural and unforced stimulating use of language "that moves children, stirs children, through the association of two things that they did not expect to see associated," to apply Frost's quotation[1] to the present situation.

As well as the creation of a favourably stimulating, fresh, oral atmosphere in which to encourage a more unusual approach to writing, children seem to gain insight into the enjoyable possibilities of unusual imagery creation in writing through the medium of oral and written activities on the lines of 'The Unusual Uses of Objects' test devised by Guilford and his associates.[2] Translated to the classroom either as an incidental activity within a lesson, or as a formal 'training' activity for the whole period, the teacher names an object of everyday and well-known use, like 'pencil'; the children write down as many

[1] See page 13 above for Frost's original quotation.

[2] Guilford, J.P., Wilson, R.C., Christensen, P.R., and Lewis, D.J. (1951) 'A Factor-analytic Study of Creative Thinking; I: Hypotheses and Descriptions of Tests. L. Angeles, U.of S. Calif. See a modified copy of the test at Appx. W.2.

unusual uses for a pencil as they can think of. These responses can be marked in two ways, one mark going to any fresh response, and a more important mark being given to any use involving a change of category of use. Though the latter are rare compared with the number of ordinary responses of a similar nature to one another[1], yet children easily understand that even the common responses have a high value when used metaphorically in creative writing. Further, the game similarities which arise from the open-ended competitiveness - in which everyone can score something - attract children. Though it would be rash to attribute good creative writing containing unusual, or more than usual, imagery to one classroom activity alone such as this, there does seem to be a strong transfer affect takes place immediately afterwards in 10 and 11 year-old children's creative writing. However, this experience is both subjective and probably the results are due to a number of additional, uncontrolled factors.

In addition to activities such as this, that are only indirectly concerned with creative writing, the teacher's influences on the following aspects of creative writing itself are important, both before, during and after writing: the encouragement of unusual slants to stories or descriptions, unusual beginnings and endings, titles possessing some originality in contrast with the banal 'Last Night' type, as well as constantly re-directing attention to 'undecorated' (in an image sense) nouns, verbs, and suitable sentences for simile and metaphorical embellishment.

If marking of children's writing is confined to the positive kind of encouragement discussed on pages 35 and 36 above, the specialist English teacher should have more

[1]The writer of 'The Search' on page i is the only junior child to gain a score of 21 responses:21 changes of categories, in the present writer's experience of using the test with over 200 juniors.

time to discuss one or two points with each child by his side. (This does not assume freedom from external examinations. Except for the special activity involved in precis work, as mentioned above, the contention is that a higher standard will be achieved by encouraging the child's writing in these various ways). It is extremely important that the teacher is seen to take an interest in writing that is, after all, personal and (one hopes) important to both teacher and child. Reading aloud to the whole class some interesting parts from each members work is also desirable, especially on those occasions when there was high motivation and a good response.

All of these aspects of creative work with children are believed by the present writer to have beneficial effects on their attitudes to life in general as well as an important direct effect on their creative writing. Thus, these activities were included in the training programme of the full experimental class in the methods experiment described in Part Two of the thesis.

(h) Wonder and Exploration, to Delight and Excellence.

Though some verbally above-average children do manage to achieve unusual imagery, it is usually too complex for most average and below-average ability children. Their attempts to reach for novelty of insight and expression occasionally break through in scintillating and penetrating ways, but they usually manage to end up with perfectly apt and satisfactory, but predictable imagery. However, literary achievement is viewed as a complete, whole creation, that is intellectually satisfying (usually in an aesthetic sense), and that is novel in the insights offered or the way they are presented. Novelty of imagery is not an essential ingredient in literary creation, though it is usually present in some form in outstanding work, and is worth aiming all children at, after Lewin's concept of 'level of aspiration'[1]

[1]Lewin, K. (1935) 'A Dynamic Theory of Personality', MCGraw-Hill.

ongrounds mentioned immediately above, namely that they achieve a higher level of imagery and insight than they would otherwise have done.

The short poem entitled 'the Search', serving as a frontispiece on page i above, does not contain one adjective other than 'little'; 'dark' and 'fair' are used in the nominal sense of negro and white. Yet the effect of wonder is conveyed throughout the poem be simple repetition, statement, contrast, and a rhythm that carries the reader on from the effective opening, through to the completion of the search and the naming of the morn. The writer of the poem, despite the simplicity of expression written, incidentally, within around ten minutes of a 'free choice' period, said that he felt "it's like the way people always seem to be searching after something."

Perhaps for the adult reader, this intuitive recognition by the poetic child-thinker, and the poem's own comments, serve to point to valuable elements in understanding creation that have not been mentioned. Teachers desiring to develop the flow of children's writing, no matter what the reason may be behind their desire, are unanimously as aware of the need to make qualitative judgements upon such writing as they are of the length of time needed for the development of a high quality of work. This 'nature' is marked by unevenness of development over a long period, and though this is true of all child learning, it is especially so where the child is very conscious of its own variable state of motivation and resultant accord or discord with the task in hand. Against such a background of long exploration after that which is held to be of great value by the teacher (and it is hoped, eventually, by most children), the teacher must, somehow, keep up his own gaze, fixed on the attainment by children's writing of an absolute standard of excellence for any particular age,

though he knows that such is difficult, if not impossible, to assess. However, excellence in creation cannot arise from low 'average' demands upon the creator. Whatever the child's ability, 'excellence' can be achieved by that child measured against its own previous attainments, but this 'excellence' should never be confused with a comparative standard of excellence. In other words, a teacher should maintain a standard of proportion, recognising the validity of an individual's work in relation to that person's own work and in relation to literary creation of other children and, at the higher end of Ghiselin's continuum of creativity, in relation to adult standards of literary achievement.

Freya Stark has examined the nature of excellence and her comments[1] have relevancy for those whose work in schools is concerned with the dual action of drawing attention to excellence in written creation, helping children to understand and use its thought, and secondly to attempt to draw from those same children, not faint imitations of original work, but work that is excellent in its own form of child creation, and, more rarely, excellent in relation to adult creation. Freya Stark (1967) examines why 'Excellence' has largely vanished, and how it may be pursued. "The English current, the strongest of its kind since the voice of ancient Greece was interrupted, runs deep, and still shows itself in much except the (present-day) imaginatively creative side of literature." This is because Mediocrity is held to lead to Excellence, and secondly, that Mediocrity itself has been too often accepted "if the first-rate is out of reach." Rather Excellence is to be reached in ways unique to itself. And it is here that Freya Stark's words accord with what seems to be the resulting glimpse one has occasionally, through the writing of children, of the wonder of the world

[1]Freya Stark (1967) 'The Qualities Needed to Escape from Mediocrity.' An Essay in 'The Times' of 28th. August, 1967.

as they reach out to some experience such as she mentions. The excellence in in the reaching out and not in the mere grasped result. "It is not a result, but an apparition.... It is whatever life may mean apart from daily living - a wisp of azure, a visitation to the mind or heart." It is to be found especially amongst those "whose intrinsic freedom is regardless of worldly accidents and all material things.... but the happiness is to be found (apart from being amongst such "whose winds blow as they list") too, among craftsmen who delight in their plans and ploughmen who drive a symmetric furrow, and anyone who is allowed for his daily enjoyment to dip into the timeless world where every perfection, small or great, is born. This is that excellence where

'each in his separate star
Shall draw the thing as he sees it
For the God of things as they are.'

Where

'A man's reach must exceed his grasp,
Or what's a heaven for?' "

Too many schools' lack of time to allow children 'to stand and stare' (one of the conditions for Freya Stark's way to excellence) and such schools' need to have their children attain a maximum fluency in English writing would seem to effectively cancel one another out, if one accepts the dual premise that 'the only way to learn is by writing', and that really fluent writing, enjoyable and meaningful to the child, can only be attained through such influences as have been described earlier from within the school, but which are themselves intent on pointing children out, towards the realities mentioned by Freya Stark. Drawing the modern child's attention to beauty and values of all kinds, surrounding the child with objects, or scenes, or any experience which induces wonder in children, and which is held up to them as valuable, is

ancient in conception.

The following statements of Socrates, as they appear in Plato's 'Republic', written in the 4th. Century B.C., have a relevancy for the children of today's sophisticated social pressures. And it surely falls to the teacher of secondary school English, in view of the social and examination squeeze that has ejected Art and Music to the cold fringe of the curriculum, to attempt to present to children the possibilities of their world beyond the superficial that is so insidiously offered them. The English teacher should be one of 'the craftsmen' whom Socrates would seek out to be responsible for 'this nobler manner of education.' Perhaps, in considering the values to which the guardians of the ideal society should be turned, the English 'craftsman' could be joined by the Religious Education 'craftsman', but the latter is under the same kind of social, scholastic, and therefore 'timetable-cut-to-the-minimum' stigma, as the true craftsmen of Art and Music. The social demands of 1967 are still whistled on the stale winds that were once hopefully and freshly wafted away by the breath of Socrates, centuries ago, in an attempt to enlighten the more openly corrupt social demands of Athenian society. Similarly, that society's demands remorselessly swept on, over Socratic wisdom which was possibly hardly noted beyond the superficial political seizure and smear, until it destroyed itself.

Perhaps our sixth-formers are showing society, in an intuitive, protesting, seeking way that they are more concerned with working on school 'subjects' which offer more freedom for them to think about a reality beyond the physical shell of society. Whatever the reason, or the proposed remedies for meeting this drifting defection from science, any measures should allow some more liberal approach to learning so that, 24 centuries later, we can echo Glaucon's approbation of

Socrates' speech, and say "A nobler manner of education there could not be."[1]

> "No, we must seek out those craftsmen who have the happy gift of tracing out the nature of the fair and graceful, that our young men may dwell as in a health-giving region where all that surrounds them is beneficient, whencesoever from fair works of art there smite upon their eyes and ears an affluence like a wind bringing health from happy regions, which although they know it not, leads them from their earliest years into likeness and friendship and harmony with the principle of beauty."
>
> Socrates, 'The Republic' of Plato, para 401.

In conclusion, there have been placed at Appendix F two scripts, drawn from the first two samples of work. They have been selected because, both times they were considered by the judges, they were consistently awarded marks at the opposite ends of the marking scale. Further, they appear to this writer to be representative - as far as it is possible for any creative writing to be considered typical - of the two halves of ability that have been sampled from the secondary school children's creative writing of this area.

1'The Republic of Plato', translated by Lindsay, A.D.(1935), para. 401, Book III. Everyman's Library edition, J.M. Dent and Sons Ltd.

CURRENT PSYCHOLOGICAL VIEWS ON CREATIVITY, AND PREVIOUS REPORTS ON CREATIVE WRITING IN SCHOOLS.

A. A Summary of Current Psychological Views on Creativity, and their Significance for Creative Writing in Schools.
B. Some Previous Studies of Creative Writing in Schools, and Previous Investigations into Creative Writing in Schools.

A. A Summary of Current Psychological Views on Creativity, and their Significance for Creative Writing.

1. A Summary of Current Psychological Views on Creativity.[1]

Guilford's (1950) claim to have evidence indicating a possible structure of 120 interacting but discrete cells of mental ability, and that two whole divisions of mental operations can be contrasted as determinants of creative (divergent operations) or noncreative (convergent operations) activity, developed considerable interest among psychologists in this country as well as in America. The creative 'divergent' factor is demonstrated, Guilford claimed, by high performance on open-ended tests (which involve a number of possibly right responses), as distinct from the conventional closed-ended type of test response arrived at by progressively narrowing down alternative wrong answers to the one right answer. Creative writing is an excellent example of open-ended mental activity product, and this has been recognised by the would-be testers of creativity amongst children, in that one test instrument in a battery of creativity tests usually includes a story writing activity.

Getzels and Jackson (1962) developed some of Guilford's ideas, and compared a group of 'High IQ' with

[1]The numerous references to reports of psychological theory and experiment in this sub-chapter 3A make it desirable to place references together in one place, rather than have an otherwise cumbersome number of footnotes. Thus, all chapter 3A references have been placed in a bibliography at the end of this sub-chapter 3A, leaving only author and date of source in the text. The bibliography is at p.91.

another group of 'High Creativity' children from the same school. They maintained that their research supported the existence of two contrasting types of cognitive excellence, both of which gave an equally good performance in school work, but which were not equally favourably regarded by teachers.

Burt (1962) and Vernon (1964) reviewed the claims of Guilford and Getzels and Jackson that there are two distinctive types of intellectual ability. As well as drawing attention to the erroneous conclusions of Getzels and Jackson, they pointed to the factor analytical work which demonstrates before rotation a high common factor between open-ended and conventional (closed-ended) I.Q. measures. This common factor could be more simply considered as a 'g' factor of intelligence. Factor analytical work by Cropley (1966),and Lovell and Shields (1967) with high IQ junior school children in this country, confirmed Burt and Vernon's misgivings, in that both analyses showed a large general factor running through the divergent thinking tests and the IQ measures. On rotation, the divergent measures fragmented away over a number of dimensions. Eysenck (1967) considered Guilford's concepts and especially the model of intellect which Guilford based them on, to be erroneous. Not only is there this danger of infinite subdivision of processed which adds little to our knowledge, or to our ability to forecast intellectual development in an individual, but worse, the essential hierarchy of the structure of intellect is lost completely.

De Mille and Merrifield (1962), and Marsh (1964) re-assessed the statistical work of Getzels and Jackson and their dependent conclusions. Both papers presented the view that Getzels and Jackson were incorrect in a number

of ways, but especially where they exhibited low correlation coefficients between the I.Q. scores and the 'creativity' scores of their high I.Q. school subjects, and accordingly, the low correlations were revised upwards.

Yamamoto (1965) replicated Getzels and Jackson's work,but used school subjects whose I.Q.s had been reliably measured, and who were representative of a normal public school population. Because of his better sample, Yamamoto was able to compare the relationship between I.Q. and divergent measures over a broad I.Q. range. He found that there was a consistent decline in correlation values between the two types of measures for I.Q.s of 110 upwards. This tends to support the work of such as MacKinnon (1964) who postulate a 'threshold of intelligence' beyond which I.Q. ability is no guide as to the present or future likelihood of creative activities by the possessors of those above-average I.Q.s. But more importantly for the majority of the school population, Yamamoto found that the evidence is against there being two cognitive or intellective modes of thought, since the pooled correlations between I.Q. scores and divergent thinking measures, over the whole I.Q. range of ability tested, remained over .5.

Turning to consider whether studies of personality traits of gifted subjects offer any pertinent insights into the identification of creative ability, the classical work of Terman (1926 and subsequent years) stands out. His large-scale developmental investigations on highly gifted subjects showed considerable variance in later adult life attainments of his large group of child subjects. He considered that highest eminence is achieved through both high intelligence and also general and some specialised ability. Seriousness of purpose and indomitable persistence

were found to be most important features, additionally, for the highest level of professional or business success. Roe (1953) found that the same seriousness of purpose was evident in her studied samples of eminent scientists. McClelland (1963) drew attention to the common 'risk-taking' and Protestant home factor in the backgrounds of productive American scientists and successful entrepreneurs. A radical upbringing, he concluded, might help develop a creative outlook. McKinnon (1964) found that creative individuals liked complex asymmetrical line drawings, were high in artistic and theoretical values, and low in religious, economic and social values. They were willing to express and accept their own feelings above average, and had a strong streak of femininity. They were more given to intuition than to sensation-type thinking, and far more introverted than extraverted. On the other hand, Eysenck (1960) found extraversion rather than introversion to be correlated with the divergent type of test. Hudson's work (1962, 1963) has recently been publicised as possibly offering some explanation for the increasing preference of grammar schoolchildren for arts rather than science subjects. Working on similar lines to Getzels and Jackson, though with English sixth-form boys, Hudson's use of divergent thinking measures revealed a high-scoring divergent/high-scoring convergent split between boys in the arts/science sixth-forms respectively. ($P = <.0001$). Though he was careful to avoid saying his divergent subjects were also 'creative' subjects, nevertheless there are interesting personality differences between the two types of boys. The divergers are more flexible, sociable, fluent, prepared to express their opinions in unusual, unrealistic or anti-school ways, and prefer cultural and political activities to out-of-door, practical ones. Lovell and Shields (1967) indicate that their group of I.Q. 140+ children have personality trait ratings of Gregariousness,

Leadership, Health, Physical Energy and Cheerful Outlook. Presumably, as with Terman's larger group of high I.Q. children, and in agreement with the earlier reports on the distinctiveness of divergent abilities apart from I.Q.s above 110/120, many of the children in Lovell and Shields' group would not exhibit marked divergent qualities. However, on the subjective plane of personal impression, this writer(s own experience of children whom he would consider to possess above average creative powers is that they have personality characteristics similar to those listed by Lovell and Shields, and that such children usually are intelligent enough to stand out above their more average fellows. Though this judgement may be the product of a halo effect, as will have been made clear in chapter 2 above, academically backward children do have completely equal opportunities to show creative abilities in non-academic media, and in an informal classroom, can do so as ably as highly intelligent children. But there are not many children who regularly shine as frequently or brightly in even non-academic activities as the child does who is also highly intelligent.

Finally, no review of the psychological work on creativity would be complete without mention of the great industry of Torrance, and his co-workers at the Minnesota Bureau of Educational Research, who were concerned entirely with creativity amongst children. Rather than examining the possibility of there being a distinctive 'creative' mode of thought, Torrance has been concerned with a practical methodological approach to classroom behaviour that might be termed creative. Much of his work has been directed to suggesting, in a number of books intended for teachers and parents, that the talents and capabilities (he calls them creative) of too many children are concealed under, or inhibited by intellectual, peer, administrative and teacher pressures. To help identify

such children he has developed a large number or divergent test instruments of a type used by Guilford with adults, but repeatedly modified after use by himself and others in large sample work. From the investigations he has published, this writer has selected those aspects of his work that are relevant to the present investigations. Much of his work is based on the premise that writing is a skill that many children find difficult, and this inhibitss their creative flow and, in turn, prevents them from being recognised. Thus, though he has developed, with Yamamoto, an elaborate scoring technique for marking an 'Imaginative Stories Test' he has emphasised frequently in his work that attention to spelling can be inhibitory, and that more investigations must be made into the desirability of testing children's creative talents by the use of varied sensory media. In his book 'Guiding Creative Talent' (1962) he pointed to a phenomenon that occurs regularly in his divergent thinking test work amongst children. During the 4th. grade (ages 9/10) there is a marked deterioration in most children's performances in divergent tests. The drop in performance is thought to be due to a number of possibilities: acquisition of other skills; and teacher, parent and peer pressures involving ostracism, segregation into groups, disparagement of what is not conventionally acceptable, stereotyping, competition and compromise. Of course, humiliation and anxiety often accompany these. Later, around the 7th. grade (ages 12/13) Tomance considers that another, though slighter, dip in creative activity is due to adolescent peer pressures to conform rather than be divergent. In reporting on responses to divergent thinking tests in a study of children in six other countries, he mentions (1964) that where there are few cultural discontinuities in a country's educational system there is no drop in the developmental curve. But a similar drop to that in the U.S. at ages 5, 9 and 13 takes place where there are

cultural discontinuities. The tests used were three non-verbal and six verbal divergent thinking tests. Regarding the personality of the creative child, he echoes many of the findings of other workers. The highly original person has strong needs for change, intraception, autonomy and heterosexuality, and low needs for order, succorance and abasement. He does not find the highly creative child has a strong sense of above-average purpose, or above-average perseverance in seeing a task through to a successful conclusion; on the contrary, such a child usually has a low endurance capability. This difference from the conclusions of workers with adult subjects is reconcilable with the recollection of the great gap in ages that is involved here. Torrance's subjects are children whose immature control over a lengthy task, whether intellectual or physical, soon becomes exhausted and requires fresh mental stimulation. Torrance's work (1962, 1965) on creative peer criticism, inhibition due to some aspects of writing follow-up such as negative teacher criticism, training in manipulation, generalised stimuli and teacher reward of originality, has been incorporated into the training programme of the main experimental group in the present methods experiment.

2. The Significance of Psychological Research on Creativity, for Creative Writing in Schools.

Divergent thinking tests, it seems clear from the above views and evidence, still require long-term validation, using as criteria the eventual adult behaviour which can be considered original and creative in a meaningful way. It can be said, from evidence of Torrance and his associates (1965) that such tests do help identify children who have an aptitude for unusual (though not always useful) original and creative ideas, capable of being tested and

expressed in a variety of perceptual modes. Such aptitudes can be identified either generally or as abilities in specific situations. (Lovell and Shields, 1967).

From the cumulative evidence of investigations such as those of Yamamoto (1965)(.51 and .54 for two, wide range I.Q. groups) Cropley (1966)(.51) and Lovell and Shields (1967)(.73 creativity summed scores, with WISC full scale .76 loading, on the first dimension of a Principal Components Analysis) there appears to be a far higher correlation between divergent thinking tests and conventional verbal I.Q. measures than had been thought to be the case, previously. Such divergent tests, or,as they are more often called by American psychologists, creativity tests, are thought, by this writer, to be more appropriately referred to as intelligence/creativity tests (abbreviated hereafter as 'I.Q./Cr. tests'). The name creativity tests, has too strong an inference of testing a separate cognitive mode that is not sampled by conventional I.Q. tests, and this cannot be completely accepted, though, as will be argued below, there is a good case for using I.Q./Cr. tests in addition to I.Q. tests, in school situations.

Though their heavy verbal content leads one to consider the value of comparing performance in I.Q./Cr. tests with the subjectively assessed ability to write creatively (and an exploratory comparison is made as part of this investigation's methods experiment), there is, of course, far more involved in creating an integrated and intensely personal piece of writing than the ability, say, to create unusual connections or situations. This writer accepts that I.Q./Cr. testing in schools can identify and provide a teacher with a general and a particular indication of children's abilities to think unusually, originally, and to good, useful purpose, yet such tests are no substitute for conventional methods of assessment of school creative activities. Similarly,

in adult assessments of creative activities, subjective rather than objective criteria for the degree of a man or woman's success in their work must be applied. In other words, creative writing must be assessed by criteria that is generally accepted as being applicable to such writing; and since subjectivity is called for, that criteria must be generalised and flexible enough to permit individual variation of judgement.

In the case of the present investigation, other interesting though more speculative implications arise from Yamamoto's confirmation of the way that correlations between I.Q./Cr. test scores and I.Q. test scores drop with rises above an approximate I.Q. level of 110 in both of his two school samples covering a wide range of I.Q. These speculative implications are dependant on acceptance that I.Q./Cr. tests sample children's potentialities for open-ended school work, such as creative writing, art and craft whose activities are not too closely controlled, movement P.E. and drama, and unusual organisation of topic approaches to History, Geography, etc. As stated above, this writer considers tests are likely to indicate a particular perceptual or a general ability only to think on lines that will be helpful to the development of open-ended school work. A busy teacher, particularly one in a secondary school who does not have the same children for most of the time, is likely to miss potentially creative children, who, for some reason or other, have poor verbal development.

Given this assumption of the limited usefulness of I.Q./Cr. tests in school, Yamamoto's work (1965) shows that a person's intelligence may be a causal factor, and a common factor certainly, with the functioning and development of open-ended thought. This is further strengthened statistically by the conclusion of Yamamoto's, secondly,

that when a certain minimum level of intelligence is present in an individual (around 110 I.Q.) there is a decreasing correlation with I.Q./Cr. scores. Previously, McKinnon had said, "It is clear, however, that above a certain required minimum level of intelligence which varies from field to field and in some instances may be surprisingly low, being more intelligent does not guarantee a corresponding increase in creativeness. It just is not true that the more intelligent person is necessarily the more creative one."[1] If there is even partial truth in this argument of 'the threshold of intelligence', then this country's di-chotomising of the school population at the age of 11, perhaps peculiarly reinforces the two-way correlation between intelligence and intelligence/creativity, with a watershed at the very dividing point of I.Q. 110 which determines the type of work done by children for the rest of their lives, usually. Though the results of the testing done on children at 11 years of age determine the eventual aims of the school course that the dichotomised child population follows[2], different emphases in approach within even the same type of school are likely to be evident, and these emphases create a new set of variables which the above theoretical construct will affect differently and which will be worth examining.

Since the dividing line of I.Q.110 effectively creates two distinct secondary school populations in this country, we shall consider the possible effect of 'the threshold of intelligence' argument on the likely combinations of three alternative situations in which the two populations might be compared with one another. It must

[1]McKinnon, D.W.(1964).

[2]This is as true for most comprehensive schools, since they have streaming usually between (though more rarely within) classes, as it is for grammar and secondary modern schools.

be emphasised that a true comparison would lie somewhere in between any of these combinations. The theoretical combinations may be useful in helping form hypotheses regarding the likely outcomes of the schools' work sampled in the main investigation and the likely results in the methods experiment.

Looking at the first possible combination of English work, it is unlikely that less intelligent children would compare well in creative writing with their more highly verbal I.Q.-endowed contemporaries, when both groups are taught on similar formal lines. This is especially so when, in the opinions of many English specialist teachers, these same intellectually superior children are failing to achieve high enough standards in English writing.

Secondly, should both types of children be taught to write creatively, with similar aims and methods to those mentioned in chapter 2 above, the determining influence of general intelligence, below a level of about I.Q. 110 should - again theoretically - limit these children's chances of doing as well as those with I.Q.s around and just above 110. Hence, the more highly intelligent group should write more creatively than the less intelligent group.

Thirdly, if the lower I.Q. group approaches English using creative writing as one of the bases for the subject's development, and the higher I.Q. group follows a formal G.C.E. course with little or no work on the lines suggested in chapter 2, then there seems a probability that the superior verbal I.Q. group will not develop in creative writing as much as the lower verbal I.Q. group. The higher verbal I.Q. group may well attain and maintain a higher absolute standard than the lower verbal I.Q. group, but in this combination , it seems likely the latter group might well register a greater degree of improvement in writing.

Thus, even though a child population with I.Q.s rising over 110, it is suggested, is unlikely to possess a proportionately greater ability to think divergently in general and write in ways that are unusual, original or vivid, yet this higher I.Q. group ought still to write in a creative way significantly better than the children who have not such high I.Q.s. However, as case number three above suggests, this hypothesis is likely to need modification for the lower verbal I.Q. group possibly improving more than a higher verbal I.Q. group which does not have the benefit of a child-centred English course. It is hoped that the main investigation will be able to present evidence supporting or refuting this third hypothesis, since all five schools taking part purport - according to the Heads of their English Departments - to take account of modern thinking about the teaching of English writing. But it should be noted that the three grammar type schools naturally have to follow an intensive G.C.E. course, unlike the two secondary modern schools. And though all five schools may attempt similar child-centred, experience-based creative writing work, it is uncertain whether the skill of a good teacher combined with the relatively effortless verbal performance of superior verbal I.Q. children can overcome adverse timetable and curriculum influences. Such factors as external examination requirements controlling literary content, and a whole timetable loaded with closed-ended, impersonal, reasoning and memory work allowing little time for supporting activities of a creative nature would seem to militate against the growth of mental attitudes likely to help creative English writing.

Intelligence is, of course, for most school subjects, of over-riding importance. This is the case, as argued above, in mental activities leading to creative English

writing. But perhaps more than for any other school subject other than spontaneous drama, creative writing activities - and most adult creative activities - are, almost by definition of their having a personal creative element in them, peculiarly susceptible to variable personality influences both in an integrated sense of the person's total mental experience and in the immediate effects of personality at the time of writing creatively. For does not personal creative writing involve an intimate drawing upon present and past experience, blended into one inseparable whole?

Up to the age of 11, during their less examination-geared junior school lives, children from lower socio-economic group homes (whose I.Q.s, it should be remembered, have been shown in numerous investigations to have a marked skew towards below average values[1]), have strong compensatory experiences crowding in on them. This is mainly because children at this age range are at a stage of rapid perceptual development, but it is also because the school has time, and considers it important, to present a range of experiences (both involving direct primary source experience of some kind, or through some form of secondary source such as books, films, other people) embracing the directly relevant human and natural environment, in a wider range than most homes do. Any advantage arising from early childhood is possibly limited, therefore, to the intellectual advantage of a stimulatingly higher level of verbal intercourse, together with the deeper level of absorption of higher social attitudes and values due to superior intelligence.

At pre-adolescence and early adolescence for both socio-economic groups of children, physical growth that is so rapid in most cases as to be enervating is

[1]This is inevitable, in view of the level of verbal activity in homes that are in the bottom half of the socio-economic scale, and the fact that most I.Q. measures are biased verbally.

accompanied by less keen and exhaustive perceptual exploration but greater fantasy and day-dreaming activity directed towards anything peer or adult, and away from anything considered childish. Thus, the content of the secondary child's creative writing undergoes a change in content, unless corrected by a stronger perceptual sense or a conscious control over imagery. Description using the main sensory modes as bases for story or narrative departure does not seem as natural or as frequent as at the primary level. Without natural ability, creative writing appears to veer into a narrative form of what the child finds exciting, and because he does not use his sense perception in such a strong, vivid way, the narrative's grey is only relieved by consciously directed adjectival and adverbial insertions.

This is probably particularly so for children from the top half of the socio-economic scale, who have, by this age, more fully adopted the values of their parents at a deeper level than would appear to be the case from the increasing parental-child rifts, and rush to gather under the nearest protest banner. A minority do ostentatiously throw away inhibitions of their more cultured, middle-aged (usually) home environment; for example, the thraldom of home is eagerly exchanged for the 'freedom' offered by drugs. For the majority, the escape route lies through starting work, or going to college or university. But, as a generalisation, this socio-economic group's early adolescent behaviour is usually marked by considerably more inhibition of habits and social behaviour generally than is the case of children from homes in the lower half of the socio-economic scale. Hence, the greater freedom of the latter group of children and the comparative absence of early neuroses should mean they remain more open to sensory exploration, to expression of

emotion and lack of inhibition in generally setting out their ideas. Whether this freedom of expression can struggle over a possibly more inflexible school routine than in the junior school, and through a greater verbal disability than the higher socio-economic group - assuming that there is a significant personality difference between the two groups - is doubtful. Once more, one comes back to the primary importance of the teacher, working in the most adaptable way permitted by the framework of the system.

One must have qualms, too, about comparing 'gifted adults' with children who can write creatively in a gifted way. Secondly, one must guard against assuming that children who are successful on divergent tests, or who are intellectually gifted, are therefore creative. However, the considerable literature exploring the backgrounds of gifted people, and sometimes - as in the studies of Terman, and Lovell and Shields - examining the personalities of gifted children is most relevant to this work and must be reviewed[1] because of the number of intellectual and personality characteristics that are probably common to both an intellectual and a creative child and adult.

There seems to be agreement that creativeness, seen in terms of behaviour on divergent tests, is associated with intelligent children whose home backgrounds are free from financial worrying and material insecurities, whose home backgrounds are permissive in regard to behaviour at home, and permissive about friends and school upbringing. (Getzels and Jackson, 1962). Though Eysenck (1960) points to introversion as a trait evident in creative persons, Hudson (1962, 1963) and Lovell and Shields (1967) found that above average intellects (who were also more divergent in the case

[1]See pages 58 to 61 above.

of Hudson's subjects) were all correlated with characteristics of extraversion, gregariousness, and cheerfulness.

It is possible for the teacher of creative writing to help the writing of such gregarious and extraverted children to develop by arranging, occasionally, a lesson that permits such children, after first choosing their subject-matter, to move freely about in groups of 2 - 4, around the classroom or the school, to experience directly their chosen primary or secondary source subject. This, of course, permits rather than inhibits the expression of their personality, and in turn, should help their writing.

Getzels and Jackson noticed that teachers tended to regard children, who were noted for high intelligence and were well-mannered and conventional in tastes, opinions and behaviour generally, more highly than the group of children who scored highly on intelligence/creativity tests and were lower on I.Q. tests. While we may take exception to equating divergent tests as identifiers of persons who behave creatively, we have accepted that they may draw attention to children who show aptitude - verbally and spatially - for unusual, original, humourous and generally open-ended thinking, who might otherwise pass unnoticed, and whose thinking might be capable of expression in creative behaviour in the classroom and at home, with suitable encouragement. It is confirmed that teachers in this country who, confronted with the necessity to identify Originality amongst their high I.Q. pupils, think in terms more of reasoning ability than "in terms of inventiveness or unusual ideas; or it may be that 'creativity' measured by these tests is too specific and at times too trivial to be noticed by teachers."[1]

[1]Lovell, K. and Shields, J.B. (1967) p.207.

If there is a common factor or factors underlying the ability to score highly on I.Q./Cr. tests and performance in creative English writing and other creative activities in school, then the findings of Torrance, on repeated occasions, that dips in open-ended test behaviour occur at certain ages (9/10 and 12/13) has obvious significance for any study such as this, and requires bearing in mind when the results of the main investigation are examined. There are, moreover, wider implications if it could be shown that drops in performance of conventional school work, as well as perhaps drops in the more open-ended types of activities, take place at the same ages. It is especially interesting to note that the drops in divergent thinking performance occur at around the very ages at which it is proposed children will enter and leave the new Middle Schools. One might suppose if there is any foundation for this theory, then even more serious upset would occur to children by transferring them to new schools at these two ages than is the case at present where change takes place at age 11. (One must add the caveat that a drop in actual school performance is speculative at these ages, in the absence of research applied specially to the problem, and that the idea of Middle Schools is partly mooted to overcome the generally accepted upset at age 11, where children in the junior schools are reaching exceptionally high standards, particularly in the kind of open-ended work that is soon to almost disappear when they enter secondary schools).[1] If a decline at 9/10 and 12/13 does take place in school work of a conventional or open-ended nature, the causes of it are, perhaps, partly sampled by the slight drops in I.Q.

[1]There are many other reasons, but perhaps the most important of all, apart from this type of school enabling class teaching to continue the smooth development of highly promising individuals, is that it will enable children, at all stages of mental growth, to grow in ways that would not be so smooth and stress-free were transfer to a system of specialised education at 11 years of age to take place.

that are evident in the range of ages 7 to 13 of 1353 representative Aberdeen schoolgirls. As the following table shows, slight declines in mean scores of these children's performances on intelligence tests occur at ages 9 and 11. Though they are admittedly slight, they are from a large population and follow a similar age pattern to the one pointed to by Torrance with his samples of children's performance in open-ended work. As Nisbet and Illesley (1963) say, the tests - with the exception of Schonell's Essential Intelligence Test administered at age 9 - were all Moray House tests "intended to be,and generally are, comparable with one another."[1]

Table 1. Mean Test Scores of 1353 Aberdeen Schoolgirls, Representative of all Social Classes. (Computed from Table 3 of Nisbet and Illesley's 1963 BJEP paper).

Age	7	9	11(1)	11(2)	13
Mean Score	101.3	100.8	101.0	100.9	101.1

Furthermore, with a similarly large sample of children (1159 New Zealand 7 to 14 year-olds), an investigation by Ford (1954) into the number of words used in various types of composition, reveals a decline in the growth rate of words used at ages 10/11 and 12/13 by girls in narrative description.

Whether there really is a significant decline in conventional schoolwork at these ages - possibly hinted at by the above I.Q. means - in British schools has neither been established nor disproved. While speaking of the development of intelligence, Vernon (1960) said that after the final year of the junior school "there is little further improvement in the average secondary modern pupil." He goes on to emphasise that"our knowledge of such growths and declines is admittedly rudimentary."[2] This is underlined by

[1]Nisbet and Illesley (1963) p. 171.
[2]Vernon, P.E. (1960) p. 104.

investigations such as that of Nisbet and Illesley who were trying to find out if early puberty affected test performance of schoolgirls in a favourable way. No significant favourable improvement in test scores was found, considered from this physiological point of view, "though it is possible (some may say probable) that the onset of puberty affects aspects of mental development which are not measured by the tests used."[1] One can conclude that closed-ended reasoning, as measured by conventional I.Q. testing, shows only slight variation at different ages; other types of mental development - such as may be partly sampled by I.Q./Cr. tests - may show a more marked variation.

Finally, one other investigation by Torrance (1965) must be mentioned. He designed a methods experiment to test the effects of two kinds of criticism on children's creative effort: creative (i.e. constructive and positive) and critical (obstructive and negative). Immediately after the two treatments, subjects of all ages showed no significant divergent test gains after 'creative peer evaluation' compared with negative criticism. Positive peer criticism - especially for the child who is adversely sensitive to the glare of whole class attention - is valid practice in any school activity. It is hardly surprising that the gain in performance was significant for most ages.[2] Teachers generally try to aim at this ideal in all their work, though the negative traces in our English marking habits have already been commented on. Positive criticism - both by teachers and using peers in a similar way to that of Torrance - is suggested for the full experimental group in the methods experiment.

[1] Nisbet and Illesley (1963) p. 175.

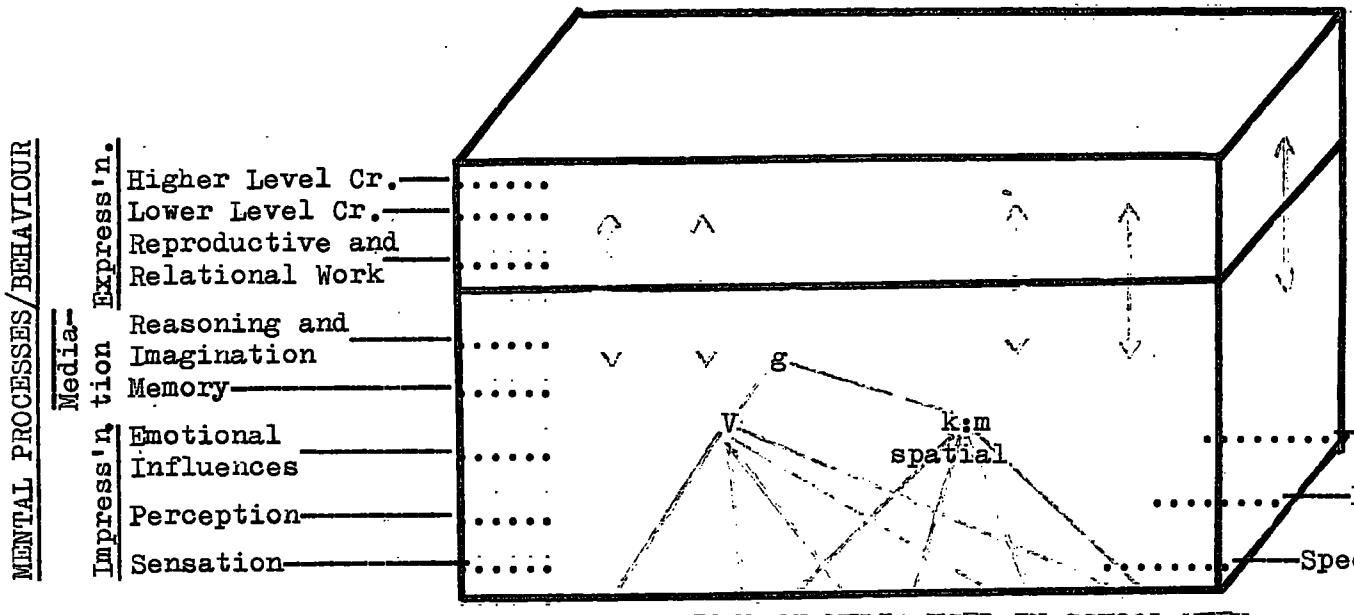
[2] Torrance, E.P. (1965) 'Rewarding Creative Behaviour,' Chap.11.

3. Theoretical Model of the Structure of Intellectual Processing of One Week's Media in Typical Junior and Secondary Schools.

Figure 1, on page 77 - an amplification of Eysenck's Model of the Structure of Intellectual Processing (1953) - offers a useful means of understanding the possible interaction of junior and secondary school media (with their significant variations) with intellectual behaviour that has, as its highest achievement, Higher Level Creative Behaviour, or Genius. This model has the advantage of being in the form of a hierarchical framework in which the many facets of intellectual activity are governed by the general factor of intelligence whose operation is seen at its height when, probably above an I.Q. level of 110/120, it combines with various favourable combinations of personality to produce, in a few rare cases, Genius.

As stated in chapter 2, this writer considers that most children's creative writing falls within the category of Lower Level Creativity because, unless it is outstandingly different from most other child writing, it cannot be considered to be comparable with mature adult creative expression of the highest order.

The model is to be understood as offering a tentative interpretation of the proportionate amount of time spent on various media in junior, secondary modern and grammar schools (or streams within a comprehensive school) during a typical school week. The secondary modern and grammar streams of a secondary hybrid nature, whether this hybrid be within one building or a change of names only for the constituent schools in their former buildings with everything else progressing as before, will follow their respective types in the model. Whatever the variation



APPX. PROPORTIONS OF MEDIA USED IN SCHOOL WEEK

	Verbal	Number	Aesthetic	Kinaesth.	Music
Junior School	(incl. Eng., Hist., Geog.)		(incl. art and craft media)	(use of body - PE drama games)	
S.M. School	Verbal	Number	Science and Tech. / Art and craft	PE and Games (girls-drama)	Music
Grammar School	Verbal	Number	Science-(Gram) Sc. and Tech. -(Techn) / Art and Craft*	PE and Games* / Art	Music*

(N.B. In many gramm. and Tech. schools, subjects marked * disappear from the T.T. completely at the top end of the sch.)

Figure 1. Theoretical Model of the Structure of Intellectual Processing of One Week's School Media.

in media between schools that may be allowed to a child, the latter's mental behaviour will involve most of the 'Mental Processes' distinguished, with important variation in achievement being due to the variable qualities that the child brings to bear on the media available to it.

The behaviouristic thesis suggested by the model follows the theoretical mental processing that Hebb (1949) has suggested takes place both in the growth of the cortical assembly and the phase sequence, and the concept of the A/S Ratio. Within the general setting of Hebb's theory, but from an ethological approach, the concepts of Lorenz's (1950) theoretical model of instigation, illustrating the theory of innate behaviour patterns[1], has relevancy for the model if we substitute for 'action specific energy' the amount of time exposure and the relative strength of impact on a child of the 'Media'.

As has been suggested earlier, an indispensable means of helping the mental development of children, especially when one is concerned with such children's creative expression as is seen in the original, unusual recombination of material in writing, lies in allowing them considerable exercise of their sensory perception as a stimulation for writing. This exercise, according to Hebb's A/S Ratio theory, is of fundamental importance for the whole development of intellectual life.

In the theory, Hebb draws attention to the nature of the slow control which sensory and primitive parts of the brain establish over the proportionately larger association areas. Hence his A/S Ratio postulates that the larger the association areas of a species's brain, the longer will be the initial period of learning required to structure

[1]Lorenz demonstrates the connection between the rate of flow of 'action specific energy' and the hierarchy of response.

these areas and bring them under the control of sensory input, and in turn enable them to differentially ignore on occasion those same sensory impulses. In the case of the human being, Hebb was obviously referring to the lengthy process of maturation in a mental sense that is required from birth. The writer feels that this process of sensory stimulation having the power to affect our thoughts in a very vivid way does not suddenly become redundant even for the more highly intelligent child at the age of 11+. For example, one can point to the preparation and content of the work of mature writers and poets who exhibit such strong sensory awareness in their work. Thus, the manner of approach and the timetable spread of lessons or activities in grammar-type schools or streams should contain opportunity for frequent practice of sensory awareness, especially in English periods. And if this is correct for highly intelligent children, it must be even more true for children of average and below average intelligence. The thought behind the methods experiment is partly based on this speculation.

Hebb's theory, and this writer's extension of it, are both in accord with Piaget's concepts of the stages of reasoning that the child passes through, during its school life. Understanding Piaget's suggested age divisions as being mental not chronological ages as he suggests, we can broadly accept the approximate ages of thought transition as being: pre-operational thought up to age 7, concrete operations up to 11, and the final stage of operations which are structurally whole - propositional or formal operations from 11 onwards. (Piaget, 1947). As indicated above, children and adults still require stimulation before writing from as strong a sensory stimulation as possible, despite the fact

that after the age of 11, most children's thinking follows formal operational lines. It may be that secondary schools of all types presume too much on the sensory experience of children having become saturated through over-familiarity, or having become redundant through the mental development of a formal operational nature. Be the cause either or both of these, secondary schools of a non-academic nature that do not suffer from a formal external examination system dictating to them in a progressively shortening five-year race to G.C.E. 'O' levels, certainly seem to place less reliance on preparatory work of a concrete nature than do the junior schools.

In the model, verbal activities are shown in a pre-dominant role, partly because they pervade most school activities, and partly because the stress laid on the importance of language in a child's perceptual, conceptual and social development in its second and subsequent years by Piaget (1947) seems to this writer to offer an extremely convincing account of the really vital influence of language on a child's growth. How far the model is correct in using titles that are common to dissimilar activities is less certain, for in the case of grammar schools, verbal activities carried on from one part of the curriculum to another are very different from both the less closely reasoned but still highly teacher-controlled verbal work in the secondary modern, and the initial stumblings through to increasing fluency that are more open-ended and less teacher-controlled in some junior schools.

While there is room for argument about differences in approach to the same basic tool media such as verbal and number, there is less room for argument about the respective proportions of remaining media in the three types of schools' weeks; nor can there be much disagreement

about the change in approach from junior to secondary schools of all types that takes place in the media of art and craft, in the media of P.E. and drama and in the universal secondary school specialisation that effectively divides up areas of knowledge with little meaningful use or connection between any of them. Indeed, the change in character and value of art and craft media use between junior and secondary schools epitomises this. From being invaluable tools helping children enrich every other part of the curriculum, they become isolated 'subjects' in the secondary school with average and below average children, and vanishing 'subjects' in the secondary school with above average children. For the majority of grammar school children who do not show some special talent that can become examinable there is - early on in their school careers - a choice between forgoing either art or craft. By the time the children are in the upper half of the grammar school, craft activities vanish altogether, and at the top end of the school, so does P.E.

These more obvious 'open-ended' activities do, themselves, change in character, with child-choice of subject-matter becoming rare, and a strong teacher control correspondingly more evident. The latter is understandable and necessary during boys' woodwork and metalwork because of the potential danger, but choice only begins to emerge for the select few in art, craft and needlework who are judged competent enough towards the middle and end of their school careers. While many enlightened secondary modern and comprehensive schools do allow freedom of choice and individual exploration in subjects such as History and Geography, pursuit of a syllabus or inability or unwillingness on the part of a subject master to attempt the extra burden of work that would be necessary if he was still to keep a guiding balance of work done to meet syllabus requirements, restricts the appearance of freedom of choice. The same

is true in the formal junior school.

Perhaps drama is one of the greatest subsidiary aids to a child's creative attitudes and its openness to experience. Here again, the same word 'drama' has different connotations for junior and secondary teachers. In the secondary school, it is understood and practised in a radically more formal way (when it is on the timetable at all, in the case of boys) than it is in the primary school. The really valuable work of drama becomes possible only when there is unscripted teacher generalised direction, always permitting a wide range of individual interpretations. Given this type of framework to the lesson, a kinaesthetic expression of any part of the curriculum's work (except for number computational though not spatial activities) is possible. Drama is the development of a maturer and less fantastic infant 'music and movement' type of work, usually without any music at all in the junior school. It is hardly ever used 'in vacuo', since it takes its stimulation from most parts of the curriculum. In the secondary school, this open-ended type of work largely disappears, except in secondary modern girls' schools. Where it appears on the timetable as a 'subject', from the writer's questionings of local and more distant secondary girls' teachers, it often degenerates into teacher-inspired set-piece, contrived, 'spectacular', in which individual interpretation has to be sublimated to the requirements of the teacher's direction. Because of subject divisions, the drama teacher cannot be blamed for not knowing what is 'going on' in the classes' experience of Historical events, or English stories and experiences. However, in all types of secondary school, tremendous effort is annually (or even worse, twice a year) put into the rehearsal and production of some adult playwright's work that usually refers to the culture of a past age. A tiny percentage of each school's child population tries to interpret

what the English or drama teacher thinks the playwright meant.

For most of our more intellectually able children, these differences between junior and secondary distribution of media must have some effect. Let it be stressed again that the present writer acknowledges that society's needs for highly specialised arts and science graduates is of paramount and overriding importance. Some would say that our abler school products should be as highly specialised within the context of a broad and general education as it is possible for them to be. However, because of the shortness of time and the requirements of society, the grammar schools must seriously discipline most activities that are inessential - so the argument goes - for their more able pupils to fulfil the function of the grammar school: most grammar schools proclaim with justifiable pride the size of their sixthforms, for it is from here that children leave the school after gaining the highest levels of attainment in a few specialised subjects. But the whole theoretical part of this thesis rests on the argument that these same highly intelligent children will become more efficient in their formal learning if creative English writing and an essential minimum of open-ended activities, such as art, craft, drama and non-examination literature (i.e. listening and reading for enjoyment) have room in the time-table made for them. The majority of formal subjects leading up to important external examinations should become more meaningful for pupils who might seek to apply a fresh questioning in attempts to structure their learning. At present, if it is true that most highly intelligent children with I.Q.s around 110/120 are also the ones who behave the most creatively, then their greater and more successful exploitation of aesthetic open-ended opportunities in their junior

school days will force them to make an even severer set of mental readjustments than their less skilled (intellectually and creatively) contemporaries. Thus, if in creative writing, grammar school children maintain an absolute superiority over secondary modern children, it would seem likely that the former's sheer verbal ability, overcoming the disappearance of most complementary aesthetic activities, is the cause of this. It would also seem likely that any superiority will be despite the grammar schools, and not with their help.

The large re-arrangement in type of media, especially the disappearance of most open-ended work, might possibly accentuate a junior school-fed need for such work. Perhaps this is unconsciously realised by the above-average intelligent/creative population in streamed forms or schools. Could it be, therefore, that children turn to the next best type of secondary school activities that offer a substitute for these regularly-enjoyed junior school activities? Could it be that they intuitively feel their aesthetic potentialities are being starved, where before they were being promisingly sustained? Could the drift of grammar school pupils to arts and away from science choices be because we are not giving our more gifted children even a minimum chance to think in ways that are not involving closed-ended reasoning and memory work tied to an examination syllabus? If this drift away from science is to be corrected - and it is obviously vital that it should be - then either the primary schools are wrong in teaching children with the free variety of media to be seen in most of them, or the grammar schools will have to guarantee a minimum liberalisation of the curriculum that could well have the same beneficial results on standards as it appears to have had in the junior schools. One of the hopeful features about comprehensive schools is

that not only should the late developer be able to change to a more academically suited course in practice as well as in the present theoretical state of transfers, but the already academically streamed benefit from curricular and social contact with the less intellectual majority. However, there are a lot of 'mights' in this phenomenon of a drift away from science, and the remedies cannot be decided - no matter how theoretically convinced one might be - until the contributing causes have been accurately identified.

Turning from variation in media to the dimension of Quality, Eysenck (1953) has argued that intelligence testing should make allowance for variation in speed and power. Later, in Eysenck (1967) attention has been drawn to a significant correlation between Speed and I.Q., and Power seemed more related to personality. As Eysenck says, "most workers in the field of intelligence testing disregard personality factors altogether, but this is almost certainly a mistake."[1] This writer has modified Eysenck's dimension of Quality by the addition of 'Set or Style', which he feels to be an important theoretical variable, partly determined by personality, partly by intelligence, and considerably by teacher influence. This is based on a summation within the writer's mind of the speculations of many creativity theorists and of the way children's writing can be influenced by alerting the writer to be more open-minded to previously unseen possibilities, in the ways outlined in chapter 2. Set or Style probably affects a person's Expression in the dimension 'Mental Processes/Behaviour' perhaps as much as does variety in Media. But a Set or Style of thinking will remain superficial if it is induced by only a single teacher, or even a succession of teachers; as soon as the teacher's influence is withdrawn, other stronger influences will prevail. Getzels and Jackson

[1]Eysenck, H.J. (1967) p.88.

(1962) saw the problem this way: "boldness in thinking, free rein to the imagination, and creativity in performance will not be easily forthcoming through piecemeal lessons and artificial stimulants. What is needed is a change in the entire intellectual climate in which we - the parents and the teachers - as well as the children, function."[1]

This may be very desirable, but it has clearly limited chances of ever becoming more than an ideal while society places primarily an emphasis on the acquisition of the highest possible level of attainment in a purely utilitarian learning, and while educationists do not believe there is any other way of achieving such a level than by intensive and rigorous closed-ended memory and reasoning work, with minimal sensory aids to help this activity become more real and meaningful.

Possibly this situation comes about through ignorance, on the part of formally-trained and formally-experienced teachers and educationists, of the possibilities of transforming mere rote learning into something really useful and meaningful to a child.

Or it may be due to the conservative, professional, 'teacher' attitude coloured by a knowledge of the alien appearance and behaviour and thought of 'artists', 'flippant humourists', 'questioners who are just trouble-makers', or merely people who seem 'different' from the professional educationist. Further, this prejudice may be strengthened by the fact that the forms of creative expression are often far removed from the clearly reasoned, academic atomosphere of education in its traditional academic forms. The creative person may be a manual worker, or a product of one of the lower classes of the Registrar-General's classification of workers. Such a person may be thought by the traditionalist to have little to do with the real business of scholarship and learning, and this, of course, is partly true. But what is our learning,

[1]Getzels and Jackson (1962) p.124.

our knowledge of the world about if ultimately it does not take cognizance of human life, and the activity of such men as miners and navvies, and such women as those whose daily work is passed in sweet factories. And the fact that creative work can appear from, and about, such circumstances is often sufficient to cause all creative work to be regarded as if it is from another universe of existence, and of no relevance to a secondary school teacher's special subject.

Teachers being the products of their own system must have some considerable adverse influence, too, it seems reasonable to suppose. Most secondary school (and junior school) teachers never experienced any opportunity for open-ended work themselves, and yet appeared to manage all right. So why should they yield precious timetable space to suchlike activities when time and examinations at the end of time are so remorseless in their movement towards one. It is hard enough under the present way of working to fit in everything, and anyway, nobody has conclusively proved that open-ended work does help children when there is just so much sheer learning to be done, and little time for questioning or really relating this learning to the reality of 1968, let alone the particular needs of a teenage child.

It is hoped that the present writer has demonstrated that, at the very least, a case exists for investigating the effects of a continuance or a minimum amount of open-ended work for all children working through an academic timetable. This open-ended work for all children (to stress that the whole population should be involved) could most profitably be examined firstly in its effects upon academic subjects from co-existent open-ended work in subjects such as English, Art and Drama, and secondly, by examining the effects in other schools that are prepared to introduce a minimum of open-ended work into the actual

teaching of those academic subjects, as well as retaining throughout all levels of the curriculum the subsidiary open-ended subjects of Art, Craft and Drama. Perhaps Schiller (1963) is right in saying that "Change in the educational system of this country is like the wriggling of a worm, with the wriggle still having gone only one-third of the way from the tail."[1]

Finally, the only comment felt to be necessary in an otherwise self-explanatory dimension of 'Mental Processes/Behaviour' is that 'Emotional Influences' has been placed under 'Impression' and immediately before 'Mediatory' Processes because, as Eysenck has mentioned, emotions clearly affect any central mediation even to the extent of determining the content of the input as well as the subsequent processing.

That this heading 'Emotional Influences' might have been placed equally well anywhere under the conveniently distinct but actually integrated with one another 'Impression' and 'Mediation' processes emphasises a final comment that must be made about the whole model. As already stated, it was based originally on that of Eysenck's (1953) which he stripped to a bare minimum number of features to serve as a guide/criterion of the measurable qualities of a well-constructed test. The main intention behind the development of this model is to present by means of a relatively simple visual display an insight into some of the possible psychological and institutional variables that seem likely to affect creative development favourably and unfavourably. The model certainly makes clear that there are many complex, interacting variables, both in terms of what different types of school

[1]Dr. Schiller of the London Institute of Education, at the end of the programme, in the ABC/TV series reviewing trends in modern educational practice in Britain, that worked through the writer's primary school. Autumn, 1963.

present to children, and as a theoretical essay in showing with what qualities and through what processes children can bring a series of conscious and inter-dependent mental activities to bear on their school's presentation of media. It is also suggested that the model goes some way to emphasising the hierarchical nature of intelligence, as well as the way that creative behaviour of the Higher Level type is certainly dependent on a great number of intellectual processes, and cannot be considered to be a separately functioning mental faculty distinct from the influence of general intellectual development. Expressed creative behaviour, rather than creative behaviour of the intellectual process type just mentioned, is considered to be one of the highest forms of expressed behaviour, the other being the type of thought of a closed-ended nature that a person with an extremely high intelligence is likely to use as a basis for behaviour. Expressed high level creative behaviour is a natural, though not inevitable, summation of intelligence, personality and environment, and it can be elicited - given a minimum apposite 'mix' of these three variables - from children in a short-term way by an individual teacher's influence on the set or style by which such children are led into approaching their work. (This assumes, of course, that most children do not naturally exhibit creative behaviour of any substance because of repression from a number of sources). If the set or style of approach to any situation is to become permanent, then assuming that the environment and the other two variables were forcing a teacher's intervention in the first place, the only chance lies in the child coming into contact with other teachers who have a similar interest in developing a more open-ended type of thinking, or being in a school where the time-table contains enough open-ended activities to allow

creative behaviour to develop despite the majority presence of teachers concerned only about traditional methods of learning.

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B. Some Previous Studies of Creative Writing in Schools, and Previous Investigations into Creative Writing in Schools.

1.Anecdotal Studies of Creative Writing and Creative Writing Assessments in Schools.

Apologia for creative writing, intended for parent, teacher and general public reading, are usually in a form that presents the author's personal experiences in helping children to write in a fluent, imaginative way about matters of interest and importance to them. Such books usually fall within one of three headings - small accounts of successful school methods; fuller treatments of creative writing problems; and symposia offering a number of views on the subject.

Margaret Langdon's book 'Let the Children Write'[1] is a good example of a teacher's efforts to help children break through inhibiting, foreign, 'school English' and write fluently using a type of emotive, sensory experience, partly stimulated and supported by a balanced presentation of mature literature, especially poetry. Her initial method was to lead the stumbling thought of the whole class, with the children writing a short line (in poetry form) after she had drawn attention to some aspect of the stimulus. In this way, all scripts had a common form but different content. As a way of eliciting writing from children not used to free creative expression, it would seem likely to achieve a first movement of minds recording personal impressions in writing, quite successfully. But the teacher variable - as with all single methods - would seem more important than with reliance on a number of 'methods' or influences which are not all so dependent on one teacher's close control. The present writer considers a more generalised, open-ended cross-subjects approach is desirable, on the lines of chapter 2 above, and in accordance with the argument that a single teacher is

[1]Langdon, M.(1961) 'Let the Children Write.' Longmans.

unlikely to achieve more than a short-term 'set' towards creative expression. He is in agreement with Margaret Langdon about the often-heard injunction to 'write a certain minimum quantity of writing' being undesirable. This cry, amounting to a teacher failure to understand that it should never be said to children because it causes further inhibition of fluency, is totally unnecessary where children are interested in experiences they are writing about and are not fearful of adverse teacher comment about spelling, etc., for they will write just as much as they feel to be necessary. However, there are two qualifications that can be made to Margaret Langdon's further conclusion that quantity in writing is no guide to quality. Quality is independent of quantity, but only after a minimum (and variable) amount has been written in order to enable a judgement about quality to be made. Secondly, children who have a higher than average verbal intelligence, and find writing relatively easy, naturally write more than the averagely intelligent child does. Hence, though one cannot conclude that because a piece of writing is longer than average it is also better than average, it is nevertheless likely that the third factor of intelligence which causes the writing to be more fluent and expansive than the average child's might be, enables one to generalise that quantity may well indicate the presence of quality; marks and quantity of words written over all three samples in the main investigation will be correlated to determine if a positive relationship exists.[1]

A fuller treatment of the problems inherent in children's creative writing is to be found in David Holbrook's 'The Secret Places'.[2] Holbrook uses examples of the content of

[1]See Appendix M.1 for an example of marking at the top of the scale being related to the lengths of scripts.(cp. Schools 1, 2 and 4 with Schools 3 and 5).

[2]Holbrook, D.(1964) 'The Secret Places.' Cambridge U.P./Methuen.

children's writing to argue that the fundamental case for creative writing rests on therapeutic grounds. Such writing affords a means of healthy mental sublimation and growth for the secondary child from internal frustrations and inhibitions due to parental restraints and lack of understanding, and due to school attempts to continue teaching children from an irrelevant curriculum by means of boring and meaningless methods. Secondly, creative writing permits the child to gain insights into true values and experiences of life which a materialist society, with trivial and mediocre values (cp. Freya Stark's thesis on mediocrity being the enemy of excellence at the end of chapter 2) that seek to abuse through over-stimulation for commercial purposes, is attempting to pervert. He adopts a post-Freudian view, citing as his authority on what is happening in children's minds "psychologists from Freud to Melanie Klein."[1] The nature of the mind's processes is the determining influence on his attitudes to secondary school methods: simile is not mere external decoration to be inserted; "Our experience is only known through an apprehension suffused with fancy and imagination."[2] The formal textbook tries to "limit such processes (of imaginative English usage) to mechanical rules and in doing so, it kills the life in them."[2]

He emphasises the importance of actually using language in a "rich and varied reading, writing, talking and listening."[3] Holbrook asks how, since creative sustenance is so lacking, and the need for it unrecognised by society, "shall we ever convince utilitarian authorities that children's imaginative powers are at the root of all their faculties?"[4] Lastly, Holbrook suggests that inhibition of children's expressive powers of all kinds, besides being encouraged by society's and

[1]Holbrook, D.(1964) op. cit. p.115. [2]p.226. [3]p.70. [4]p.156.

the secondary schools' denigration of the arts, by trivial and neurotic culture (motivated by commercial interests) that feeds unhealthy fantasy, is also caused by increasing peer pressures linked to sexual awareness. It should be borne in mind that like much of the first part of this thesis, Holbrook is - for the most part - speculating and theorising.

At the risk of being pedantic, the present writer, even though Holbrook's thinking is basic to his own thesis, considers that the ready acceptance of this book[1] is part of a most undesirable trend (that has always been present in any society but that appears to be rapidly increasing today) to accept uncritically anything new that is given general, and if possible official, approbation. It is important that, as in all educational matters that might have far-reaching effects upon a country's development, a book such as this should go out of its way to distinguish between what is theory and what is proven fact. It is important because such distinctions help clarify points at issue and avoid the danger of misunderstanding, and worse still, passing on this misinterpretation to others.

It simply is not true that deterioration in secondary school children's writing has been established. To have an impression of such deterioration or a feeling of unease at the state of secondary school children's writing is quite different from saying that such deterioration exists on a wide scale. However, as has been made clear earlier, the present writer agrees with Holbrook's central contention that what matters - for there can be no disagreement about there being room for improvement in writing - is that secondary school children's English writing can become more fluent through development of creative writing ability. This will help their powers of communication and provide at the same time a means

[1]Like that of Getzels and Jackson's in America, and now, despite the qualifications and doubts about discussing creativity as though it were a separate ability from intelligence (reported in 3 A above), it seems that a creativity bandwaggon has been set rolling in this country, judging by Coll? of Educ. requests for creativity books from the Leeds Institute of Educ. Library.

of helping personal maturation and exploration of human experience, as well as general insight into what is truly valuable, sincere and beautiful in life, as distinct from what is superficial, misleading, abusing, or merely expedient.

To conclude this brief review of previous studies of what might be termed 'popular literature' intended for general consumption (without implying anything derogatory) two studies from a symposium[1] of a different nature - intended for specialists in English - must be mentioned. Both deal with problems of assessment and measurement of English compositions. One raises the question of how far have English teachers changed their assessment criteria over the last 40 years, and the other argues that not only is assessment of a comparative nature meaningless, but it also does direct and indirect harm to the children being assessed.

A short report by Mittins (1960)[2] gave the writer a cue on preparing the five judges who were helping him with the main investigation. Mittins published in the 'Use of English' journal three short compositions which he invited the journal's readers to "rate in order of suitability for grammar school entrance." He described how Boyd (1924) had the same three essays graded by 271 teachers about 40 years ago.[3] The original judges placed them in the order B-A-C, showing that they were making primarily a verbal technique assessment. The 1960 judges were about evenly divided between the 1924 order using verbal as the main criterion (B-A-C) and the order C-A-B. Over the years, "comparative unanimity about criteria has given way to serious differences," and, in Mittins' words,

[1]Jackson, B. and Thompson, D.(eds.)(1962) 'English in Education.' Chatto and Windus.
[2]Mittins, W.H.(1960)'Marking Composition' in Ch.VII of the above.
[3]Boyd, W.(1924)'Measuring Devices in Composition, Spelling and Arithmetic.' Harrap. Copies of the three essays are at Appx. D.
[4]Mittins, W.H.(1960) op. cit. p.180.

half of the modern judges "are mainly concerned with personal communication."[1] The almost equal division reveals that they "are more acutely and uncomfortably aware of the competing claims of individual authenticity and verbal technique, that this tendency is restrained both by an awareness that personal quality is less susceptible of reliable assessment and by an irresistble feeling that verbal sophistication is the more important factor for grammar school purposes."[2] It is unfortunate that only 18 modern judges took part in the assessments. If one could assume that these judges who were interested enough to reply to Mittins' invitation are representative of secondary school English teachers, and not just (as they probably are) grammar and comprehensive (G.C.E. stream) teachers, then the state of English writing in secondary schools would not seem to be as bad as the protagonists of creative writing would have us believe. If the respondents are grammar school teachers, then one might justifiably hope that the fortunate children in their schools, starting with a strong I.Q. advantage, should be able to develop their writing to a high level of creative ability. Against this, however, many of the 18 modern judges intimated that verbal techniques would have to gain priority over other assessment criteria, thus implying that they expected the children's ensuing grammar school English work would be concerned with work of this verbal technique type.

O'Malley (1950) was equally concerned, as were some of Mittins' judges, with the difficulty of marking imaginative composition.[3] His views on imaginative composition "as the summit of English teaching" and his view that "Politicians,

[1] Mittins, W.H.(1960) op.cit. p.180.
[2] ibid pp.182 - 183.
[3] O'Malley, R.(1950) 'Measuring the Inner Light'. Originally published in 'The Use of English' and now in 'English in Education.' pp.184 - 191.

engineers, ... teachers and other technicians exist chiefly in order that there shall be artists,"[1] are both in accord with the present writer's placing of 'Higher Level Creativity' at the summit of the theoretical model on page 77 above. O'Malley's criticisms of attempts to measure this type of writing are well-argued as well as being important ones: children are variably motivated to write on different occasions; there is little likelihood of a number of judges agreeing on criteria, and even if they do, there is no guarantee they are marking by any particular criterion because the same words of the criterion may have different meanings for different judges; to obtain greater reliability in marking, one tends to narrow down towards certainty of agreement by elimination of controversial elements, and in the case of imaginative writing, one would be in danger of cutting out consideration of the very material that differentiates one script from another; and further, "those who shape our tests shape, in large measure, the content of teaching and even some of its ideals."[2]

This writer accepts O'Malley's main criticism that comparative assessment of children's imaginative writing is unreliable since children's writing behaviour varies from one sample to another. He further accepts that usually it is true that measurement by "marking or grading on whatever plane will always favour the substitution of the measurable and technical for the unmeasurable and essential."[3] One has to seek refuge in the reply that most children are more adaptable than is generally realised, and that the handling of samples by statistical procedure recognises to as high a degree of stringency as one desires to apply, that bias, error, and individual subject variance must be allowed for. Thus, if one

[1] O'Malley, R. (1950) op.cit. p.184.
[2] ibid p.189.
[3] ibid p.190.

can obtain a reliable assessment in which reliability does not increase with a proportionate loss in validity, then this data arising from imaginative writing can be as carefully handled as data from any other tested material.

O'Malley would have been correct in saying that the latter achievement is impossible if conventional marking systems are used: if one gains in reliability it has to be at the expense of validity in measurement of the qualities that go to make up a piece of imaginative writing. But investigations such as Wiseman (1949) and Britton, Martin and Rosen (1966)[1] have demonstrated the high reliability of the multiple-view method of marking English compositions by quick impression - known as multiple marking - and the way this seems likely to obtain a high validity measurement of the subjective qualities of imaginative work. Thus, the resultant mean view of a variety of individual judges' opinions on any single script has robbed O'Malley's arguments about reliability and validity of much of their strength. The only way a multiple impression marking method will still fail to allow for variety in subjective but reliable assessment will be in the case of the child whose writing performance is so unstable as to be subject to really extreme fluctuation in writing behaviour. And even in such a case, over a number of years of samples of that child's work, this can be detected in comparison with his own previous, and his contemporaries' work. O'Malley, additionally, is against marking or grading children's work in rank order before the whole class, because imaginative ventures - "private raids on the inarticulate' need sympathetic response and criticism, but not assessment."[2] It is clear that

[1] Wiseman, S.(1949) 'The Marking of English Composition in Grammar School Selection.' BJEP 19.3.
Britton, N.J., Martin, N.C., and Rosen, H.(1966) 'Multiple Marking of English Compositions: An Account of an Experiment.' Schools Council Examination Bulletin No.12. H.M.S.O. This latter investigation is reviewed at the end of the present chapter, and the marking results are frequently compared, in Part Two of the thesis, with those of the present investigation.

[2] O'Malley, R.(1950) op.cit. p.190.

what he fears is the succumbing of teachers to the general need for order, uniformity, and absence of variety when comparative grading is to be carried out on the work: "the differences that are the mark of living opinion must not be squeezed out in the quest for quick, statistically demonstrative objectivity."[1] A personal teacher reaction is what is required. In this sense, it is irrelevant to the child to compare his own intimate, personal confidences with other children's. The present writer fully agrees with this, and regards internal classroom comparison (through public marking or rank ordering) of imaginative effort as harmful, insulting and irrelevant to the child's advance beyond its previous effort. Also, he agrees that O'Malley's fears about classroom intrusions by conventional marking and examination criteria considerations are justified. However, if schools who have external examinations to consider know that multiple and subjective views are to be taken, and, indeed considered to be desirable, in the case or each script, this danger can be minimised.

2. Previous Research into the Development and Assessment of Creative Writing in Schools.

Most of the published work on creative writing, of a similar literary type to that reviewed in the preceding section, is subjective. Because of the nature of the material it is not surprising that, as Sampson (1964) points out, "relevant scientific studies are scarce."[2] The scientific studies published are almost all in the journals and are easily accessible; it will suffice in this section to draw attention only to their relevant findings in a much briefer way than was possible where reference had to be made to anecdotal sources.

[1] O'Malley, R. op.cit. p.190.

[2] Sampson, O.C.(1964) 'Written Composition at Ten Years as an Aspect of Linguistic Development.' BJEP 34.2. pp.143-150.

Of the studies that recent scientific writers quote, most are concerned with detailed linguistic analyses as means of assessing development in writing. Though such analyses as those of La Brant (1933)[1] (using a 'subordination index'), Chotlos (1944)[2] (using the 'type-token' method), and Sampson (1964)[3] (using these two methods plus impression marking), all found clear indications of increasing complexity of word usage with age, they were all concerned with gaining a detailed knowledge of the development of language rather than attempting to assess the more intangible general creative qualities of a whole piece of writing. Such techniques are invaluable in providing a meaningful and precise understanding of the constituent parts of any piece of writing. They reveal the presence in writing of particular elements in more exact ways than are possible by mere inspection.

Schonell (1942)[4] and Burt (1942)[5] have both referred to a relationship between attainment and length in written composition. Ford (1954)[6], with 1,159 children aged between 7 and 14+, using four different types of topic, found the average number of words written increased from a mean of about 70 at age 7+ to about 210 at age 14+, with large deviations from the means within and between the four types of topic. The subject of essay length is considered as part of the main investigation, and takes the form of a word count and analysis

[1]La Brant, L.L.(1933)'A study of certain language developments of children in grades four to twelve inclusive.' Gen.Psy.Mono. 14.5

[2]Chotlos, J.W.(1944)'Studies in Language Behaviour. IV - A Statistical and Comparative Analysis of Lang. Samples. Univ. of Iowa Monograph 56.2.

[3]Sampson, O.C.(1964) op. cit. BJEP 34.2.

[4]Schonell, F.J.(1942)'Backwardness in the Basic Subjects.' p.370. Oliver and Boyd.

[5]Burt, C.(1942)'The Backward Child.' p.330. U.L.P.

[6]Ford, C.T.(1954)'Developments in Written Composition during the Primary School Period.' BJEP 24.1; pp.38 - 45.

of differences between sex and school types' performance in the number of words written.

Of Ford's four types of topic, the closest type of writing to that of the present investigation was 'Narrative-Descriptive' on the subject "Home". The data of the children's writing on this topic have been extracted and are shown below in table and graph form for later comparison with the data from the present investigation.

Table 2. Data of the Mean Number of Words Written by 1,159 New Zealand Schoolchildren, by Age and Sex. (Extracted from a larger table in Ford (1954) - table 1.)

Narrative-Descriptive Topic

Age		7	8	9	10	11	12	13	14 +
Boys	N.	20	63	81	91	99	119	80	42
	$\bar{x}$.	88.5	88.9	118.7	141.6	154.0	177.4	188.3	195.2
	SD.	43.8	49.1	51.2	52.8	45.8	55.8	52.4	68.8
Girls	N.	27	65	85	93	82	94	82	36
	$\bar{x}$.	65.4	104.9	144.8	180.9	173.8	187.2	190.4	202.8
	SD.	26.0	55.9	61.4	56.8	55.0	61.4	76.4	74.6
Both	N.	47	128	166	184	181	213	162	78
	$\bar{x}$.	75.2	96.8	132.9	161.5	163.0	178.6	189.6	198.5
	SD.	38.1	52.9	57.2	58.2	51.2	59.8	65.2	70.4

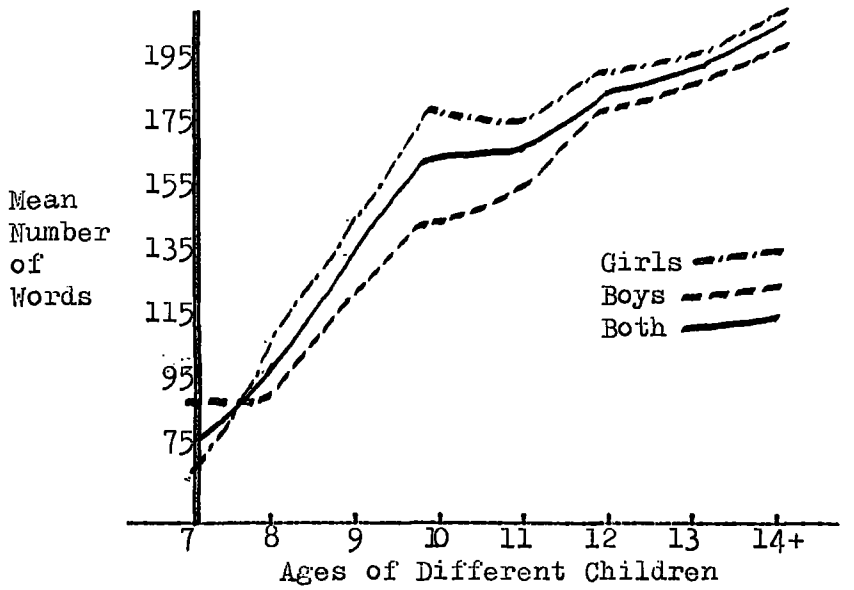
N.B. The 1159 children in the total sample are reported as coming from Canterbury, New Zealand. Ford warns that "in New Zealand, the more intelligent 13 and 14 year-old children leave the primary schools, so that ours was not a representative sample in the older age groups." However, the present writer considers the data for 13 and 14 year-olds worth recording here, since it is representative of average and below average ability children, such as will be found in the two secondary modern school samples in his own main investigation.

It should be re-emphasised that word counts and more complex liguistic analyses have a secondary value compared with the information to be gained from a number of judges' subjective assessments of the whole literary qualities of a creation such as a child's creative writing.

Because of the correlation between quality and quantity already discussed on page 93 above, this data can be said to give a very general indication of the possible developments in the quality as well as the quantity of the writing of these boys and girls at various ages. Figure 2 below

demonstrates more clearly the superior fluency of girls to that of boys and secondly, the presence of a marked loss of growth at approximately the same age as the American 4th. grade. It was in this grade that Torrance (1962)[1] reported that American children suffered a severe decline in creative work output. Further, at ages 12/13, New Zealand children appear to suffer from a similarly less severe loss of growth as do the American children observed by Torrance.

Figure 2. Graph of the Data of Table 2, Showing the Growth in Mean Number of Words Written on a Narrative-Descriptive Topic by 1159 New Zealand Boys and Girls, of Ages 7 to 14+.



The means of the number of words written by Ford's sample in the Narrative-Descriptive topic (that is closest to 'creative writing') were consistently lower than those of any of the other three topic types. This is partly explained by Ford as being due to a tendency - especially of boys - to be narrative rather than descriptive. Thus, the other three essays, which lent themselves to narrative better, resulted in more words being written by both boys and girls.

Girls were, over all four topics, generally superior in fluency compared with boys. Ford notes that scripts become more complexly constructed with increase in age, though there was not much "discernible improvement in quality" from one age to another. However, this statement should be seen against the fact (understandable in view of the large sample) that Ford's "qualitative assessment" was really no more than a subjective impression with no reported attempt at grading or moderation from other opinions. Bearing this in mind, he states there was a marked correlation "between these aspects (expression in composition) and high verbal intelligence."[1] This certainly is in keeping with the later psychological work which has established a positive relationship between intelligence and open-ended testing, though this only becomes really relevant when one accepts that open-ended testing and creative writing have a number of common factors.

This was one of the two inter-dependent hypotheses that Myers (1960) set out to test: "that divergent thinking abilities are directly related to successful creative writing, and that children can perform more creatively in their written expression as a result of receiving training exercises in divergent thinking."[2] He carried out a methods experiment dividing a class of 24 boys and girls aged 11/12 into two matched halves and, using one half as the control group, gave the other half "non-specific" training (i.e. no creative writing practice) involving working through assignments based on a battery of creativity tests. An essay was written after four months in which, according to Myers, little differentiation in training between the two groups had been

[1]Ford, C.T. (1954) op. cit. p.45.
[2]Myers, R.E. 'Creative Writing and Training in Divergent Thinking.' (47 pp.)(1960) An unpublished M.A. Thesis, Reed College, Portland, Oregon. p.iii.

achieved. Hence, when the first essay was drawn, there was no significant difference between the two groups. Two months later, a further sample of essays - marked as before by six highly qualified persons - produced a significant difference, ($P = <.005$). Because of the similarity between Myers' investigation and some aspects of the present methods investigation (namely some of this writer's suggested training exercises for his full experimental group had common emphases with some of Myers' 'creativity' exercises), and because what Myers was trying to do was test the existence of a relationship of particular interest in this thesis, the present writer re-analysed Myers' data by matching each trainee and non-trainee against itself rather than against one another. In this way, the writer felt he could see whether the trainee group and the non-trainee group had bettered their own first test performance after a training period in which Myers took over himself to obtain a more controlled differentiation in the training of the two groups. With the rank data given by Myers re-arranged as at Appendix X, and using the Wilcoxon matched-pairs signed-ranks test for small samples, a T value of 27.5 for the trainees and 27.0 for the non-trainees was obtained, as against a required T value of 11 or less for significance at the .05 level. ($N=11$ since one of each group obtained the same rank for both essays). It is possible to argue that since the first essay was written four months after the start of the experiment, by the time the first essay was written, both groups of subjects had altered from their original condition and were so close to the mental state in which they wrote the second essay that there is not likely to be a chance of a significant difference for either the trainees or the control. This criticism, however, is not a strong one for two reasons: in Myers' own words, "the two groups were really not differentiated in their learning experiences"[1] and the

[1]Myers, R.E. ibid p.24.

training was not given regularly, hence at the time of essay one the children could be considered to be untrained; secondly, even if one assumed the two groups had progressed considerably by essay one, there was still a two-month interval before essay two was drawn, during which a more controlled programme was administered by Myers personally. One would have expected the trainees to show at least a significant gain in rank positions and the non-trainees a decline, but in fact the reverse happened though the direction was not significant.

One cannot, therefore, be confident, on Myers' evidence, that creativity exercises alone train children to write originally and well. This writer feels that such exercises may help creative writing, but there are many other variables than 'creativity test' type exercises involved, as his model on page 77 above has attempted to show.

Evidence to support the premise of this thesis that creative writing improves considerably during the final year of the primary school is presented by Sharples (1967)[1]. From the repetition of three essays in five primary schools he found "significant improvement" in composition performance during the final year in the primary school. Possibly bias from repetition may have crept in, but presumably this was allowed for. Further, he found a uniform improvement in all five schools. As was the case with Ford's word count, girls were significantly superior to boys; so also were children from higher social classes, and small families.

The comments of O'Malley (1950), reported on pages 97 to 100 above on the grading and marking of imaginative

1Sharples, D.(1967)'Factors affecting the composition performance of ten year-old children.' M.Ed. thesis abstract reported in BJEP 37.1 pp.137 - 140.

writing, give an indication of the need for extreme sensitivity and care in setting out to consider the marking of such work, both for the sake of children's own writing development and, as here, where one really has to allow for the presence of a number of variables over which one has little control, or over which one has control provided initial preparation is adequately carried out. Suggestions of criteria which the markers are to apply while examining writing comes within the first category since no matter how carefully thought out, or however valid the criteria may be, there is no guarantee the markers will be influenced by them.

Marking practice, in school and examination work as well as psychological testing of creative writing, seems to devolve into either analytic or impression, though sometimes a mixture of both types evolves. Thus, Yamamoto's (1961)[1] highly elaborate and reliable scoring scheme is probably ideal for measuring the constituents of creative writing in some analytical scheme of marking or as part of a battery of school attainment tests or creativity tests, for which, of course, it was designed. But this writer considers such a closely controlled scheme of marking, which gains in reliability precisely because it leaves little to a marker's subjective impression, cannot be said to assess validly an artistic creation in writing form. Presumably Goldman and Clarke (1967) advocate the use of an adapted, detailed scoring system based on Yamamoto's solely as part of any wider attempts at assessing 'creative thinking'. However, it does seem somewhat misleading, in considering such a deliberately objective and rigidly controlled method of marking, for them to talk of setting out "to discover more about the reliability of subjective interpretations of written material by a single and independent scorers"(sic)[1]

The most promising means of obtaining a valid

[1]Goldman, R.J. and Clarke, D.F.(1967)'The Minnesota Tests of Creative Thinking - A Note on Scorer Reliability....' BJEP 37.1. This scoring scheme was reported in Torrance (1965) pp.279 - 288.

assessment (that can be accepted with confidence) of children's writing lies along the method of procedure which Britton, Martin and Rosen (1966), following Wiseman (1949), examined exhaustively - that of multiple impression marking. Britton, Martin and Rosen's three teams of experimental markers, each with three markers whose rapid impression marks were summed into their particular team's composite mark for each script, after an additional fourth marker concerned with mechanical accuracy had added his mark, proved to be both more reliable and more valid than the official G.C.E method of marking by means of careful preparation, sampling and moderation of individual marker's work. (Reliability: lowest experimental r = .70[1], highest official r = .65 for a different paper from that on which the lowest experimental r of .70 was obtained - the official r for the same paper as the .70 one was .49; Validity: lowest experimental marking r = .66[2], highest official marking r = .57). The present writer has used a similar experimental design of marking, though without moderation from a mechanical accuracy marker.

[1] Britton, Martin and Rosen (1966) op.cit. p.25.
[2] ibid P. 24.

PART TWO

TWO INVESTIGATIONS INTO -

A. THE DEVELOPMENT OF SECONDARY SCHOOL CHILDREN'S CREATIVE WRITING

B. THE INFLUENCE OF SENSORY PERCEPTION ON SECONDARY MODERN BOYS' CREATIVE WRITING

PLANS OF THE INVESTIGATIONS

A. THE DEVELOPMENT OF SECONDARY SCHOOL CHILDREN'S CREATIVE WRITING.

B. THE INFLUENCE OF SENSORY PERCEPTION ON SECONDARY MODERN BOYS' CREATIVE WRITING.

A. The Development of Secondary School Children's Creative Writing.

1. Subjects and Methods.

This investigation is concerned with determining whether there is any significant trend in the quality of secondary school children's creative writing, considered over two single-year periods and the whole two-year period, from their entrance into school. Originally it was intended to consider children's writing over a period of one academic year, from September, 1965 to July, 1966, primarily because of thesis limitations of time. However, the writer decided - despite the appearance of some interesting trends after only one year - that this would not be long enough for many conclusions, other than very tentative ones, to be drawn. The main investigation was, therefore, extended by a further year so that a third sample of writing could be written at the end of the children's second year, in July, 1967.[1]

In any developmental investigation, the initial samples of work assume more than usual importance, since they have to serve as the criteria against which the subjects' subsequent performance is judged, and this is certainly the case in the present investigation. In view of the 'anecdotal'

[1]With the agreement of the judges - on whom the main burden of work falls - and the schools in the investigation, this writer hopes to continue drawing annual samples to gain a complete 5, 6 and 7 year view of the writing development of the subjects in their secondary schools.

opinions referred to in Part One of the thesis that most secondary school creative writing does not grow at as steep a rate of improvement in quality and fluency as it does in the final year or years in the junior school, clearly the desirable starting point at which to draw the first sample would be towards the end of the final year in the junior school. Unfortunately, a difficulty presented itself which seemed insurmountable in view of this writer's full-time teaching work: 21 primary school headteachers would have had to be approached for permission to have complete class samples written under as near identical, controlled conditions as possible. Inevitably, there would be considerable variation in conditions rendering later comparison difficult, apart from the physical difficulty of gaining unbiased co-operation from so many junior school headteachers. It was fortunate that this administrative difficulty and the likelihood of an undesirably wide variation in the conditions under which a first sample would have been written brought about the decision to take the first sample shortly after the children's entrance into their secondary schools. For an unforeseen snag turned the just possible into the impossible. The local boys' grammar school headmaster refused to consider co-operation at the time when preparations had to be made.[1] This compelled the writer, eventually, to approach a mixed grammar school in the next town, to whose school few local primary school children are sent; consequently, the writer would have been unlikely to have found even a sample of 10 first-year pupils who had been present in the junior schools that would have co-operated in the writing of the first essay.

Apart from the disappointment of not obtaining co-operation from a boys' grammar school, promises of help were willingly given by the heads of the mixed grammar

[1]Referred to on page 5) above.

school (whose pupils come from a different geographical, though socio-economically similar, catchment area to the other schools), the local girls' grammar school (which the boys' grammar was intended to match), one girls' and one boys' secondary modern school, and fifthly the technical mixed grammar school that draws children from the whole area but is in the same neighbouring town as the mixed grammar school. Though a straight boys/girls sex contrast for unmixed grammar school pupils was impossible owing to the school sample readjustment, this same readjustment was seen to be potentially valuable in that a contrast would become possible between those children writing in a single sex environment and those in a contrastable co-educational grammar school.[1]

Having succeeded in obtaining co-operation from five secondary schools, arrangements were made for all of the September 1965 intake of children to write the first essay of the investigation "sometime during the first fortnight of term"[2] while the children would still be essentially unaffected by secondary school teaching. This was requested by the writer, partly to compensate for his having been unable to draw a sample, from the junior schools, that could be considered to be a normal sample of junior school creative writing, to be used later as the criterion. It was also because he felt that an early writing - in strange surroundings and after a 7-week holiday in some cases - would help avoid the standard of writing being unnaturally upgraded due to the abnormally high state of motivation that children in new schools display in the forms of eagerness to please and obvious attempts to succeed. The counter-arguments that absence of writing practice and nervousness from entry into

[1] If inspection of the data from the small 10-child sample of each school justified it, a larger scale contrast of the creative writing of children in both types of school could be designed and considered fully elsewhere.

[2] The writer's letter giving suggestions for sampling procedures to the heads of the five schools.

formidably novel circumstances of timetables, bells, changing of classrooms, 'subjects', unknown teachers, children bigger than themselves, and, in the case of the secondary modern children, a possible sense of failure immediately after streaming, would combine to depress abnormally the standard of writing, might well be more valid than the former argument. Additionally, in the case of secondary modern children who were possible candidates for grammar school places, the familiar argument of depressed standards and failure has peculiar force when one considers that these are the very children whom one might expect to be comparable in verbal ability to the lower end of grammar school ability, assuming that they appeared in the random selection for their schools.

However, it was felt that overriding all else was the fact that children fresh into the secondary school, with hardly any secondary teaching affecting their thinking at all, were still, in reality, junior school children. And if,it is reasonable to suppose, comparison of relatively poor attainment in their first sample with later samples should show a definite improvement in the latter, any decline compared with such 'unsettled' scripts would be far more significant than if a decline was apparent after exceptionally good first scripts had been written.

Thus, the first essay was written in September, 1965, and what was originally intended to be the final essay (for the period to be surveyed by this thesis) was written at the end of the first year, in July, 1966. When a year's extension proved to be possible, a third essay was drawn from these children at the end of their second year, during July, 1967.

The ideal aimed at by most investigations in the behavioural sciences, and for obvious reasons, rarely achieved, is that of eliminating all unwanted variance other

than the variable to be examined - in this case 'writer variable'. For the elimination of such sources of unreliability, control must be attempted of variable factors such as 'classroom conditions' before and during writing, the 'assignment' variable which, in turn, can considerably affect the 'state of motivation of the writer variable.' This latter is distinct from the 'writer variable' under examination, at least in origin. The 'writer variable' can simply be described as a child's ability to write creatively, in the sense that phrase is defined in chapter 2.

Then, too, we are concerned with material that requires a subjective though mediated response in which the marker applies some consistent criterion. As pointed out earlier, one could obtain very high reliability by adopting a system of marking compositions such as was reported by Goldman and Clarke (1967). But this writer has argued that such a detailed system, which left little scope for the necessary subjective response of the viewer, analytically breaks up the creative activity into constituent parts without enabling enough weighting to be given to impressions of the creation's success or failure, as it subjectively appears to the marker.

Braddock, Lloyd-Jones and Schoer (1963) distinguished between two judging variables, 'rater variable' and 'colleague variable'[1] which will be examined more fully in the next section when the judging of scripts is considered, though we may briefly point out here that 'rater variable' refers to variability within a single judge's work, and 'colleague variable' refers to variability between judges, some of which is desirable in a multiple marking system.

[1]Braddock, Lloyd-Jones and Schoer. (1963) 'Research in the Teaching of English Composition.' N. Council of Teachers of English, Champaigne, Illinois: reported by Britton, Martin and Rosen (1966) in 'Multiple Marking of English Compositions.'

One of the considerations that the investigator was most conscious of was the necessity to obtain written work as similar as possible to the ordinary classwork of the children concerned. It was hoped that each school would have the essay writing administered by the classes' usual English teacher. But artificiality had to be introduced if the writing conditions between different schools - and even different classes within the same school - were to be standardised. Hence, the suggested procedure sent out to schools each time an essay was to be written (copy at Appendix B) was kept uniform, except for variation of words connected with the title changes. Times of writing within variable lengths of lessons between and within schools were standardised by suggesting the low maximum permitted writing time of 25 minutes. Since some schools in the investigation had short 30 minute lessons occasionally, it was felt that a specified period of 25 minutes would guarantee an uninterrupted period in which all classes could write. Further, the writer kept constantly in mind the work load of the judges, since there would be at least 100 scripts to order, and he took the view that 25 minutes should give the judges enough of the intended story for them to form a complete idea of the standard of writing by that child.

The 'assignment variable' was considered to be possibly even more important and more likely to be the cause of unwanted variance than even the 'rater variable'. For not only was it desirable for each of the two, and later, three, essays to be stimulating enough so that both boys and girls would be strongly motivated to write, but it was essential that the essays should elicit the same type of writing. A choice of title at any one time was not permitted, principally because it would increase the possibility of like not

being compared with like by the judges through adult preconceptions arising from different titles. Even within the same type of writing, it was felt that the titles set should be similar so that if motivation of a given strength was arousable by one title, then a year later the writer might be motivated in a similar way. It was also recognised that individual motivation together with personal growth in a general sense as distinct from the intellectual verbal growth that ideally was to be measured, would themselves vary, so rendering these arguments about subject motivation being constantly stimulated, weaker. However, additional to the above, the writer is indebted to a conversation with Armstrong (1965)[1] in which the latter took the view that a multiplicity of choice tends to confuse the child writer, rather than help it select the title most suited to it.

The initial choice of titles, it should be remembered, was to cover an intended survey of a one-year period; thus two titles were to be selected that would be interesting to both boys and girls aged 11 and 12 years old, and would be suitable for the stimulation of creative writing. The writer desired to suggest something that was capable of arousing such basic emotions as love, fear and anger. At the same time he tried to make allowance for a rapidly self-reinforcing tendency of secondary school children[2] to belittle childish activities and pursuits, and concern themselves with real or imagined adult activities.

[1]At present W.R.C.C. Educational Psychologist. In this capacity, he has afforded the writer considerable help over the last three years by 'liaising' with schools in the investigation during school hours when the writer was engaged in his own school. Apart from the necessity to oversee experimental work such as this being carried on in West Riding schools, he has done similar work himself: Peel, E.A. and Armstrong, H.G. (1956) 'The Predictive Power of the English Comp. in the 11+ Examination.' BJEP 26.3.

[2]Helped by the apparently unanimous acclamation of affluence, which in turn is only reached through adult employment.

Two titles were set, appropriately stimulating for boys and girls it was hoped, capable of arousing basic emotions provided self-identification had taken place, and offering an equally possible setting within either the child's or the adult's experience: "Help" and "The Threat".

Though the topics were similar (and this should give the judges an easier task of comparison), a variable effect on the subjects had to be allowed for at different times. Thus, the writer used a 'split-half' method, giving as near as possible to half the subjects (three schools) one title, with the other title being written on by the remainder. This would also serve to minimise any unconscious bias from judges, who were all familiar with the nature of the investigation, and who probably had views of their own on the rate of improvement or decline in secondary school children's writing. Since both titles were written on at both ends of the first year, it would be impossible for any judge to even 'feel he was certain' that one single title had been written before the other.

Later when the third title had to be devised, a close approximation to the first two was needed that at the same time satisfied the criteria of being a-sexually suitable, potentially able to arouse basic emotions, and child or adult orientated. The title was "The Stranger" and this was set at the end of the second year, in July, 1967. The main misgiving felt at the time the essay had to be selected was that the judges would possibly comprehend - and be unconsciously be influenced by - the presence of a new title that perhaps indicated this was the most recent piece of work, and possibly through being fresh work compared with the previously-seen scripts, might be more favourably viewed. However, at this stage there was nothing that could be done other than stressing to each judge the importance of seeing each script as if

for the first time, and making note that a possible cause of bias in marking had been introduced. Had the original intention been to sample work over two years, all three titles could have been written on by alternate schools on each of the three occasions of sampling. In deliberately ambiguous conversation with each judge prior to marking all three essays, the writer tried to leave the impression that this scheme of essay writing had been carried out. The results would possibly show any excessive preference on the part of one or two judges for the third essay over and above the general level of marking on that essay by the other judges.

To conclude this survey of subjects and methods, as will have been obvious from the above, the writer has, throughout both occasions when the design of the investigation was being considered, been highly conscious of the crucial role of the judges. Multiple impression marking is both reliable and valid, but the system is only as reliable as it is because of the care taken in the design stage of an investigation. However, from the subsequent marking performance of an inexperienced judge, the selection of the judges may not be as important as their common preparation for, and method of, marking. The administration of scripts and methods of marking are best left to the next section, but it would be appropriate to consider here the initial selection of judges.

The writer was fortunate in obtaining the help of five judges who were most co-operative in marking the increasing number of scripts. Since this investigation was about secondary school children's writing, the ideal panel of judges seemed to be - 3 English specialists teaching in secondary schools, 1 highly experienced person familiar with junior school creative writing, and 1 English lecturer in university or college of education. After trying four different secondary schools for help in judging, the writer succeeded in gaining an offer of help from only one English

specialist. Though this lone secondary school representative was on the staff of the technical high school in the main investigation, the writer was confident that he would not exhibit any more bias than the other judges who were unconnected with the schools in the investigation. This was supported by subesequent results. A college of education lecturer in English agreed to help, as did two highly experienced junior school headteachers, and one primary school head, who, incidentally, was one of the contributors of a school preface in the West Riding's symposium of children's writing.[1] Unfortunately, the team of five judges was not to remain intact, for at a point just before the final marking of essays began in August, 1967, the one representative of secondary school English died. It proved impossible to replace him with a comparable secondary school judge, who would have had to mark the first and last sets of scripts so that his work could be examined for reliability. And it would all have to be done within the space of two or three months so that there would be dangers of memory effects entering into the final marking. Since it was intended to have the investigation continued in future years, and five judges' impressions are better from a team reliability and validity point of view than four judges', the writer decided the above danger was outweighed by the advantages of having a fifth judge. He accordingly approached an honours science undergraduate whom he knew, with a view to considering his contribution as being that of an inexperienced marker. It was felt that this new situation of having a judge who had no experience of marking English work would give an indication of the efficacy of the marking criteria's power to guide such a judge. Thus, a fifth and inexperienced judge was obtained.

[1] "The Excitement of Writing" pp.27 and 28. Chatto and Windus.

2. Administration of Scripts, Judges' Marking, and Additional Measures.

The scripts from the first forms of each of the five schools were arranged alphabetically, with each school as an intact alphabet. Those children who were absent at the time of writing the second sample in July, 1966 were eliminated from the sample which was then numbered. Using a table of random numbers, and following a different series of numbers but using the same method for each of the five schools, 10 scripts were withdrawn from each school population to serve as the sample for that school, so giving a total of 50 randomly selected children. Varied code letters and new numbers were given to the blocks of 10 scripts, as shown at Appendix C, to lessen the risk of any judge unintentionally being influenced by a long run of consecutively numbered scripts which he or she might suppose to be from the same school. (The scripts were later presented in letter and number order: e.g. T.1 - T.39; U.11 - U.20; etc.)

The writer typed out all the scripts, correcting spelling mistakes and inserting obviously omitted full-stops and capital letters. Direct speech punctuation marks were inserted. Where any obvious word such as 'and' was missing, this, too, was inserted, though in red type. The whole point of corrections, of course, was that mechanical errors might slow down and distract the judges from the given criteria.

Each judge was given 100 typed scripts in code letter and number order. Bearing in mind the 3 given criteria[1] the judges had to establish a comparison standard by reading a dozen randomly selected scripts. After obtaining an idea of the standard, and applying the three criteria, all of the 100 scripts in the lst. Marking were to be quickly sorted into 3 piles, two with 33 and one with 34 scripts in.

[1] In Appendix D. para. 2.

The second, more careful sorting distributed the scripts from each pile into 3 associated marks: Pile A into Marks 9, 8, 7; Pile B into Marks 6, 5, 4; etc. Thus, the final rectangular mark distribution for each judge resulted in 11 scripts going to each mark with an extra script being allocated to one of the 9 piles.[1] Finally, the investigator obtained a mean mark for each of the 100 scripts, as at Appendix H, by summing the five judges' marks for each script.

The judges were asked to mark the whole sample of 100 scripts to one scale at the same time so that a direct contrast could be made between initial writing ability on entry to the secondary school and writing ability after the first year. This contrast, of course, was subject to the judges being able to set up a common frame of reference and consistently apply it during their own marking. Further, by having initial and final scripts marked together, it was felt that there would be less variability in the standards of the judges' attention to marking criteria.

An assessment was obtained after one year principally because this was to have been the terminal point considered in this thesis, originally. When the writer found that an extension of time was possible so he could include two years of the sample's growth in creative writing ability, he decided to retain the 1st. Marking data for the single first year for three reasons. First, the data enabled the formation, of a summed impression of the sample's writing ability growth during the first year, to take place. Secondly, it would permit additional evidence of inter-marker reliability to be presented and compared with the inter-marker reliability demonstrated by the performance of the judges in the 2nd. Marking at the end of the second year. Thirdly, the end of the first year marking performance of each judge on the first sample (S.1)

[1]See Appendix G for the marking methodology results, set out clearly.

and the second sample (S.2) scripts could be checked with the marking performance on the same scripts one year later, to give a measure of self-consistency on a near-identical marking task.

At Appendix D is a copy of the instruction sheet sent out to the judges with the first two samples of scripts written before and at the end of the children's first year. To give as clear an indication as possible of the type of writing that was being considered by this writer and others to be good creative writing, generalised criteria of the London Association of Teachers of English, mentioned on page 17 above, was given. A warm-up test on Mittins' (1960) three essays with enough information given about his study for the judges to check whether their judgement was biased towards 'verbal techniques' or biased towards writing as 'personal communication' was presented to the judges. A discussion by this writer of some aspects of creative writing was also offered to them.

In addition, on Judges' Sheet 3 (at Appendix E) the usual advice about setting a frame of reference or standard of marking in the mind, avoiding fatigue, and how best to sort the scripts so as to produce relatively easily a final order of marks was given.

The resulting rectangular distribution of marks (as shown in the mark sheet example given at Appendix G) constitutes an important departure from normal practice. In a 'normal' distribution 68% of cases fall within ± 1 s.d. of the mean, and 95% within ± 2 s.d. It was felt that following a rectangular distribution would force a far greater degree of differentiation among scripts than would have been the case if a pattern had been laid down to force marking to follow a normal distribution with about 68% of scripts about the mean. While a much greater individual script

differentiation was being obtained, the writer recognised that there would be statistical difficulties if the system of multiple impression marking and a good measure of agreement between judges did not result in the summed gradings producing a reasonable approximation to a normal distribution.[1] Non-parametric tests of significance and analyses of co-variance (which it was intended to carry out) do not require any assumption of normality of distribution, but many other tests or measures which might become necessary do require such an assumption. If the resulting distribution was approximately normal (to be determined by a goodness of fit test) then this investigation will have demonstrated that, for investigations which require a high degree of differentiation, given a team of reliable and self-consistent markers working within a multiple impression marking system, it is feasible to depart from a normally distributed pattern of marking.

Apart from the pattern of marking, the whole process of impression marking calls for examination with regard to the assessment of judges' reliability. The difficulty is that, if one argues that there should be differences, desirably, between the subjective impressions of judges reflected in their marking, how can one compare one judge with any other? Correlation techniques measure the degree of agreement between two sets of marks; if a

[1]Though, obviously, complete marker agreement would produce a rectangular distribution , even a slight lack of agreement it was expected, would tend to produce a distribution approaching normality when the 5 slightly differing judges' marks for each script were summed and averaged. An inspection of the summed mean scores at Appendix H and M.1 reveals variation between markers did occur in this way - there is greater agreement between judges in the cases of scripts judged to be best and worst, and less agreement the more one leaves the clearly best and worst in the samples. Thus, the great majority of scripts tend to receive marks around the overall mean.

large difference is reflected by a low coefficient, it is usually attributed in investigations of this kind to some undesirable source of variability, and conversely, a high correlation coefficient is interpreted as reflecting the probability that attention has been correctly paid by the judges to the same criteria. Britton, Martin and Rosen (1966) following Wisemans(1949) important exploratory investigation of multiple impression marking, are possibly correct in arguing that because of the necessity "to accept a degree of disagreement among markers, the inter-marker reliability within a team of markers cannot be justifiably quoted as an indication of the reliability of the marking."[1]

But while, in the usual sense, a coefficient indicating inter-marker reliability in impression marking that has to allow for this unknown but desired amount of variability from one judge's viewpoint to another's, cannot be viewed with the same amount of confidence, it can still be argued, and <u>is</u> by this writer, that the markers are attending to similar criteria when a positive correlation of fair size (say .45+) is shown to exist. The large measure of disagreement may be due to one, or a combination, of the factors of the abnormal amount of differentiation between scripts forced upon the markers, the desired different view-points of the same scripts, or the conventional cause of low correlation coefficients in subjective marking - a variable weighting (or almost complete absence of consistency in weighting at all) placed upon criteria by different judges. The writer, therefore, considers that inter-correlations between markers must be calculated and are valid assessments of reliability because although, in impression marking, deliberately varied emphasis is being sought from marker to marker, nevertheless, high coefficients betwen markers will

[1]Britton, J.N., Martin, N.C., Rosen, H. (1966) 'Multiple Marking of English Compositions.' para. 40, page 8. HMSO.

probably indicate that attention has been paid to the generalised criteria supplied by the writer.

To determine a team's marker reliability accurately, without requiring qualifications of any sort to be applied to the resultant coefficient, it would be more satisfactory to have at least one other matched team of markers working on the same scripts so that their multiple marks can be used, with the individual marker (or 'colleague') variability allowed for within the summed marks. The operation of two teams of judges over even a sample portion of the scripts involved in both investigations was impossible here because of the difficulty of obtaining additional qualified people besides the five in the existing team. Thus, this writer accepts the inter-marker correlation coefficient series and the individual and team measure of self-consistency mentioned below as being adequate measures of reliability.

An essential pre-requisite to any method of assessing marker reliability is an assessment of the 'rater variable' or degree of self-consistency in an individula judge's marking. This is so because each individual marker is the basic constituent of a team. And without checking self-consistency in marking on different occasions, high marker inter-correlations could mean that all, or most, of the judges have moved the weighting of their judgements in the same direction from one time of marking to another, a year later. Admittedly, this is not very likely. However, a second marking of the same scripts, together with marker inter-correlations does increase the extent of our understanding of what variation in the work of individual markers has taken place.

S.1, S.2 and S.3 samples of 50 scripts each were sent round for a second, final judging ('the 2nd. Marking'),

after the second year that these children had been in their secondary schools. Their scripts were marked in a similar way to that already described above at the description of the 1st. Marking. The marks of judges given to these three samples have been placed at Appendix M.1. From them, the marks given to the S.1 and S.2 scripts were rank ordered and correlated with the same scripts' ranks obtained from marks given in the 1st. Marking. Using a form of Spearman's coeffident of rank correlation, allowance was also made for the number of tied ranks in the manner shown at Appendix I.

Three further aspects of this investigation were considered. Two of them concerned the judging of scripts and the third is a preparatory move towards a more linguistic approach to an examination of the fluency of the children in these samples, elsewhere, as part of the longer-term study.

Recognition of the desirability of an individual view of each script on top of the suggested criteria was made clear to the judges from the very beginning. Though one must be cautious in accepting self-assessments of criteria used during what is largely an unconscious process by the judges when quick impressions are being formed, yet this writer considered that any explanatory light shed,on any systematic and consistent variability that might later become apparent, by any one of the five judges would possibly be helpful in understanding their conscious views on their own marking, and explain any unusual features. After the second and final marking, the judges were asked to say what,if any, additional features or important emphases were looked for in the writing. This also gave the writer an opportunity to ask two questions related to the judging: had attention been paid to traditional

grammatical aspects of sentence construction, etc., and had length of script influenced their attitude to quality?[1] Each question was dichotomised into conscious/unconscious parts. This was to ensure an answer to these possibly emotive aspects of marking: by inserting the possibility of unconscious influences being present, the judges had a greater chance given to them, perhaps, to deal with the inquiry without rationalising out answers which would show conformity with any line of approach to creative writing that they may have regarded as being conventional or desirable. However, the two categories of reply were combined by this writer to provide only one answer with the responses as shown in the results falling under only one heading of 'likely' or unlikely', depending on the original strength of each judge's reply.

Judges were asked to record the actual time spent on marking.[2] The number of sessions, average length of time spent on marking each script of a complete batch of scripts, were noted. The reasons for this small survey were, first, keeping a time log would probably help the judges maintain in their minds the need for a speedy quick impression, and secondly, such data might provide some kind of rough norm for the marking of scripts on a quick impression basis in the future, through the appearance of a common pattern in the sessions and time spent on marking each script. This can be further assisted through comparison between the marking achievements in time of the present judges and those who helped other investigators, such as the judges in Britton, Martin and Rosen's inquiry.

Lack of time, and the unimportance of quantity and linguistic assessment relative to assessments attempting

[1] A copy of the letter sent to each of the judges after the 2nd. Marking has been placed at Appendix M.3.
[2] A speciman time log is at the top of the mark sheet at App. G.

a subjective view of the quality of a whole essay as an integrated creation, compelled the writer to go no further than to examine the total number of words written in the 25-minute periods, and compare the number of words written by children of different sexes and different types of school.

A Footnote on the Problem of Validation.

Finally, mention must be made of the problem of validation. How can we be sure that the judges are really marking creative writing rather than some other form of writing they may have in their minds that they think is 'creative' writing? The answer is that we cannot be sure, because of the absence of any similar form of assessment in the five secondary schools solely to do with English writing ability, and the additional resources of judges and time to set up an ideal criterion other than from the present samples were not available.

However, marks are more likely to be valid if inter-marker correlations are high. Thus, although the present investigation offers no completely satisfactory means of checking the validity of the judges' marking, the presence of reasonable self-consistency and high inter-marker correlations can help one to feel more confident about the likelihood that the judges have been attending consistently to the criteria suggested (assuming that criteria helps form valid opinions about creative writing).

3. Statement of Hypotheses.

This formal statement of hypotheses has also been placed, for later ease of reference, immediately prior to the decisions upon them after consideration of the results in chapter 6.

H_0 = That there is no significant difference in quality between the creative writing of children entering grammar, technical and secondary modern schools and

the same children's writing after -

(i) the first year, and after the second year in their respective schools (i.e. single-year periods);

(ii) and after a two-year period in their respective schools - - -

- $H_o(a)$ - where the samples from all five schools are considered as a single group of 50 children;
- $H_o(b)$ - where samples from the five schools are compared with one another;
- $H_o(c)$ - where the later samples from individual schools are being compared with their own earlier ones.

H_1 = That there is a significant difference in the quality of the creative writing of secondary school children between their initial and later writing for the two periods stated above of -

(i) a single year, and

(ii) two years - - -

considered in the different groupings of

- $H_1(a)$ - a single group of 50 children;
- $H_1(b)$ - five groups representing five different types of secondary school;
- $H_1(c)$ - a single group of 10 children considered by itself.

B. The Influence of Sensory Perception on Secondary Modern Boys' Creative Writing.

1. Subjects and Materials.

Part One of this thesis will have made clear what is considered to be the importance of supporting and increasing the likelihood of a useful learning taking place through some strong sensory experience. This is believed by the writer to be so for all ranges of intellectual ability, but certainly for the levels of intellectual ability and

development found in lower forms of all secondary schools.

One may not have accepted the assumption of this writer that the child who can write fluently in the form of writing referred to as creative writing is also likely to be as fluent, or better, in performance at 'examination' English than the child who has been trained formally. Nevertheless, there are few who would deny that the ability to write perceptively about one's fellows and about the environment generally (and this the content of creative writing, usually) is worth cultivating, for the sake of the child's personal development.

The present experiment attempts to explore this theory, mentioned in the first paragraph of the section, about the importance of sensory perception for creative writing, by presenting a microcosm of the activities that one might find in two contrasting types of school English work: the first type of school, it is supposed, has children with the highest mean I.Q. of a catchment area's secondary schoolchild population, and is immersed in external English examination syllabus requirements; the second type of school is prepared and able to take advantage of the possibility that better learning ensues in cases where there has been a strong sensory[1] impression, of a primary and not a secondary variety only, on the children being taught. Regarding the latter type as being 'informal', two possible approaches in such a type of school are explored.

The experiment consisted of arranging the first-form English lessons of 3 classes of a boys' secondary modern school in different ways, providing a variety of treatment, but setting a similar weekly essay for each class to write within the framework of its own special approach.

[1]The writer defines strong sensory stimulation as being the presentation of some stimulus, capable of highly motivating children of that age, in a direct, primary way that permits them to experience it with as many different senses as practicable. At the other extreme of classroom stimulation is the the information conveyed by a teacher's voice or by books.

The highest mean I.Q. class (108.33 - Group I), usually taught formally by its English teacher, was to continue on normal lines of work, but without any strong sensory stimulation on even the occasional basis that the class used to experience it. Emphasis was to be on such traditional aspects of writing as the construction of sentences and the extreme importance of spelling, rather than on the story content. It was anticipated that this control group's higher mean I.Q. than those of the other two classes would permit it to retain a fair standard of writing without too much deterioration; even so, a decline was expected.

The second class (I.Q. 101.12 - Group II), was to be similarly deprived of varied and vivid sensory stimulation except for the single occasion in the week prior to writing the weekly essay. Then, it was to be permitted to sensorily experience, in as many ways as desired, the appropriate West Riding Schools Museum Service exhibit which the weekly title common to all three groups was based upon. The direction of attainment over the experimental period was not forecast, though it was hoped that despite having the lowest mean I.Q. of the three groups, this class would still out-perform Group I.

The full experimental group (I.Q. 103.5 - Group III) was to be given, in as many of the week's English lessons as possible, a specially arranged, flexible programmed of work that was designed to encourage open-ended approaches to stimuli, flent reading and writing, an enjoyment of literature, and ways of expressing any experience into writing that contains far more than the usual amount of <u>unusual</u> imagery. Spelling and grammatical accuracy were to be taught incidentally as and when the teacher felt that individual children were ready for some particular help. This group was expected to show the greatest

degree of improvement in the three groups: not only would its members have their interest aroused at least once per week in an identical way to Group II's, but they would have been taught how to experience in a more open-ended way, and further enjoy their experiences through efficiently incorporating them into writing. Moreover, there would have been no possible inhibitions developed in them through fearing grammatical and spelling errors and the consequences that sometimes go with them.[1]

The reasons behind the choice of the secondary modern school and these particular classes within it are of interest in that they reveal the practical considerations and difficulties that any part-time investigator considering such an experiment must be aware of.

The secondary school selected for such an experiment, first, had to possess an exceptionally co-operative staff in the English department since it would be impossible for the investigator to standardise the teacher variable by taking all three classes himself and, in any case, the experiment's value would be diminished if too much abnormality intruded into what were meant to be normal school conditions of work; Secondly, it was desirable that the school approached should be one whose curriculum would not be too upset by an 8-week experiment[2] interrupting the syllabus work of one class: the full experimental Group III obviously required all English lessons to be completely devoted to the experimental programme for the duration of the experiment. All five schools in the main investigation would have satisfied the first condition easily, but the two grammar schools and the grammar technical school were working to a syllabus that could ill-afford interruption for what amounted to the best part of a spring term. The writer felt he should not

[1]Detailed suggestions to each of the three groups' English teachers are shown at Appendices P, Q, R and S.

[2]As explained later, the experiment was intended to last for 8 weeks, but it had to be extended to 12 due to holidays, etc.

trespass on their time anymore than he had to already when the annual samples were drawn. Of the two secondary modern schools, he knew the headmaster and the head of the English department of the boys' school very well, and so they were approached, and agreed to permit the experiment.

The writer asked that the subjects in the experiment should be first-year children, for two reasons. Children newly arrived in the secondary school were likely to have fresh memories of their primary school experiences involving writing, after being exposed to, or during, some strong sensory stimulation. Thus, they would learn more efficiently in a programme of work that was similarly open-ended to the English work of the primary schools they had just left. Secondly, some of these first-year children would possibly be late developers and, as such, would be intellectually suitable for transfer to either the grammar school or the grammar technical school at the end of their first year. Therefore, the presence of higher I.Q. members in the sample than would normally appear in a broader sample from secondary modern schoolchildren would enable comparison to be made with the lower end of the ability range found in grammar and grammar technical schools. With reservations, therefore, any findings from this first-year secondary modern school experiment will have relevance for secondary schools of all types.

On entry into this school, all boys are streamed on the basis of verbal and numerical ability tests. (The writer feels he should add, especially in view of the poor reliability of school testing in general which is, nevertheless, still taken on trust and made use of by investigations such as Getzels and Jackson's (1962) in America, that subsequent additional non-verbal I.Q. testing of the top three of the first-year streamed classes in this

school confirmed the I.Q. ordering carried out by the school). The non-verbal I.Q. Test 3 for the top three classes gave the following results when it was administered for the present investigation.

Table 3. Means and S.D.s of the First Three Streamed First-Year Forms in the Boys' Secondary Modern School, Tested by Non-Verbal Test 3.

Group	Class	No. on Roll	I.Q. $\bar{x}$s*	S.D.s*
I	$1A_1$	33	108.33	7.14
III	$1A_2$	34	103.50	8.40
II	$1A_3$	35	101.12	9.08

* computed from the eventual sample of N = 24 for each class, selected in the manner described in the next section.

The top three classes in the school's first forms were chosen to take part in the experiment because of the second reason given above for the use of first-year children: the obtaining of a comparable I.Q. sample in a secondary modern school to the lower end of the grammar schools' I.Q. range.

Apart from considerations of I.Q. before allocating any class to a particular method of work, the factor of teacher variability was to be considered carefully. The class with the highest mean I.Q. was $1A_1$, and this was clearly the class to use as the control group (Group I) as nearly as circumstances allowed, along traditional lines of work, following a tight, time-influenced syllabus. By good fortune (or inevitable consequence?) these higher I.Q. children were being taught by the teacher who was the most experienced English teacher, as well as being "the most efficient of the three, with a tendency towards formal approaches"[1], according to the head of the English department. The incidence of the highest mean I.Q. and a formally-inclined teacher coming together in this class seemed extremely fortunate, but the writer was told by the head of the department that after the class had been selected as the control group which was not

[1]The head of the English department did not teach any of the three classes, and this lent greater objectivity to his words than might have otherwise been the case. He gave a full, supporting picture of the progress of the experiment.

to receive any special sensory stimulation for the period of the experiment, its teacher had expressed dissatisfaction with the whole idea. Though it had been made clear that normal English work was in order - other than where it might lead to an activity involving the boys in varied sensory perception as preparation to writing - this writer still felt that the control group teacher was so out of sympathy with the experiment that he was likely to stray consciously or unconsciously into some of the areas of the other two classes' work. This would have to be remembered when the results from all three classes were being considered. A combination of higher I.Q. children plus a teacher who was unsympathetic to the experiment might effectively cause a gain in writing quality where I.Q. alone might manage to merely hold its own against the deprivation of vivid and sensory stimulation prior to writing.

Since both the remaining classes had a similar mean I.Q. and range of ability, allocation to the remaining two different experimental treatments became a matter of assessing which of their two English teachers was likely to be the more flexible. The method of full sensory stimulation plus an open-ended programme of work in all English activities would be demanding and required a teacher who would be willing to co-operate because he believed in the possible value of the methods suggested. The young and relatively inexperienced teacher of $1A_2$ was such a person, and when later approached, expressed willingness to handle the full experimental programme. The teacher of $1A_3$ was a part-time teacher/part-time C. of E. priest, about whom the head of the English department remained silent. Class $1A_3$ was given the partial experimental programme of sensory perception

but neutral teacher influence in the essay writing periods, with normal class English activities for the remainder of the week but was to avoid mention of sensory perception.

Bearing in mind the importance of home background on any school activities - and probably especially so for those activities which permit children to move open-endedly rather than on closely laid-down teacher patterns of work - many of the 'creativity' writers whose 'personality' approaches were reviewed in chapter 3 above were probably right in stressing the need for as thorough an understanding as possible of variable home situations affecting children known to be creative. The present investigation was only able to obtain information about parental occupation when the non-verbal test was administered. Inevitably, some of the boys' answers were vague or non-existent. Of the eventual sample of 72 boys (24 in each group) 80.56% of their fathers' occupations came within the categories of manual workers (skilled, semi-skilled, but predominantly unskilled) as defined by the Registrar-General's Classification, and revealed that the sample had a marked skew. The relationship between class of parents and verbal intelligence is well-established in that "professional and upper business parents produce the biggest relative proportion ..... of the outstanding intelligences of the next generation"[1], as Vernon puts it. Possibly if the size of family had been measured in this sample, the view that the sample was markedly skewed would have been reinforced further than the actual I.Q. means and parental occupations reveal. But even without this data about family size, through the marked skew towards categories of manual workers, we can assume that the children in the experimental groups (II and III) come from home backgrounds that are probably verbally average or below. This would increase the likelihood of

[1]Vernon, P.E. (1960) 'Intelligence and Attainment Tests' p.143.

poor responses to the programmes of work for the two classes possessing the lowest mean I.Q.s. Thus, should significant gains be made by the two lower classes that are given the experimental treatment, one can speculate this might possibly be despite the handicap of a background with little verbal variety in it, and average to below average intelligence, both militating against verbal expression.

One of the main justifications for this experiment - apart from the possible provision of useful cues about the optimum conditions for creative writing - was that the writer felt it would be interesting to examine the value of the beauty and interest of the exhibits of the West Riding School Museum Service for stimulating secondary children's creative expression - in this case in writing. There is considerable variety and a high quality of condition in the exhibits which the Museum Service acquires and loans out to Schools. In the experience of the Organiser, the exhibits are loaned out and used in a number of ways overwhelmingly by the County's primary schools, though there is an increasing number of secondary schools who have been made aware of the exhibits' value. However, secondary schools use the exhibits mainly as visual aids rather than as stimuli for creative expression. It is an examination of the exhibits' effects on children's work of an expressive nature, and not in the more servile role of visual aids, that we are concerned with here. Do children, because they suddenly become members of a secondary school, lose their susceptibility to the high quality and wide variety of exhibits[1] that a few months earlier were capable of capturing their attention and sending them off in entirely unexpected, unplanned and exciting directions

[1]A sample of recent exhibits, loaned to the writer's school, as well as the list of stimulus objects loaned for this experiment and listed at Appx. R, reveals the variety: African drum, bowls and spears; brand new ski equipment; a set of ornate soldiers; a great variety of brids and animals in an unmotheaten stuffed condition; and a replica of the Kon-tiki Raft.

that one teacher could never hope to think of and suggest?

The School Museum Service Organiser was pleased to co-operate, expressing keen interest, at the same time, in the eventual results of the investigation, and allowed the choice of 10 exhibits likely to interest boys. They are listed at Appendix R.

2. Experimental Procedure.

Before the experiment began, all children in the three classes wrote under parallel conditions, with only the title written on the blackboard, a 25 minute essay on "The Crocodile". They were also given the group Non-Verbal Test 3, referred to on page 133 above, and a modified Uses of Objects Test in which each pupil was asked to think of as many different uses as he could of a brick, a pencil, a tin-can, a paperclip, and a sheet of paper, respectively.[1] This test was a modification of one of Guilford's open-ended tests and was given so that a later assessment could be made as to whether any correlation existed between the ability to think quickly of radically different uses of common objects and the ability to write well, the criteria for which includes the quality of creativeness, defined as written expression that is "new, original, individual."[2] The writer doubted the value of this test: it was felt to be unlikely that any substantial correlation would appear simply because the judging of the writing involved so much more than the quality of creativeness, as expressed by this definition. Nevertheless, the test was easily administered, and was marked by the writer on the principle that any mark given was to be solely for each completely new change of category in the use of the specified object, as shown in the example given at Appx. W.2.

[1]Copy at Appendix W.2.

[2]Part of the judges' criteria for creativeness; Appx. E.para.2(b).

Each class worked through the experimental period, following their own differential treatment as requested in the instruction sheets to the English teacher of each class. (Appendices Q, R, and S). The work followed the pattern already described at the beginning of this sub-chapter. Additionally, the teacher of the full experimental Group III, who had ten activities suggested for his class to work on, was provided with a sheet to serve as a diary. It was realised that many of the activities might overlap, or even that some of them might be considered by the teacher to be inappropriate.[1] The activities were based on the writer's own experiences of stimulating creative writing; and, according to the head of the English department and the class's teacher, appeared to be reasonably successful in increasing the interest, and the rate and quality of response, of the majority of the children in the class.

The 8-week period of work became extended to one of 12 weeks, with such intrusions as school examinations and the Whitsuntide holiday coming in at the end. It had been calculated previously that the chosen period of 8 weeks for the experiment would just finish before the examinations and half-term, but two classes fell slightly behind in the programme of essay writing. Thus, after a week back at school in which the classes settled down and did some revision work of their particular activities, the final essay was written by all three groups under the same conditions as the first essay on "The Crocodile" had been. A title comparable with this one would have been better and more appropriate for judges and children alike if it had offered the name of some kind of stimulating creature, so enabling self-identification or antipathy to take place between the writers and the stimulus. However, at the risk

[1]The amount of time spent by the teacher on each activity is shown approximately on the copy of the diary placed at Appx. T.

of losing an amount of stimulation and child-interest, the investigator chose "The Police Truncheon" because a title suggesting this type of object was more in keeping with the material presented in the training period, and secondly, he desired that if any uncontrollable weighting of child motivation was to result from accidental high or low motivation arising from the final title, this weighting had better be in the direction of poor motivation. Hence, any gain in performance between the first and final essays - as measured by the judges - would have to be despite a possible lack of motivation, and despite a possibly damaging (to the short-term effects of the 8-week period of work) pair of examination and holiday interruptions.[1]

In selecting the eventual sample, the writer had to take account of initial differences in ability between groups, and the desirability of being able to compare writing ability, as measured by the five judges, with I.Q. and performance on the 'creativity' test - the Uses of Objects.

The importance of not ignoring initial differences between the three groups had led to the attempt to identify the existence of any such differences by means of the non-verbal I.Q. test. The results of this test indicated a slightly wider range of mean and S.D. (from I.Q. $\bar{x}$ 108.82 S.D. 7.78 to I.Q. $\bar{x}$ 100.37 S.D. 8.71) than is the case in the smaller sample reported on page 133. More importantly, the range in I.Q. mean showed that the three groups were by no means matched in initial ability with one another. To validly test any difference and make allowance for variance due to initial differences, it could still be possible to

[1]From the aspect of the longer-term validity of the training programme's effects, this gap could be considered desirable: a common fault of many methods experiments is that they result in short-term effects in expected directions but their longer-term effects are not known because they are not usually measured after an interval of time.

give the varied programme of work to intact class units if the difference between initial and final essays was tested by an analysis of co-variance. However, the eventual sample of 24 boys in each group came about through the elimination of all absentees from any one of the four measures taken: the initial and the final essay; the I.Q. test; and the open-ended test.[1] Apart from the need to match up subjects who had been present at each of the measures, it was felt that the sacrifice in the sample size that was involved was completely justified by the probability that an absentee from one of the tests was also likely to have been an absentee from part of the training programme.

The same marking procedures were followed as in the developmental investigation, offering the judges the same criteria as before and asking for their personal impressions bearing in mind the generalised criteria and the comparative standard of the essays.

Full reference has already been made on pages 120 - 122 above to the marking method forcing an equal number of scripts to be allocated to each of nine grades, so resulting in a more highly differentiated distribution than would have been the case had a normal distribution been asked for. In this investigation, since there were 3 groups of 24 boys writing twice (24 x 3 x 2), the resultant 144 scripts were divided equally by the judges between the available 9 grades, so that 16 scripts were given to each grade. This was achieved by a first sorting into 3 equal piles of scripts, with each one finally subdivided into the 3 grades corresponding to the respective thirds of ability. As before, it was hoped that the multiple marking system of having the individual judge's marks summed into an expression of the

[1]Actually, two groups ended up with 24 boys each, by chance; to match them, 2 boys extra from the other group were randomly eliminated, and so ease calculation.

[2]See the pattern of marking scripts into 9 grades on the mark sheet at Appendix G.

five judges' views on any one script would, through reliability of marking (but with slight variability between judges) result in a normal distribution. A goodness of fit test would, of course, be applied to the resultant distribution.

Lack of time on the part of the judges and the investigator prevented the latter from sending samples of scripts round to each judge again during the last year to obtain an assessment of self-consistency in marking on the two separate occasions the same scripts. Additionally, the writer felt that there was a real risk that his judges' standards of marking might suffer a drop in reliability whose seriousness would be out of all proportion to the value to be gained from asking for a fourth marking,of even a sample of the whole batch of 144 scripts, within one year. Thus, a second mark that would enable a coefficient of self-consistency to be calculated was not obtained in this method investigation. The judges' inter-correlations would have to be sole assessment of reliability of marking.

For similar reasons, validity would have to be assumed in the event of high marker inter-correlations, and in the absence of the dual ideal presented by Britton, Martin and Rosen (1966); they obtained a reliable and valid school assessment of their sample of children, combined with a second team of markers' assessment of this school work, so providing a criterion against which the investigation's marking could be compared. Such an ideal design would naturally have been followed by the present writer if he had the resources of time and judges available.

3. Statement of Methods Experiment Hypotheses.

This formal statement of hypotheses has also been placed, for later ease of reference, immediately prior to the decisions upon them after consideration of the results in chapter 6.

M H_o = That there will be no significant differences between the quality of creative writing at the beginning of the 12-week period of varied training and that at the end of the period -
in which Group I has no stimulation of a vivid, sensory perception nature before writing, and has an English work programme with traditional emphases;
Group II does have such vivid, sensory stimulation, but has no supporting programme of work; and
Group III has the same sensory experience opportunities as Group II but also an intensive programme of open-ended English work; where - - -

- $MH_o(a)$ - the three groups are considered as a single group of 72 secondary modern first-form boys;
- $MH_o(b)$ - the three separate groups of 24 boys are compared with one another;
- $MH_o(c)$ - the individual groups' later samples are compared with their own earlier ones.

M H_1 = That there will be significant differences between the quality of creative writing at the beginning of the 12-week period of varied training and that at the end of the period -

- $MH_1(a)$ - by the three groups considered as one group of 72 boys;
- $MH_1(b)$ - the three groups of 24 boys, with the full experimental, the partial experimental, and the control group gaining significantly distinct final positions from one another, in that order;
- $MH_1(c)$ - and by each one of the two experimental groups, with their final mean scores comparing significantly better than their initial ones, while the control group will be significantly adversely affected.

STATEMENT OF RESULTS

A.. ANALYSES OF CHILDREN'S CREATIVE WRITING AFTER THE FIRST AND SECOND YEARS IN THEIR SECONDARY SCHOOLS.

B. ANALYSES OF SECONDARY MODERN BOYS' CREATIVE WRITING BEFORE AND AFTER A PERIOD OF TRAINING EMPHASISING SENSORY PERCEPTION.

A. Analyses of Children's Creative Writing After the First and Second Years in their Secondary Schools.

1. Analyses of the Marking.

Table 4. Summary of Samples Taken, and the Judges' Marking of Them.

Beginning of 1st. Year	End of 1st. Year	End of 2nd. Year
Random sample of 10 scripts from each of five schools. (S.1).	Matching of initial 50 scripts with a further 50. (S.2) 1st. Marking of 100 scripts by each of 5 judges. (S.1 and S.2).	Matching of previous scripts with a further 50. (S.3). 2nd. Marking of 150 scripts by each of 5 judges.(S.1,S.2, and S.3)
	(Each judge's independent marking for the 1st. and 2nd. Markings, is shown at Appendices H and M.1 respectively.)	

It can be seen from the above that two separate markings were carried out. As explained more fully above, this was partly because of a late modification to the research design so as to cover a two-year period, and partly to provide additional data for reliability of marking purposes.

Conclusions drawn from investigations such as this one,and the methods experiment, must be clearly understood to be as strong or as weak as the original, subjective marking's reliability and validity, within the framework set up by the investigator. The two distinct problems in the present marking concerning, first, the rectangular distribution of each judge which it was hoped would assume normality when summed into a team mark, and secondly, the lack of ideal arrangements for

obtaining a measurement of the reliability and validity of this team's marking, by comparison with school work assessments and a second set of marks from another marking team, have already been mentioned.[1] The rectangular distribution of each judge's marking was viewed as part of the team distribution of marks for individual scripts, the latter distribution being tested to see how closely it came to normality. Correlation coefficients were calculated for individual rater variability (self-consistency) and team self-consistency between the 1st. and 2nd. Markings which had an interval of one year between them. Intercorrelations between judges at the times of 1st. and 2nd. Markings were also calculated. It was felt that the four sets of correlations should give a good indication of the extent to which the marks had been allocated reliably, and from this, an indication of the extent to which the judges were probably attending to valid criteria in their marking of creative writing.

2(a) The Observed and Theoretical Distribution of Summed Marks from the 1st. Marking.

To determine whether the distribution obtained, by summing the five judges' individual marks for each script and so calculating a mean mark for each script, differed significantly from a normally distributed sample of marks, a theoretical distribution based on the observed data (at Appendix H) was calculated. The first three columns in the following table show the number of subjects who were given mean marks falling within the stated 'Marks' intervals: thus, in Sample 1 (S1) a single subject obtained a mark falling within the intervals 8.0 - 8.9 marks; 6 subjects obtained marks within these intervals in Sample 2 (S2); so that for the whole of the 1st. Marking - which was to the same scale for the 100 scripts at the same time of marking - 7 subjects obtained marks falling within these intervals.

[1] On pages 121 - 124 above.

Table 5a. Observed and Theoretical Distributions from the 1st. Marking (including J4 b[1]) of S.1 and S.2 Scripts.

nS1	nS2	ΣnS12	Marks	U.Limit	U.L.-$\bar{x}$	z	Ppn.Below	Ppn.Within	n'
1	6	7	8.0-8.9	8.95	——	——	——	.0643	6.4
5	4	9	7.0-7.9	7.95	2.82	1.52	.9357	.0992	9.9
9	7	16	6.0-6.9	6.95	1.82	0.98	.8365	.1665	16.7
8	17	25	5.0-5.9	5.95	0.82	0.44	.6700	.2098	21.0
9	6	15	4.0-4.9	4.95	-0.18	-0.10	.4602	.1959	19.6
8	6	14	3.0-3.9	3.95	-1.18	-0.63	.2643	.1433	14.3
5	2	7	2.0-2.9	2.95	-2.18	-1.17	.1210	.0774	7.7
5	2	7	1.0-1.9	1.95	-3.18	-1.71	.0436	.0436	4.4
50	50	100							100.0
		$\bar{x}$=5.13	s=1.86						

Inspection of the observed distribution under the column headed 'ΣnS12' in the above table shows that it does appear to approach normality despite the rectangular distributions of the five constituent judges' marks. However, to determine more precisely how near the observed distribution approaches to one of normality, a χ^2 test of goodness of fit was carried out, and is set out below.

Table 5b. Test of Goodness of Fit for the Observed and Theoretical Distributions of Table 5a.

Mark Intervals	n	n'	n - n'	$(n - n')^2$	$(n - n')^2/n'$
Above 6.9	16	16.3	-0.3	0.09	0.006
6.0 - 6.9	16	16.7	-0.7	0.49	0.029
5.0 - 5.9	25	21.0	4.0	16.00	0.762
4.0 - 4.9	15	19.6	-4.6	21.16	1.062
3.0 - 3.9	14	14.3	-0.3	0.09	0.006
Below 3.0	14	12.1	1.9	3.61	0.298
Σ	100	100.0	0		χ^2= 2.163
				d.f.=3	P =>.50

For 6 - 3 d.f. = 3 d.f.[2], a value of χ^2 = 2.163 will occur more than 50% of the time when the null hypothesis is true. Therefore, we can say that the obtained distribution is sufficiently close to that of a normal one for the assumption of normality to be made.

[1] J4 b denotes the replacement for the deceased judge J4 a.

[2] As Edwards, A.L.(1956) in 'Statistical Methods for the Behavioral Sciences', Rinehart and Co. Inc., page 386, says, "Ordinarily, in problems of this kind, we have had R-1 d.f..... In the present problem, however, we have placed additional restrictions ... that Σni=Σni'... and that the mean and S.D. must remain the same for the expected distribution as for the observed distribn."

2(b)The Observed and Theoretical Distribution of Summed Marks from the 2nd. Marking.

Table 6a. Observed and Theoretical Distribution from the 2nd. Marking (including J4 b) of S.1 and S.3 Scripts.

nS1	nS3	ΣnS13	Marks	U.Limit	U.L.-$\bar{x}$	z	Ppn.Below	Ppn.Within	n'
2	7	9	8.0-8.9	8.95	——	——	——	.0643	6.4
2	9	11	7.0-7.9	7.95	3.17	1.52	.9357	.0849	8.5
5	12	17	6.0-6.9	6.95	2.17	1.04	.8508	.1385	13.9
8	6	14	5.0-5.9	5.95	1.17	0.56	.7123	.1804	18.1
14	6	20	4.0-4.9	4.95	0.17	0.08	.5319	.1873	18.7
8	4	12	3.0-3.9	3.95	-0.83	-0.40	.3446	.1552	15.5
4	2	6	2.0-2.9	2.95	-1.83	-0.88	.1894	.1041	10.4
7	4	11	1.0-1.9	1.95	-2.83	-1.37	.0853	.0853	8.5
50	50	100							100.0
		$\bar{x}$=4.78	s=2.08						

From the observed distribution of marks given by the team of five judges in the 2nd. Marking, a theoretical distribution was obtained as above in the column headed ' n' '. As in the case of the 1st. Marking data, a χ^2 test of goodness of fit was carried out, and is set out below.

Table 6b. Test of Goodness of Fit for the Observed and Theoretical Distributions of Table 6a.

Mark Intervals	n	n'	n - n'	$(n - n')^2$	$(n - n')^2/n'$
8.0 - 8.9	9	6.4	2.6	6.76	1.056
7.0 - 7.9	11	8.5	2.5	6.25	0.735
6.0 - 6.9	17	13.9	3.1	9.61	0.691
5.0 - 5.9	14	18.1	-4.1	16.81	0.965
4.0 - 4.9	20	18.7	1.3	1.69	0.094
3.0 - 3.9	12	15.5	-3.5	12.25	0.790
2.0 - 2.9	6	10.4	-4.4	19.36	1.862
1.0 - 1.9	11	8.5	2.5	6.25	0.735
Σ	100	100.9	0		χ^2 = 6.928
					d.f. = 5 P =>.20

A value of χ^2 = 6.928 with 5 degrees of freedom[1] will occur more than 20% of the time when the H_0 is true. The drop in probability compared with the 1st. Marking's P = >.50 is possibly due to S.1 and S.3 not being the complete distribution of 150 scripts,(50 scripts of S.2 were marked at the same time and to this scale, as can be seen at Appx. M.1).

[1]See footnote 2 on the preceding page for the reasons behind the d.f. being 5.

However, even with one-third of the distribution's marks missing, the χ^2 test above still enables us to reject the the hypothesis that our observed S.1 and S.3 distribution differs significantly from a normal one; we can therefore accept the null hypothesis.

3. Judges' Marking Correlations.

(a)Individual Rater Variable (Self-consistency).

Four of the final five judges marked S.1 and S.2 scripts originally in the first marking and again as part of the second marking one year later. However, the unplanned inclusion of a new judge to carry out a first marking about nine weeks before all five judges were asked to carry out the second marking enabled not only five sets of rater correlation coefficients for the marking of two essays to be obtained; it enabled a comparison to be made of self-consistency after a twelve-month gap in marking and self-consistency after a two-month interval only. An assumption of equal reliability of experienced and inexperienced markers has to be made, though tentative interpretation of their reliability can be made from the 1st. and 2nd. Marking inter-correlations.

Thus, the coefficients of J1, J2, J3 and J5 refer to self-consistency after an interval,between marking, of 12 months, and J4 b's coefficients refer to a two-month interval. Correction factors were applied to the large number of ties to prevent inflation of the resulting rank correlation coefficients. The correlation coefficient for J1's marking of the first sample (S.1) is calculated at Appendix I, by way of example.

Allowing for these coefficients referring to marking over a twelve-month period (except in J4 b's

case), they are comparable with the coefficients for self-consistency of Britton, Martin and Rosen's judges over a two-month period. This is especially so in the comparison of the coefficients of J4 b who marked his scripts again after an almost identical interval to Britton, Martin and Rosen's judges. J4 b's coefficients are in the same range as six out of nine correlations from the latter judges.

Table 7. Rank Correlation Coefficients of the Rater Variable (Self-consistency) from Two Markings of S.1 and S.2 Scripts.

	J1	J2	J3	J4b	J5
S.1 (X_1X_2)	.622	.557	.671	.730	.729
S.2 (Y_1Y_2)	.580	.469	.705	.795	.661
Est.maximum[1] r_{xy}	.601 (±.09)	.511 (±.11)	.688 (±.08)	.762 (±.06)	.694 (±.08)

Table 8. Correlations between Nine Examiners Original Marking and Second Marking, after a Two-Month Interval, of 100 Scripts. (Data taken from Britton, Martin and Rosen, 1966)[2].

Examiner	A	B	C	D	E	F	G	H	I
r	.78	.67	.85	.94	.78	.72	.76	.96	.76

3(b) Team Variable Between 1st. and 2nd. Markings.

The strength of impression marking lies in its composite and moderated view, from as many standpoints as there are judges forming the multiple view, of individual scripts. Accordingly most reliance can be placed on assessments of marking in team form. Using the mean of the five judges' marks for each script of S.1 and S.2 given during both markings, converting them into rank order, and calculating the correlations between the first marking of S.1 (X_1) and the second marking of S.1 (X_2), and the correlations between the first marking of S.2 (Y_1) and the second marking of S.2 (Y_2), gives the following results for the whole team.

Table 9. Team Correlation Coefficients between the 1st. and 2nd. Marking of S.1 and S.2.

	r	S.E.
S.1 (X_1X_2)	.868	± .04
S.2 (Y_1Y_2)	.890	± .03

[1]From $r_{xy} = \sqrt{r_{xx}r_{yy}}$ (Ferguson, G.A.(1959)'Statistical Analysis in Psychology and Education.'p.285.McGraw-Hill. [2]B.M.R.(1966)para.99.

Though, unfortunately, in Britton, Martin and Rosen's study, a team self-consistency mark for all their examiners was not obtained, they did manage to have three examiners who marked the same sub-sample of scripts twice. Pooling the marks of these three examiners and correlating their two sets of pooled marks gave a similarly high coefficient of .91[1] to the coefficients obtained in the present investigation. The present team's coefficients are, moreover, reliable. The calculation was similar to that done to find individual rater variability, and allowed for tied ranks to avoid inflation of the coefficients as at Appendix I.

3(c) Colleague Variables (Marker Intercorrelations) at the Time of the 1st. Marking and 2nd. Marking.

The extent to which individual markers show agreement with one another at the time of the 1st. and 2nd. Markings is shown by their inter-correlations. It will be remembered that they were working from a set of common, generalised criteria (as shown in Appendix E) towards an impression mark.

Table 10. Inter-correlations Between Judges at the 1st. Marking. (Pearson Product-Moment Correlation Coefficient).

	J2	J3	J4	J6	J5
J1	.781	.805	.811	.808	.808
J2	.	.750	.758	.795	.765
J3		.	.844	.848	.826
J4			.	.835	.830
J6				.	.848

Calculated between marks for S.1 and S.2 scripts.

Table 11. Inter-correlations Between Judges at the 2nd. Marking. (Pearson Product-Moment Correlation Coefficient).

	J2	J3	J6	J5
J1	.803	.810	.827	.861
J2	.	.798	.813	.841
J3		.	.811	.820
J6			.	.808

Calculated between marks for S.1 and S.3 scripts.

[1]Britton, Martin and Rosen (1966) op. cit. para.99, page 23.

4. Assessments of Children's Creative Writing after One Year in the Secondary School.

Having established that the composite team mark for each child's writing in both samples approaches normality at the time of the 1st. Marking, that individual judges may be termed reasonably self-consistent, and that they agree to a considerable extent with one another at this 1st. Marking stage, we can approach the analysis of the team's data with considerable confidence.

4(a) Analysis of the Sample of 50 Children's Writing as that of One Group of Secondary School Children.

To test the null hypothesis that there is no difference between children's creative writing on admission to their secondary schools and after one year in them, the marks for S.1 (written on entry) and S.2 (written at the end of the first year) were matched against one another, and the Wilcoxon Matched-Pairs Signed-Ranks Test was applied as shown at Appendix J (with J4 a's marks in the pooled mean), and again as at Appendix K (with J4 b's marks in place of J 4 a's).

Since the hypotheses on pages 127 - 128 do not specify a direction of difference in writing ability, it will be appropriate to proceed with a two-tailed test.

4(a)(i) Wilcoxon Matched-Pairs Signed-Ranks Test (with J4a).

Calculation as at Appendix J.

31 subjects showed an improvement and 16 a deterioration between writing S.1 and S.2. There was a mean net gain of 0.7 marks. A z value of -2.54 was obtained giving a two-tailed probability of .011. The H_0 can be rejected at the .01 level.

4(a)(ii)Wilcoxon Matched-Pairs Signed-Ranks Test (with J4b).

Calculation as at Appendix K.

27 subjects showed an improvement and 18 a deterioration between writing S.1 and S.2. There was a mean net gain of 0.75 marks. A z value of -2.5342 was obtained giving a two-tailed probability of .0114, which enables us to reject the H_0 at the .01 level.

From the results of both tests, a highly significant improvement can be said to have taken place over the one-year period, with a mean net gain of 0.7 to 0.75 marks.

4(b) Analysis of the 50 Children's Writing in 5 School Samples.

To make allowance for the initial differences (S.1) (at the time of entry into the five schools) and to see whether the final differences persist (at the time of S.2 writing), and are statistically significant, on the assumption of uniform regression, an analysis of co-variance was carried out with the five judges' marks including J4a's, and secondly with J4b's substituted. With the initial differences between schools at the S.1 stage allowed for, any significant adjusted final differences cannot be attributed to differences in the ability of pupils at the initial point of writing. Thus, if significant differences appeared in the adjusted final scores, it is possible that the schools may have produced those differences.

4(b)(i) Analysis of Co-Variance (with J4a). (Calculation at App.L).

The analysis of co-variance resulted in an F value of 2.664 which, for 4 and 44 d.f., has a P <.05.

Table 12. The Raw Mean Score Comparative Positions of the Five Schools.

The following unadjusted mean scores present a comparative view of the samples of writing behaviour of each of the five schools.

Order	Initial Raw Mean Scores	Final Raw Mean Scores	Gains and Loss
1	Gr. (FM) 5.96	Gr. (F) 7.00	Gr. (F) +1.38
2	Gr. (F) 5.62	Gr. (FM) 5.48	SM (F) +1.18
3	Gr.T. (FM) 5.14	Gr.T. (FM) 5.38	SM (M) +1.16
4	SM (F) 3.24	SM (F) 4.42	Gr.T. (FM) +0.24
5	SM (M) 3.20	SM (M) 4.36	Gr. (FM) -0.48

Without demonstration of significant difference by analysis of co-variance it would have had to be assumed that these raw means are not significant, and could have come about by chance. Analysis of co-variance has shown that there is a significant difference between the schools' final scores at the .05 level.

To determine which schools have a significant difference between them, the adjusted final mean scores were calculated at Appx. L, section 13 with the following results.

Table 13. Schools' Comparative Positions after Adjustment of Final Means.

Order	Adjusted Final Mean
1	Gr. (F) 6.53
2	Gr.T.(FM)5.14
3	SM (F) 5.09
4	SM (M) 5.05
5	Gr. (FM)4.84

Table 14. Differences Between Schools' Adjusted Final Means.

School	Gr.T.(FM)	SM (F)	SM (M)	Gr.(FM)
Gr. (F)	1.39*	1.44*	1.48*	1.69**
Gr.T.(FM)		0.05	0.09	0.30
SM (F)			0.04	0.25
SM (M)				0.21

Minimum values required for significance (Calculated at App.L. section 14).
2.042 = <.001***
1.555 = <.01 **
1.162 = <.05 *

It can be seen that the Grammar (Female) is alone in having a significantly superior difference over all, and any, other school.

The performance of the Grammar (Female, Male) school calls for additional investigation. Analysis of co-variance, as pointed out initially, assumes that regression of final on initial scores is uniform. However, where a sub-sample such as this scores highly on the first script marking, regression effects[1] produce a final mean score which is nearer the group mean. The effects of regression on this school and the others become apparent when the predicted final means, based on the levels of their initial means and the final group mean, are calculated. This has been done at Appendix L, section 15. From this calculation, a comparison of the initial scores and final scores of the schools, in relation to their general means and their predicted final scores has been made below. This table should be viewed remembering that a school whose initial score diverges from the initial general mean reveals the effects of regression on the raw final mean by that final mean being nearer the final general mean. A measure of regression is

[1]Regression effects are produced by lack of perfect correlation, together with the difference between initial and final means for the complete sample of 500 pupils. In this instance, correlation between initial and final scores is $\frac{50.092}{\sqrt{(104.46)(96.272)}} = .501$.

provided by the difference between the achieved final and the predicted final mean of each school.

Thus, the final Y - Y' gains and losses in the following table may be said to present a more accurate picture of how the raw final means improve on, or fall short of, the predicted final means (Y') that could have been expected.

Table 15. The Effects of Regression on the Final Raw Scores of the Five Schools, and the Predicted Final Mean Scores. (Calculation of the predicted means is at Appx.L section 15.)

School	Ini$\bar{x}$	Gen$\bar{x}$	Devn.	Fin$\bar{x}$	Gen$\bar{x}$	Devn.	Predict.$\bar{x}$	Actual - Predict.
Gr.T.(FM)	5.14	4.63	+0.51	5.38	5.33	+0.05	5.57	5.38-5.57 = -0.19
Gr. (F)	5.62	4.63	+0.99	7.00	5.33	+1.67	5.80	7.00-5.80 = +1.20*
SM. (F)	3.24	4.63	-1.39	4.42	5.33	-0.91	6.00	4.42-6.00 = -1.58‡
Gr. (FM)	5.96	4.63	+1.33	5.48	5.33	+0.15	5.97	5.48-5.97 = -0.49
SM. (M)	3.20	4.63	-1.43	4.36	5.33	-0.97	6.02	4.36-6.02 = -1.66‡

‡ = <.01 * = <.05

The Gr.(F) school sample is free from regression influences, and so, too, is the Gr.T.(FM). However, the remaining three schools' gains (in the cases of the two SM) and loss must be accepted to be due principally to regression influences.

These results, of course, do not affect our findings in the analysis of co-variance above that the Gr.(F) is significantly superior to all other schools. Because our assumption of uniform regression does not take account of variable regression influences, it would seem better to accept that the 'true' position of the Gr.(FM) school is above that of the two SM schools in terms of gains in performance over the first year. Its performance is probably comparable to that of the Gr.T.(FM).

4(b)(ii) Analysis of Co-Variance (with J4b).

The analysis of co-variance with J4b's marks included resulted in an F value of 2.4435 with 4 and 44 d.f. P = >.05 (F needs to exceed 2.58 to be significant at the .05 level). Accordingly, any further calculation of adjusted means, etc., would not have been justified - indeed, would have been "decidedly improper" if it had led to applying "the 't' test to individual differences"[1] - since the 'error-free' differences between schools (i.e. after allowance has been made by analysis of co-variance for initial differences) did not prove to be significantly large enough.

5. Assessments of Children's Creative Writing after Two Years in the Secondary School.

[1]Lindquist, E.F. (1940) 'Statistical Analysis in Educational Research' p.98. Houghton Mifflin Company.

5(a) Analysis of the Sample of 50 Children's Writing as One Group of Secondary School Children Who Have Completed Two Years in their Secondary Schools.

Table 16. Analysis by Wilcoxon Matched-Pairs Signed-Ranks of Differences (according to the 2nd. Marking) between School Entry Writing Ability and Ability at the End of the Second Year. (Calculations at Appx.M.2).

Period	No.Improved	No.Deteriortd.	×Mk.Gain	z Value	P (two-tailed)
S1 - S2	29	20*	0.73	-2.5720	<.0102
S2 - S3	31	19	0.74	-2.6931	<.0072
S1 - S3	41	8*	1.50	-4.3678	<.00006
N = 50; * indicates one tie.					

5(b) Analysis of the 50 Children's Writing in 5 School Samples Over a Period of Two Years.

The 2nd. Marking took place with all three samples of writing being marked on the same 9-point marking scale at the same time. It was decided, since an analysis of co-variance had already been carried out on the first year data judged in the 1st. Marking, to analyse differences between the five schools over the whole period of two years (S.1 and S.3) and over the second year only (S.2 and S.3).

5(b)(i) The Analysis of Co-Variance in the Writing Samples S.1 and S.3 of the Five Schools. (Calculation at Appendix N).

The analysis of co-variance resulted in an F value of 3.5136 which, for 4 and 44 d.f., has a P = <.05.(An F value of 2.58 is required for significance at the .05 level. The obtained F is almost as high as 3.78, which is significant at the .01 level).

Table 17. The Comparative Positions of the Raw Mean Scores of the Five Schools - the 2nd. Marking, of S.1 and S.3.

Order	Initial Raw Mean Scores	Final Raw Mean Scores	Gains and Losses
1	Gr. (FM) 5.66	Gr. (F) 7.77	Gr. (F) +2.73
2	Gr. (F) 5.04	Gr. (FM) 6.28	SM (F) +2.26
3	Gr.T.(FM) 4.66	Gr.T.(FM) 5.28	SM (M) +1.30
4	SM (F) 3.02	SM (F)	Gr. (FM) +0.62
5	SM (M) 2.92	SM (M) 4.22	Gr.T.(FM) +0.62

To determine which schools have a significant difference between them, the adjusted final mean scores were calculated at Appx. N, section 13, with the following results.

Table 18. Schools' Comparative Positions after Adjustment of Final Means.

Order	Adjusted Final Mean
1	Gr. (F) 7.38
2	SM. (F) 5.88
3	Gr. (FM) 5.58
4	Gr.T. (FM) 5.07
5	SM. (M) 4.89

Table 19. Differences Between Schools' Adjusted Final Means.

School	SM (F)	Gr.(FM)	Gr.T.(FM)	SM (M)
Gr. (F)	1.50*	1.80*	2.31**	2.49**
SM. (F)		0.30	0.81	0.99
Gr. (FM)			0.51	0.69
Gr.T. (FM)				0.18

Minimum values required for significance (Calculated at Appx. N, section 14). 2.5226 = <.001*** 1.9155 = <.01 ** 1.4316 = <.05 *

As was the case in the 1st. Marking, the Gr.(F) school sample has a significantly superior difference over all other schools.

Analysis of co-variance assumes uniform regression of the final on the initial means. An examination of the effects of regression on individual schools' performances is worth making to see if any schools have done better or worse than could have been expected from a knowledge of their earlier performance at the time of the first essay. The predicted final means have been calculated at Appx.N, section 15. A comparison of the initial and final scores in relation to their general means and their predicted final scores is made below. It will be remembered that a measure of the effects of regression[1] is provided by the difference between the achieved final and the predicted final mean of each school. Thus, the final Y - Y' gains and losses in the following table may be said to present an accurate picture of how the final means are better or worse than the predicted means that one could have expected from the levels of the initial means.

[1]Regression effects are produced partly by lack of perfect correlation: here, the correlation coefficient is

$$\frac{54.90}{\sqrt{(110.20)(137.94)}} = .445.$$

As in the 1st. Year analysis, the best performance was that of the Gr.(F) sample which managed to achieve significantly better than the final score predicted for it, (P = <.05). On the other hand, the SM (M) did significantly poorer than could have been expected, (P = <.01). The SM (F) and the Gr.T.(FM) benefited from regression effects in their final scores, since they achieved scores that were -1.09 and -0.67 grades below the scores that they could have respectively obtained, allowing for regression effects.

Table 20. The Effects of Regression on the Final Raw Mean Scores of the Five Schools, and the Predicted Final Mean Scores. (Calculation of the predicted means is at Appx. N, 15).

School	Ini$\bar{x}$	Gen$\bar{x}$	Devn.	Fin$\bar{x}$	Gen$\bar{x}$	Devn.	Predict.$\bar{x}$	Actual - Predict.
Gr.T.(FM)	4.66	4.26	+0.40	5.28	5.75	-0.47	5.95	5.28-5.95 = -0.67
Gr. (F)	5.04	4.26	+0.78	7.70	5.75	+1.95	6.14	7.70-6.14 = +1.56*
SM (F)	3.02	4.26	-1.24	5.28	5.75	-0.47	6.37	5.28-6.37 = -1.09
Gr. (FM)	5.66	4.26	+1.40	6.28	5.75	+0.53	6.45	6.28-6.45 = -0.17
SM. (M)	2.92	4.26	-1.34	4.22	5.75	-1.53	6.42	4.22-6.42 = -2.20*

\# = <.01 * = <.05

Our findings from the analysis of co-variance are not materially affected, in that the analysis assumes uniform regression, and it could be argued that the above raw, unadjusted scores could have come about by chance variation in regression that is, in fact, more uniform. Even admitting the importance of the regression calculations, the main finding that the Gr. (F) has an overall superiority over all other schools is fully borne out in both examinations of the data. The regression calculations suggest that the superior performance of the SM (F) school sample may be due to inflationary regression effects, though its underachievement of -1.09 is not significant.

5(b)(ii) The Analysis of Co-Variance in the Writing Samples of the Five Schools Over the Period of the Second Year Only.

The analysis of co-variance with samples S.2 and S.3, sampling growth (it is hoped) in the children's creative writing in their second year, resulted in an F value of 0.381, which is not significant at the .05 level. (For 4 and 44 d.f., F needs to exceed 2.58 at the .05 level). Thus, none of the 5 schools, on the evidence of S.2 and S.3 marks have a significant superiority over any other schools in the investigation.

6. The Self-Criteria of the Five Judges.

For the first of what might be called the three 'peripheral' inquiries that developed as part of the main investigation, the writer asked the judges[1], just after they had finished the 2nd. Marking, if their judgement had been possibly affected by the two extraneous influences of traditional marking views and the length of the writing being considered for a mark. The judges were also asked to report any additional criteria emphases that they were conscious of at the time of marking, and which were additional to the three generalised criteria given to them.

As has already been mentioned, the 'unconscious' categories (of questions that might be regarded with distaste) were inserted in an endeavour to gain as comprehensive an idea of the possible influences on the judging as one could. However, the writer readily admits the impossibility of placing reliance on introspection into what is probably inacessible anyway to the judge, and therefore, any replies based on such have dubious value. Thus, the answers to questions I A and IB, and I C and I D in the questionnaire are treated as being one general opinion on the same question. The following table divides the answers between the categories 'Likely' or 'Unlikely' influence, and whichever seems the most appropriate summed response of the judge to both questions has been scored.

The criteria offered by the writer seems to have been well-received as a basis for the judges to work from. There are evident differences of opinion between judges and between the writer and judge 1 as regards 'sincerity', which the latter does not view as useful. But most judges, and probably judge 1 as well, appear to have branched out from the given criteria so as to obtain personal impressions of each script, in the way suggested.

[1]Letter copy at Appendix M.3.

Table 21. The Replies of Judges to Questions Regarding Self-Awareness of the Use of Traditional English Marking Concepts, Being Influenced by Script Length, and Additional Criteria.

Question	Subject-matter	Likely Influence	Unlikely Influence
I A,1 B.	Traditional Eng. Mkg. Concepts' Influence - - -	J1 J3 J4 J5	J2
I C,I D	Script Length Influence - - -	J1* J3 J4	J2 J5*
*J1, J5 required a min. length to enable judgmt. to take place.			
II	Additional Criteria or Particular Emphases		
J1 (Coll. of Educn. English Lecturer)	Imagination - good, fancy - bad; grasp on reality, plausibility, credibility - good; but weirdness ≠ creativeness; sincerity not a valuable attribute to judge, since one learns by imitation.		
J2 (Jun. School Hdmaster)	Under '(b)Creativeness' - a different approach was rewarded if the idea was handled successfully, and not allowed to get out of control.		
J3 (Jun. School Hdmistrs)	Found the given criteria a useful framework.		
J4b (Sci. student)	Used the given criteria, but favoured - sincerity; different approach; vivid self-identification with subject-matter.		
J5 (Prim. School Hdmaster)	Insincerity, which showed in contrived writing, and insincere identification with the subject, was penalised.		

7. Analyses of Judges' Marking Time during the 1st. and 2nd. Marking.

To enable comparison between the speed of marking of the present judges and that of the markers in Britton, Martin and Rosen's investigation to be made, as well as to give an idea of the potential speed that reliable impression marking can be carried out at, the judges were asked to record on each mark sheet the net time spent in marking during each session of marking.[1] This was partly to replicate the afore-mentioned investigation, but the writer also had in mind that keeping a log of marking work sessions might help the judges in their progress through what was sometimes quite tedious: short sessions, short-term targets, etc.,

[1]See the mark sheet at App.G, though it should be noted that this sheet was not typical of the others' 1st. Marking in that this judge did all marking in two sessions on this occasion.

are commonly known to help work of this nature. Further, the replies of the judges to the questionnaire (Table 21) together with the time records could be useful to the investigator himself in providing a possible clue in the event of some wildly variable marking.[1]

Table 22. Total Time and Sessions Spent on the 1st. Marking (S.1 and S.2 = 100 scripts) and the 2nd. Marking (S.1, S.2 and S.3 = 150 scripts).
(Time shown in minutes, with number of sessions in parentheses).

	J1	J2	J3	J4	J5
S.1/S.2	205 (4)	254 (4)	300 (6)	275 (4)	465 (6)
S.1/S.2/S.3	215 (3)	420 (3)	540 (6)	350 (3)	330 (6)
Σ Mins.(Sess.)	420 (7)	674 (7)	840 (12)	625 (7)	795 (12)

Table 23. Average Time Spent Marking Each Script.
(Time shown in minutes, with number of sessions in parentheses).

	J1	J2	J3	J4	J5
S.1/S.2	2.1 (4)	2.5 (4)	3.0 (6)	2.8 (4)	4.7 (6)
S.1/S.2/S.3	1.4 (3)	2.8 (3)	3.6 (6)	2.3 (3)	2.2 (6)
difference	-0.7	+0.3	+0.6	-0.5	-2.5
1st. and 2nd. Mkg. (250 sc)	1.7 (7)	2.7 (7)	3.4 (12)	2.5 (7)	3.2 (12)

Combining the data above with that given by Britton, Martin and Rosen, para.116 (1966) enables a contrast to be made between the performance of the two sets of judges.

Table 24. Comparison of Marking Times of the Present Investigation's Five Judges with the Times of the Nine Judges in Britton, Martin and Rosen's (1966) Investigation.

Set of Judges	Slowest Time	Fastest Time	Average Time
5 judges	3.4m/s or 17.6s/h	1.7m/s or 35.3s/h	2.7m/s or 22.2s/h
9 judges	4.5m/s or 13.3s/h	2.5m/s or 23.1s/h	3.0m/s or 19.7s/h

(Time shown in minutes per script and scripts per hour).

From the above, both the present and B.M.R.'s investigation would seem to have been marked by judges forming a quick impression at an average rate of about 3 minutes a script, or 20 scripts per hour. This, whether in terms of minutes per script or scripts per hour, would seem to be a suitable speed of marking for the judges in any future investigation to have pointed out to them. It would also seem to be a reasonable standard of attainment against which future impression marking by competent could be compared.

[1]Fortunately, the high coefficients made this unnecessary.

8. Word Count of the Scripts in S.1, S.2 and S.3.

The words used by the children of all schools in the three samples were counted and are set out at Appendix 0.1 in both school and sex grouping. In this section, the writer is concerned with four aspects of the quantitative analysis of the numbers of words used. First, it will be of interest to examine the nature of the growth in the total number of words used, corresponding to increases in age and as a basis from which a more detailed linguistic analysis could be developed elsewhere. The second aspect with which we are concerned here is to see if there is a significant superiority of the number of words written by girls compared with boys. Thirdly, it will be of interest to see if the grammar school children in the sample have written significantly more than the secondary modern children. Fourthly, the relationship between quantity and quality - if one exists - will be worth exploration.

8(a)(i) Mean Number of Words Written by Boys and Girls at Ages 11 to 13.

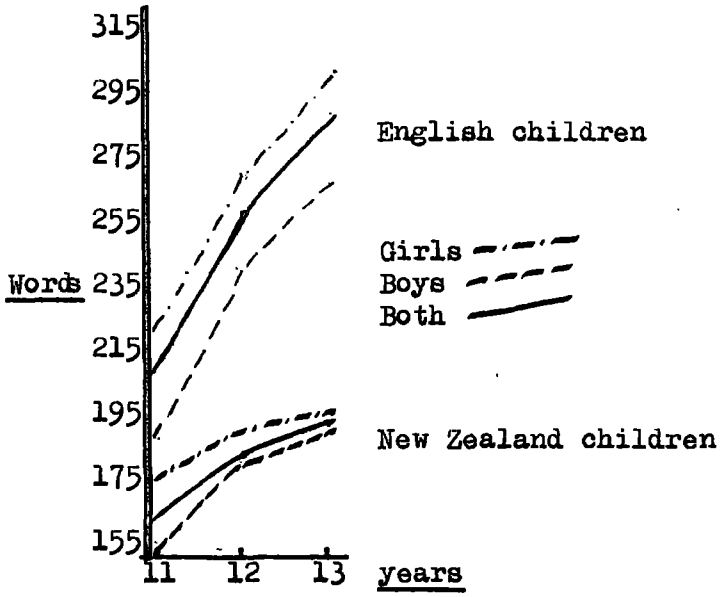
Table 25. Quantitative Development of 20 Boys' and 30 Girls' Creative Writing, at Ages 11 to 13. (Mean number of words written per script in 25 minute periods).

Ages -		11	12	13
Boys	N	20	20	20
	$\bar{x}$	188.85	239.20	265.05
Girls	N	30	30	30
	$\bar{x}$	220.73	268.33	297.86
Both	N	50	50	50
	$\bar{x}$	207.98	256.68	284.74

These figures can be contrasted with those of Ford (1954) in Table 2 (page 102). An absolute size contrast would be unwise in view of the disparity between his much larger samples (with boys approximately equal in number to girls) and the present unequal and smaller samples. However, for both Ford's larger, and the present smaller, samples, there does seem to be a relatively smooth, annual increase in words written. With these

reservations in mind, the two distributions may be viewed together.

Figure 3. Mean Number of Words Written on the Same Occasion by Different New Zealand Children of Various Ages Compared with Mean Numbers of Words Written on Different Occasions at Yearly Intervals by the Same English Children.
(The English children wrote for a maximum period of 25 mins. and on a similar type of topic to the New Zealand children).



8(a)(ii) Differences in the Words Written Between Ages 11 and 13 Over the Whole Sample of 50 Children.

By means of the Kolmogorov-Smirnov Two-Sample Test, for large samples, and proceeding by way of the one-tailed test method since we desire to know whether successive samples are significantly higher than preceding ones, the following results were obtained by testing S.1 and S.3, S.1 and S.2, and S.2 and S.3. The first of the three calculations involved has been placed at Appendix 0.2(a)

Table 26. Results of Testing the Differences between the Number of Words Written by 50 Children in Three Samples (S.1, S.2 and S.3) Using the Kolmogorov-Smirnov Two-Sample Test for Large Samples.
(From Goodman's formula, reported by Siegel (1956)[1] -

$$\chi^2 = 4D^2 \frac{n_1 n_2}{n_1 + n_2}$$

where D = maximum ($Sn_1X - Sn_2X$) in which Sn_1X is the observed cumulative step-function, and Sn_2X that of the other.

[1]Siegel, S.(1956) 'Nonparametric Statistics for the Behavioral Sciences.' p.131. McGraw-Hill.

Sample Tested	D Value	χ^2 Value	One-tailed Probability
S.1 - S.3* *(see App.0.2a)	$\frac{18}{50}$=.360	13.00	<.01
S.1 - S.2.	$\frac{13}{50}$=.26	6.75	<.05
S.2 - S.3	$\frac{10}{50}$=.20	4.00	>.10

8(b) Contrast of Total Words Written by Girls with those of Boys.

The 30 girls' writing in each of the three samples appears to be more fluent than that of the 20 boys with comparable I.Q.s, in that the mean number of words written by girls remains consistently ahead of that of the boys. (See Fig.3, page 161). Though this was expected from common experience, and remembering that the Girls grammar school was the only school to show significantly higher final marks over any other school's marks in the analyses of co-variance, it remained to be shown whether the girls were significantly more fluent,in the sense of total words written, than were boys, at the different ages sampled. Since the numbers of boys differed from that of the girls (20:30), the above variation of the Kolmogorov-Smirnov Two-Sample Test was used to test the distributions of total words written by the two sexes to see if they differed significantly. The calculation of D and χ^2 for the difference between boys and girls at age 11 is shown in full at App. 0. 2(b), and in summary form below in Table 27, along with the calculations at ages 12 and 13.

Table 27. Results of 3 Kolmogorov-Smirnov Two-Sample, One-tailed Tests on the Differences at Ages 11, 12 and 13 in the Number of Words Written by a Sample of 20 Boys and 30 Girls.

Sample Tested	D Value	χ^2 Value	One-tailed Probability
S.1 - Age 11* *(See App.0.2b)	.35	5.88	>.05
S.2 - Age 12	.17	1.39	>.50
S.3 - Age 13	.20	1.92	>.30

Therefore, despite the superiority of girls over boys in the number of words used in each sample, there are no significant differences at, or below, the .05 level, and the H_o can be accepted. However, the point should be made that using the χ^2 approximation with small samples, "the error .... is always in the 'safe'direction."[1] It is,therefore, quite possible

[1]Siegel, S.(1956) op.cit. p.135.

that a Type I error is being committed in the case of S.1's rejection of a .05 level of significance, and that there may be a significant difference at the .05 level between the 11-year old boys' and girls' numbers of words written in this sample. Nevertheless, the decision to accept the H_o is correct on this evidence.

8(c)(i) Differences between Grammar School and Secondary Modern Children in the Number of Words Written at Each Age - 11, 12 and 13.

Discarding the 10 scripts of the Grammar Technical school enables a straightforward comparison to be made between two Grammar and two Secondary Modern schools, for each of the three ages represented by the samples. Using a one-tailed test, K_D, or the numerator of the largest difference between the two cumulative distributions, was obtained in respect of each of the three samples.

Table 28. Results of 3 Kolmogorov-Smirnov Two-Sample, One-Tailed Tests on the Differences at Ages 11, 12 and 13 in the Number of Words Written by 20 Grammar School Children and 20 Secondary Modern School Children.

Sample Tested	K_D Value Obtained	One-tailed Probability
S.1 - Age 11* *(see App.0.2c)	12	<.01
S.2 - Age 12	13	<.01
S.3 - Age 13	11	<.01

8(c)(ii) Differences between Grammar and Secondary Modern Children's Number of Words Written on Entry and After Two Years in School, Expressed as Percentage Gains or Losses on the Original Total Number of Words.

To obtain a clearer picture of the increased number of words written between the writing of S.1 at age 11 and S.3 at age 13, the difference in number of words used was calculated for each child. This gain or loss over the original S.1 writing was then converted into a percentage of the number of words the child wrote at S.1. The percentage gains or losses were then divided into the grammar/secondary modern cast of the preceding section 8(c)(i), in the expectancy that the grammar school children would show a significantly higher percentage gain in number of words used over those words used by them originally to form their S.1 totals, compared with secondary modern pupils.

As the data cast at Appendix 0.2(d) shows - in the form of a Kolmogorov-Smirnov Two-Sample Test - thiss resulted in a K_D of 5, which, for N = 20, is not significant even for a one-tailed test at the .05 level.

8(d) Correlation between Each School Sample's Mean Word Totals for S.1, S.2 and S.3 and their Mean Raw Marks.

The mean number of words used by each school's sample was calculated and is correlated at Appendix 0.2(e) with the raw marks expressed as a mean mark for each school's sample.

The resulting Pearson product-moment correlation coefficientWas .913 ($\pm$ .04).

B. Analyses of Secondary Modern Boys' Creative Writing Before and After a Period of Training Emphasising Sensory Perception.

1. Summary of Tests Administered and Samples Taken.

Table 29. Summary of Tests and Samples.

Before Training Period	After 12 Weeks*
Non-verbal I.Q. Test 3 Uses of Objects Test (open-ended) M.S.1 (72 scripts) - 'The Crocodile'	M.S.2 (72 scripts) - 'The Police Truncheon'
Intervening Training over an 8-week Period	

*It should be noted that a two-week holiday and a further week at school elapsed before it was possible to draw the final sample, Methods Sample 2 (M.S.2).

2. The Judges' Marking.

The judges marked both M.S.1 and M.S.2 (72 scripts each, from three classes of 24 each) making a total of 144 scripts to be marked to the same nine-point scale on the same occasion as had been done similarly during the 1st. Marking and 2nd. Marking of the main investigation.[1]

In view of the imposed rectangular distribution that each judge was asked to mark to, it is essential to first examine the summed team distribution of the mean scores of thefive judges to see if this distribution approaches normality.

2(a) The Observed and Theoretical Distributions of Mean Summed Marks from the Team Marking of the Methods Experiment.

[1]The writing marks of the present investigation, I.Q.s and open-ended test marks (the Uses of Objects Test) are at App.U.1

As in the main investigation, to determine whether the distribution obtained from summing M.S.1 and M.S.2 mean marks, as in the following table, differed significantly from a normally distributed sample of marks, a theoretical distribution was calculated.

Table 30a Observed and Theoretical Distributions from the Methods Experiment Marking of M.S.1 and M.S.2 Scripts.

nS1	nS2	ΣnS12	Marks	U.Limit	U.L.-$\bar{x}$	z	Ppn.Below	Ppn.Within	n'
7	2	9	8.0-8.9*	8.95	———	———	———	.0706	10.0
9	4	13	7.0-7.9	7.95	2.98	1.55	.9394	.0909	13.0
9	13	22	6.0-6.9	6.95	1.98	1.03	.8485	.1535	22.0
17	15	32	5.0-5.9	5.95	0.98	0.51	.6950	.1990	29.0
4	16	20	4.0-4.9	4.95	-0.02	-0.01	.4960	.1945	28.0
12	14	26	3.0-3.9	3.95	-1.02	-0.53	.3015	.1546	22.0
8	2	10	2.0-2.9	2.95	-2.02	-1.05	.1469	.0887	12.0
6	6	12	1.0-1.9	1.95	-3.02	-1.57	.0582	.0582	8.0
72	72	144	. .	.	.	.	.	.	144.0

$\bar{x}$=4.97 s=1.92 *includes 2 subjects with 9.0 marks.

To determine whether this theoretical distribution departs significantly from a normal one, a χ^2 test of goodness of fit was carried out and is below.

Table 30b.Test of Goodness of Fit for the Observed and Theoretical Distributions of Table 30a.

Mark Intervals	n	n'	n - n'	$(n - n')^2$	$(n - n')^2/n'$
8.0 - 8.9	9	10.0	-1.0	1.00	0.100
7.0 - 7.9	13	13.0	0	0	0
6.0 - 6.9	22	22.0	0	0	0
5.0 - 5.9	32	29.0	3.0	9.00	0.310
4.0 - 4.9	20	28.0	-8.0	64.00	2.285
3.0 - 3.9	26	22.0	4.0	16.00	0.727
2.0 - 2.9	10	12.0	-2.0	4.00	0.333
1.0 - 1.9	12	8.0	4.0	16.00	2.000
. .	144	144.0	0	.	χ^2= 5.755

For 8 - 3 d.f. = 5 d.f.[1], a value of χ^2 = 5.755 would occur more than 30% of the time when the H_o is true. Therefore we can accept the H_o.

[1]For the reasons why 3 d.f. have been subtracted, see footnote 2 on page 145.

2(b) Reliability and Validity of Marking.

The judges for both this investigation and the developmental one were the same, except for J4a, whose marks were allowed to remain as part of the team's total since he was the sole secondary school representative, and his reliability in marking was likely to be greater than that of the substitute J4b even if there had been time for J4b to mark these 144 scripts as well as those of the main investigation. Further, unlike the latter investigation, no comparison marking was to be attempted with the methods experiment scripts owing to lack of time and the judges' work load.

The marking intercorrelations between the five judges are in a similarly high range of coefficients to the level attained in the main investigation markings.

Table 31. Intercorrelations Between Judges in the Methods Experiment Marking. (Pearson Product-moment Correlation Coefficient).

	J2	J3	J4a	J5
J1	.832	.780	.789	.782
J2		.813	.815	.814
J3			.819	.772
J4a				.805

These high intercorrelations give grounds for accepting that the judges were probably marking reliably. Secondly, it should be remembered that the markin g of the present investigation's scripts was carried out shortly before the second marking in the main investigation. The incidence of this marking inbetween marking that appears to be highly reliable (from the marker intercorrelations and team self-consistency coefficients) and satisfactory (from the individual marker self-consistency correlations) gives stronger grounds for confidence. The marking is also assumed to be valid as was that of the main investigation, but, as will be seen

later in this chapter, there is also reason for confidence in the validity of the marking because of the fair correlation between marks given for the writing and marks given for the open-ended test: .686. This assumes, of course, that there are common mental qualities sampled in these two forms of expression - creative writing and answers to open-ended verbal tests.

3(a) Analysis of the Samples of 72 Children's Writing as One Group of Secondary Children.

To test the null hypothesis that there will be no difference in marks for the writing of the three groups taken as one sample of 72 children, before and after the treatments, the Wilcoxon Matched-Pairs Signed-Ranks Test was applied as at Appendix U.2, in its two-tailed form.

Wilcoxon Matched-Pairs Signed-Ranks Test on Two Samples of 72 Children's Writing.

31 subjects showed an improvement, and 39 a deterioration; there were two tied marks. A z value of -1.2231 was obtained, giving a two-tailed probability of .2224. The null hypothesis can be accepted. There was a mean loss of .314 grades over the whole sample.

3(b) Analysis of the 72 Children's Writing in the Three Different Treatment Groups of 24 Children in Each.

An analysis of co-variance was carried out, under the assumption of uniform regression, so making allowance for the initial differences between the three groups of boys in the experiment, and seeing whether the final differences persisted and are significant.

Table 32. 3 Method Groups' Comparative Positions According to their Raw Mean Scores.

Order	Initial	Raw $\bar{x}$ Scores	Final	Raw $\bar{x}$ Scores	Gains and Loss	
1	I*	6.27	III	5.37	II	+0.22
2	III	5.26	I	4.99	III	+0.11
3	II	3.51	II	3.73	I	-1.28

*Full details of the different treatments given to the three groups have been given in the preceding chapter, but for ease

of reference, the treatment given to each group may be summarised as –

Group I – control, with no sensory perception work;
II – partial varied sensory perception work once per week;
III – full experimental with varied sensory perception work prior to writing, plus a training programme.

The analysis of co-variance resulted in an F value of 3.47, which, for 2 and 68 d.f., has a P = <.05; (see Appx. V for the full calculation.)

To determine which Groups have a significant difference between them, the adjusted final mean scores were calculated at Appendix V, section 13, with the following results.

Table 33. The Three Groups' Comparative Positions After Adjustment of Final Means.

Order	Adjusted Final Mean	
1	III	5.30
2	I	4.62
3	II	4.17

Table 34. Differences Between the Groups' Adjusted Final Means.

Method Group	I	II
III	0.68	1.13**
I		0.45

Minimum values required for significance (Calculated at Appx. V, section 14)
1.429 = <.001***
1.101 = <.01 **
0.826 = <.05 *

Table 34 above shows that the only significant difference (<.01) between the method groups is that between Group III and Group II, which did the least well. However, there is not a significant difference between the full experimental Group III and the control Group I despite the latter's apparently large decline in marks: see Table 32. Clearly, this could be due to regression effects – the 'within groups' correlation between initial and final marks is low[1] – and a calculation of the final predicted means from the initial and general means has been done at Appx. V, section 15. A comparison of the initial and final scores in relation to their general and predicted final means is set out below so that any

[1]Lack of perfect correlation is one of the factors behind regression: here, the correlation is – $\frac{74.33}{\sqrt{(256.57)(160.59)}} = .366.$

regression effects can be seen.

Table 35. The Effects of Regression on the Final Raw Scores of the Three Groups, and the Predicted Final Mean Scores.

Group	Init $\bar{x}$	Gen. $\bar{x}$	Devtn.	Finl $\bar{x}$	Gen. $\bar{x}$	Devtn.	Pred. $\bar{x}$	Actual - Predict.
I	6.270	5.011	+1.260	4.992	4.697	+0.295	5.06	4.99-5.06= -0.07
II	3.508	5.011	-1.503	3.733	4.697	-0.964	5.13	3.73-5.13= -1.40#
III	5.258	5.011	+0.247	5.367	4.697	+0.670	4.77	5.37-4.77= +0.60

= <.01

From the above table, Group I's failure to attain a final predicted score, based on initial and final raw scores, is only -0.07 as against the apparent drop of -1.275 between initial and final raw mean marks. Only a slight loss is due to treatment or some other cause, with the rest due to regression effects. Similarly, Group II's 'gain' of 0.22 is equally illusory, since this is also due to regression effects, for one would have expected the Group to have scored 5.13 and not only 3.73 - a 'loss' of 1.40 grades (P = <.01). On the other hand, the full experimental group, Group III, managed to score 0.60 grades more than its predicted final.

These regression movements confirm the analysis of co-variance, which shows a highly significant difference (<.01) between the superior Group III and Group II, but not a significant difference between Group III and Group I.

4. Intercorrelation between Writing Ability Marks, Non-Verbal Intelligence Quotients, and Open-Ended ('Creativity') Test Scores.

The best available measure of the group of 72 boys' creative writing ability was felt to be a combination of the marks of the two samples (M.S.1 and M.S.2), resulting in a summed mark for each child. This summed mark has been set against each boy's I.Q. and open-ended test score in the table at Appendix U.1. Their resultant intercorrelations, using the Pearson product-moment correlation coefficient, have been calculated at Appendix W.1, and are as follows.

Table 36. Intercorrelations between an Estimate of Writing Ability, I.Q., and Open-Ended Test Score in a Group of 72 First-form Secondary Modern Boys.

	I.Q.	Open-ended Test*
Writing	.583	.686
I.Q.		.582

*An example of the Uses of Objects Test is at Appendix W.2.

6
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH.

1. Judges' Reliability and Validity in Marking the Main and the Methods Investigations.

1(a) Judges' Self-Consistency Correlations and Colleague Intercorrelations.

The levels of rater correlation and colleague intercorrelation coefficients reveal that all five judges consistently reached agreement - above a minimum level of .47 for any table of coefficients - both against themselves as individual raters and against each other, as to the respective merits of the scripts being marked.

This may be due to the higher than usual differentiation in marking between scripts that the rectangular marking distribution forced on them. However, comparison of correlations with other research workers such as Britton, Martin and Rosen (1966) (abbreviated to B.M.R.) is legitimate in the case of the measure of the whole team's self-consistency, (Table 9, page 148). The team's agreement in its two markings of samples S.1 and S.2 was as high as .87 for S.1 and .89 for S.2 with a one-year interval between marking in four of the judges' cases. B.M.R.'s team consistency coefficient was .91 after a two-month interval.

1(b) Factors behind the Judges' Marking Performance.

The correlations are relatively high, in the case of the self-consistency correlations and the individual judges' colleague intercorrelations, probably owing to a combination of the following factors: the abnormal distributions of marks in the rectangular cast, so affecting individual rater and colleague lack of concordance, and favouring higher correlations, though where the marks have been summed to produce a team mark, the latter's distribution on the three

occasions when a team mark was required has been shown to assume normality; the actual multiple marking method through formation of a composite impression mark which so moderates any individually wide divergencies; attention to the given generalised criteria, perhaps even at the expense of individula impression variability (though the correlations, and inspection of marks given at Appendices H and M.1, reveal a healthy disagreement; general care in marking, perhaps reinforced by first, the provision of introductory comments and generalised criteria, secondly, sympathetic and personal approaches by the writer to the judges when handing each one a fresh batch of scripts, and thirdly, provision of a table for judges to time their progress in the marking and record it.

Certainly some such factors must have operated in the case of the inexperienced marker J4b, called in at short notice, who showed a high self-consistency of .76 between his first and second marking in the main investigation. Though this can, perhaps, be explained by the shorter two-month interval between re-marking, nevertheless it is comparable with B.M.R.'s experienced judges who also marked after a two-month interval. Further, his other high inter-correlations are also comparable with his own colleagues' coefficients.

1(c) Judges' Time Spent in Marking.

A comparison has been made between the marking times of the five judges and those of similarly proceeding impression markers such as B.M.R. worked with.

From the times spent in marking reported on page 159 above, it is apparent that the uniform increase of one-third in the 2nd. Marking's scripts was accompanied by a proportionate increase in time spent on marking in the cases of only two of the five judges - J2 and J3. Thus, three judges showed a drop in time spent on marking each script from the

1st. to the 2nd. Marking. Familiarity with the scripts and procedure, plus increasing skill in marking quantities of scripts and shortage of personal time probably contributed to the falls in time per script.

B.M.R.'s judges were asked to form a quick impression at the rate of 25 scripts per hour. The present writer suggested a first rough sorting into thirds at the rate of 50 scripts per hour. The mean time calculated from the average of the five judges' 1st. and 2nd. Markings came to 22.2 scripts per hour, which as Table 24, page 159 shows, is fairly close to the B.M.R. average rate of 19.7 scripts per hour, and is above the second sorting of 25 per hour.[1]

One can conclude that, by aiming judges at a marking rate of 25 scripts per hour, one is likely to obtain scripts marked at the rate of approximately 20 scripts per hour, or more, if quick sortings are asked for.

1(d) Conclusions on Reliability and Validity of the Judges' Marking.

The evidence in favour of the judges' reliability rests, first, on the pre-requisite condition of self-consistency both as individual markers and as a team. Their performance in the 2nd. Marking is quite comparable with that in the 1st. Marking done a year previously by four of the five judges. Further, the team self-consistency correlations show a considerable advance over individual judges' self-consistency correlations, as one would expect, but it is the high level of the correlations between the team's 1st. and 2nd. Marking that gives real ground for confidence in the team's reliability. This confidence can be maintained despite the absence of the more thorough method of assessing team reliability by contrasting this team's marking with that of another one, as B.M.R. did. Secondly, the high degree of agreement between judges shown by both their 1st. and 2nd.

[1]The average of 22 s.p.h. includes the first sorting time as well. All scripts were examined twice before final grading.

Marking inter-correlations further justifies the view that their marking was reliable.

Since the methods experiment was marked with the same criteria and procedure presented to the judges in the main investigation, and since the methods marking was done just prior to the 2nd. Marking, and revealed similarly high marker inter-correlations, the writer considers it is reasonable to conclude the methods experiment marking is as reliable as the main investigation's.

One qualification needs to be added to all this. Because of each judge's rectangular distribution (and regardless of the nature of the summed distribution resulting from the five judges' marks) inter-correlations between judges are likely to be inflated estimates, and should not be compared too closely with the inter-correlations obtained by other research workers.

The evidence supporting a view that the judges attended to, and identified, the characteristics of good creative writing is less certain, and mainly negative deduction rather than positive conclusion. The positive evidence for the validity of the marking rests primarily on the universally high agreement between the judges. Secondly, as part of the methods experiment, a reasonably high correlation coefficient of .686 between writing marks and the open-ended test scores leads one to an increase in confidence that the judges have been attending to criteria that is sympathetic, to, and has much in common with, an open-ended type of thinking.

Negatively, it is unlikely that three experienced school judges (and four, if we include the College of Education lecturer in English) of the type of children's writing generally accepted as being 'good' creative writing, and which is very familiar to them, are likely to be all in error, in the same direction, to the same degree, and at the same time. If

one rejects their judging as being invalid, then one has to argue that their high rater, colleague and team correlations arise through similar errors in the direction and strength of their marking. Further, this marking, it could be argued, is invalid in that it does not attend to commonly accepted criteria of creative writing. Similarly, one has to argue that the College of Education lecturer and the completely inexperienced science student (whose backgrounds are radically different from the other judges) are guilty of almost identically erroneous marking.

The question of whether the marking does attend to commonly accepted criteria of creative writing (as far as such writing has any commonly laid-down criteria) is an important one, and deserves amplification. It seems likely that all five judges used the given criteria of Appendix E, paragraph 2. The criteria are the distilled suggestions and syntheses of a panel of the London branch of the Association of Teachers of English. And though the members of this panel would probably readily admit to fallibility of judgement about what is or is not good creative writing, nevertheless, the criteria appear reasonably valid guideline suggestions.

The conclusion in which the most confidence can be placed, therefore, would be to say that the judging has probably paid attention to valid criteria of creative writing. Though it is possible to argue that there is no evidence, by means of independently-assessed external work comparison, that the judging has validly marked for creative characteristics to the reasonable exclusion of most other characteristics such as grammar and form, this seems less likely to be true than the converse.

A Footnote on the Use of Inexperienced Markers.

One of the most interesting sidelights of this

investigation is the performance of the completely inexperienced marker, and its implications for the future use of such persons in impression marking. Working within the generalised framework supplied to him, J4b's marking appears to be highly reliable and indistinguishable from the very experienced colleagues he worked with. The system of impression marking would seem to be capable of being used by any intelligent and consistent, careful person as part of a team. However, it would also seem safer to include such a person in some marking design that will enable an external assessment from normally experienced sources to be made.

2. Creative Writing Ability in the Secondary School.

2(a) Motivation and Assignment Variables.

It is of great importance that the initial writing sample should be as representative as possible of the normal creative writing ability of first year secondary school entrants, since it is intended to serve as a criterion against which later samples are to be measured.

The upheaval of transfer at any age from a single school in which most children have grown since the age of five must have considerable effect on conscious school performance and far greater impact on unconscious mental behaviour. The impact is likely to be favourable (amongst children streamed into grammar-type schools or streams) and possibly unfavourable (amongst average-ability children who may feel a sense of failure). Against the latter, however, one must place the fact that children are very adaptable, and that any movement upwards to secondary school education has both age and prestige associations. These generalised statements appear to find support from the marking results in that significant first year differences with low secondary modern school performances and high grammar school gradings disappear completely in the second year. However, this is not a strong

argument since only one grammar school has any significant superiority over any other school, and in later analyses (as will be mentioned later) lack of significance between the grammar and secondary modern schools could be due to the small size of the samples from each school, (N = 10). An additional weakness of the argument is that the grammar school samples always remain (though not significantly) in superior mark planes to those of secondary modern children. Upon analysis, only the SM (F) sample achieves a higher final adjusted mean than any grammar school sample other than the Gr. (F) which has the significant superiority. (2nd. Marking, S.1/S.3, Table 18 on page 155 above).

Apart from motivation due to the general school environment, the effects of good, poor or variable motivation arising from the assignments themselves must be considered. It is assumed that the assignment task has been controlled so that the children have been asked to work on similar types of essay: the instructions before writing (as in Appendix B) suggest clearly to children the type of response expected, and it can be fairly argued that the three essay titles set permit the type of creative writing which the judges have been prepared for. The question remains as to whether the titles themselves are likely to arouse good motivation to write in most of the children in the populations being sampled. One cannot guarantee, of course, the probable response, since the most likely title to arouse good motivation might quite possibly suffer from personal or widespread school events of a chance nature. As explained, the investigator attempted to control this by staggering the first two essay titles before modification of the research design took place to permit an extra year's sample (the end of the second year) to be drawn. The final essay title for S.3 was written on

by all five schools at the same time. Inspection of S.1 and S.2 marks split into single title samples[1] reveals no undue depression or elevation of marks indicating a single distinctive child reaction common to one title only. Unfortunately, this is not possible for the S.3 title, and it must be admitted that bias in the form of an abnormally hostile or favourable reaction to an unsuitable or very helpful title could be confused for decline or growth in writing ability. It is considered that the direction of bias, if there is any, is likely to be of a comparatively helpful nature: the first two essay titles could be considered as being more abstract ("Help" and "The Threat") than the final essay title which is slightly less vague ("The Stranger").

Ideally, initial samples should have been drawn in the junior schools before any possible '4th. grade' dip in creative expression could affect them. Knowing in advance the exact number of years the longitudinal study was to last would also enable the second uncertainty to be diminished by arranging that no school writes the same essay subject at the same age as another. This staggering of titles and removal of unsettled conditions for the writing of the criterion essay would increase the confidence which subsequent results might engender.

With the present design, we have to conclude that the S.1 and S.3 essays are reasonably capable of having produced representative pieces of writing from unsettled new secondary school entrants and from children who would probably welcome the more concrete imagery conjured up by such a title as "the Stranger", respectively. It seems likely that these samples of writing are fairly typical responses of unsettled and settled children in secondary schools that are comparable to the five in the investigation.

[1]In Appendix H the essay titles are identified by their initial letters, 'H' (Help) and 'T' (The Threat),written over the appropriate samples in red.

2(b) Examination of the Marks for Creative Writing of 50 Secondary School Children between S.1, S.2 and S.3, Over Two Single Years and a Two Year Period.

Viewing the sample of 50 children as a single group of secondary school children, and comparing their respective mark performance between the beginning and the end of the first and second years, and over the whole period of the first two years in the secondary school, the following results reveal a significant difference occurs between each sample, and always with a highly significant value, after the application of the Wilcoxon Matched-Pairs Signed-Ranks Test.

Table 37. Summary of Significant Differences in Marks for S.1 and S.2 (the first year), and for S.1, S.2 and S.3 (the first two years) Using the Wilcoxon M.P.S.R. Test (two-tailed).

Marking	Samples	Period	Prob.	Direction	Gain	Signif.
1st. Marking (+J4a)	S.1-S.2	1 year	.0110	improvemt.	0.70	<.01
(+J4b)	S.1-S.2	1 year	.0114	improvemt.	0.75	<.01
2nd. Marking (+J4b)	S.1-S.2	1 year	.0102	improvemt.	0.73	<.01
	S.2-S.3	1 year	.0072	improvemt.	0.74	<.01
	S.1-S.3	2 years	.00006	improvemt.	1.50	<.0001

The whole group of 50 children show significant improvements of about three-quarters of a mark each year, and a very highly significant improvement of 1.50 marks over the two-year period. The size of the gains in marks is proportionately large seen against the nine-point scale used.

In view of the discussion in section 2(a) above about the low and high motivation possibly aroused by writing soon after entry into secondary school and by a helpful title that may not have been of equal difficulty to the two preceding titles, (individual school sample responses are impossible to assess from this data cast, but since all schools wrote S.3 at the same time and with the same title), it is possible that the final analysis may be abnormally inflated

and this has led to a higher gain in marks and significant difference than would have otherwise been the case.

However, even after allowing for this suspect essay title (assuming it had the effect feared), the size of significance in each analysis is large enough for us to conclude that secondary children show a clear improvement in writing from their initially observed ability on entry into the secondary school up to at least the end of their second year.

2(c) Examination of the Marks of Five Secondary School Samples of Creative Writing to Determine Differences Between Schools and Differences in Each School Sample's Development Over Two Single Years and a Two-Year Period.

Table 38. Summary of the Differences Between Marks of the Creative Writing of the Five Schools for S.1 and S.2 (the first year), and for S.1, S.2 and S.3 (the first two years) Using the Analysis of Co-Variance, and t Testing About the Final Adjusted Means.

Marking	Sample	Period	F Test[1]	t Test - Final Adj. $\bar{x}$s[2]
1st. Marking(+J4a)	S.1-S.2	1 year	<.05	Gr.(F) over 4 schools (P= <.05, and <.01 with Gr.(FM)*
(+J4b)	S.1-S.2	1 year	>.05	———
2nd. Marking(+J4b)	S.2-S.3	1 year	>.05	———
	S.1-S.3	2 years	<.05	Gr.(F) over 4 schools (P= <.05, and <.01 with Gr.T.* and SM (M)

*the size of difference is due to regression effects.

2(c)(i) Single-Year Period Differences.

Significant differences between all schools, or between grammar and secondary modern schools in two significantly distinct groupings, are non-existent. The only significant analysis out of the three single-year period ones is that with J4a's marking covering the first year in the secondary school. In this analysis, the only school to have a significantly large enough superiority over the final adjusted means of other school samples was the Gr.(F). As was

[1]Reported on pages 151, 153, 154, 156.
[2]Reported in Tables 14 and 19.

mentioned on page 152 above, the surprising drop in marks of the Gr.(FM) sample, resulting in the Gr.(F) sample having a final adjusted mean that was highly significantly above that of the Gr.(FM), is due to regression effects.

Remembering that the whole sample of all five school samples taken together has demonstrated a significant improvement over every single year analysis, the lack of significant differences between the constituent school samples - apart from one - means that the improvement in writing ability must be a general one, with only insignificant differences between schools. This is similar to what Sharples (1967)[1] found with the writing of five junior schools; an overall significant improvement for the whole group over their last year in the junior school was found, but no significant differences between the gains of individual school samples were found to exist. The important difference between his and the present investigation is that Sharples was working with unstreamed - though culturally distinct - junior schools with a similar I.Q. range represented in each of his samples, whereas in the present samples there is a clearcut I.Q. threshold with the grammar children almost exclusively occupying the upper part, and the secondary modern the lower part, of the range. Thus, either one has to attribute the lack of significant differences between samples belonging to the two I.Q. populations to the secondary modern part improving up to the lower level of the grammar school range of writing ability (when initial I.Q. differences are allowed for, as they were in the analyses of co-variance) or one has to blame either the method of sampling for producing unrepresentative samples of each population (grammar and secondary modern), though a table of random numbers was used, or the small number in each school's

[1] page 106 above.

sample. The writer feels that though the latter possibility is real, the lack of significant difference cannot be ignored.

Considering the individual performances of the five school samples and taking into account any regression effects, by comparison with their predicted final means, only the Gr.(F) sample managed a significant improvement over and above its predicted final mean, (<.05), gaining 1.20 marks above the expected level. The two secondary modern schools, because of their low initial means, fall short of their predicted final means by highly significant amounts, (<.01), 'losing' 1.58 (SM(F)) and 1.66 (SM(M)) marks below the expected level.

2(c)(ii) Two-Year Period Differences.

A much larger significant difference was found to exist between the S.1 and S.3 mean marks of the five school samples, covering the two-year period. The F value was almost large enough for significance at the .01 level, but it was due, as Table 19, page 155 shows, to the same Gr.(F) sample's marks being significantly better than the final adjusted marks of the SM (F) and the Gr. (FM) samples (<.05), and very significantly better than the final adjusted marks of the Gr.T.(FM) and the SM (M) samples (<.01).

The comments on the analyses of the single-year periods in the preceding section apply here. If one does not attribute the results to the low school samples of 10 children each, then it is necessary to account for the presence, once more, of the SM (F) sample's final mean mark approximately level with, or superior to, the marks of two of the three grammar schools - the Gr. (FM) and the Gr.T.(FM) - after initial differences in ability have been allowed for in the analysis of co-variance. The

most likely explanation would seem to be that the SM (F) school sample has improved more than any school sample other than that of the Gr.(F).

As noted under the summary table on page 179, the Gr.T.(FM) is lower than the Gr.(F) sample by a highly significant amount, because of the regression effects discernible in the raw scores of the former school sample. Table 20 on page 156 shows that it failed to achieve a final mean mark that could have been expected by 0.67 marks, which is an insignificant 'loss', especially when compared with the 'loss' of 2.20 marks (<.01) below the final mean that could have been expected from the SM (M) sample. The SM (F) sample has again the second from the largest underachievement compared with its predicted final mean, but, unlike in the first year analysis, it is not a significant shortfall, being a 'loss' of 1.09 marks below the predicted mean. Both SM samples are well below their final predicted mean levels because of their comparatively poor initial marks.

2(c)(iii) Qualifications to the Two Single-Year Periods' Analyses and the Two-Year Period Analysis.

Though the presence of limited significant differences in comparative growth in writing ability between school samples in this investigation, and, for the most part, a lack of significant differences after analysis of co-variance, enables one to point to an absence of significant superiority of grammar over secondary modern schools, this cannot be done unequivocally.

First, it must be recognised that the children in this sample are likely to be unrepresentative of secondary school children in general, since they are from a school system that has devoted considerable effort to showing what high potential, children have for writing in a 'personal' way, and has achieved considerable success in that the selections

of writing in the West Riding-sponsored 'The Excitement of Writing' are typical of a widespread,high standard of creative writing in the county's primary schools.[1]

Secondly, the small sample of 10 children per school, necessitated by keeping the burden of marking to the minimum, is very small indeed and proportionately vulnerable to chance fluctuation in the quality of writing.

Thirdly - though it must be emphasised here that the writer has no reason at all for accepting this point - it is possible that some form of variation may have taken place in the drawing of the second and third samples in some or all of the schools.

Fourthly - though again the writer has no evidence pointing to it - it is possible that the markers reacted in a more favourable way to the fresh subjectmatter of the third sample, simply because of its novelty rather than any merit of the writing over the previous two samples.

Both the third and fourth qualifications are possible but are considered to be most unlikely, from personal observation, from conversation, and in the fourth case, from the unanimous movement of all five judges in the same marking direction.

2(d) Re-Statement of the Main Investigation Hypotheses.

(Taken from chapter 4A where the plans of the investigation were set out, and re-stated here for ease of reference in considering the decisions upon the hypotheses in the next section 2(e)).

H_o = That there is no significant difference in quality between the creative writing of children entering grammar, technical and secondary modern schools and the same children's writing after -

(i) the first year, and after the second year in their respective schools (i.e. single-year periods);

(ii) and after a two-year period in their respective schools - - -

[1] This assertion is based on the writer's contacts with other teachers and headteachers in primary schools in the West Riding.

- $H_o(a)$ - where the samples from all five schools are considered as a single group of 50 children;
- $H_o(b)$ - where samples from the five schools are compared with one another;
- $H_o(c)$ - where the later samples from individual schools are being compared with their own earlier ones.

H_1 = That there is a significant difference in the quality of the creative writing of secondary school children between their initial and later writing for the two periods stated above of -
(i) a single year, and
(ii) two years - - -
considered in the different groupings of

- $H_1(a)$ - a single group of 50 children;
- $H_1(b)$ - five groups representing five different types of secondary school;
- $H_1(c)$ - a single group of 10 children considered by itself.

2(e) Decisions on the Hypotheses about Creative Writing of the Five Samples of Different Secondary Schools, Over Two Single-Year Periods, and Over a Two-Year Period.

Considering the three sub-headings of the null hypothesis (H_o), an d their alternatives where any null hypothesis is rejected -

(i)after either one year of the first two years

- $H_o(a)$ - can be rejected, and $H_1(a)$ accepted for both single years. (Table 37, p.178; P = <.01);
- $H_o(b)$ - can be accepted in the three single year analyses, for all schools except the Gr. (F) sample.In the one significant analysis, $H_o(b)$ can be rejected, and $H_1(b)$ accepted in the case of the Gr.(F) sample over 3 other schools (P = <.05) and 1 school (P = <.01) (Table 14, p.152);
- $H_o(c)$ - can be rejected, and $H_1(c)$ accepted in the cases of the Gr.(F) overachievement (<.05), and the SM (F) and SM (M) underachievements (<.01). The $H_o(c)$ can be accepted in the cases of the Gr.T.(FM) and Gr.(FM). (Table 15, p.153).

(ii)after a two-year period

- $H_o(a)$ - can be rejected, and $H_1(a)$ accepted; (Table 37, p.178; P = <.0001);
- $H_o(b)$ - can be accepted in the cases of all school samples except the Gr.(F) sample. In the Gr.(F) case $H_o(b)$ can be rejected, and $H_1(b)$ accepted for superiority over 2 schools (P = <.05) and 2 further schools (P = <.01); (Table 19, p.155);
- $H_o(c)$ - can be rejected, and $H_1(c)$ accepted in the cases of the Gr.(F) sample's overachievement (P = <.05) and the SM (M) sample's underachievement (P = <.01). The $H_o(c)$ can be accepted in the cases of the Gr.T. (FM), the SM (F) and the Gr.(FM) samples. (Table 20, p.156).

2(f) Relevance of Results for the Creativity/General Intelligence Debate.

In both significant analyses of co-variance, the means of the grammar school samples remained initially and finally above the levels of the secondary modern samples, before the adjustement to allow for initial differences in I.Q. was carried out. This reinforces the findings of workers, reported in Part One above, that there is a strong connection between general intelligence and ability in open-ended work (at least up to a 'threshold of intelligence' of about 110/120 I.Q.

In the methods experiment, a correlation of .582 was found between a non-verbal I.Q. test and a rather unrepresentative (though the best available) measure of some secondary modern boys' creative writing ability.

Though creative English writing must be regarded as sampling mental behaviour common to most forms of verbal intelligence tests, this writer feels that it is important to

stress that such writing constitutes the greatest, and often the only opportunity for open-ended work left for children in the secondary school curriculum that has to be geared to external examination work. The variety of media available to the primary school child has been contrasted in the theoretical model in Figure 1, page 77 above, with the devreasing availability of varied media and open-ended situation possibilities that seem to accompany increased, watertight specialisation. Is the lack of open-ended situation where the child can move without close teacher direction one of the real reasons, for example, behind the sixth-form swing from science to arts subjects which may seem less rigid?

2(g) The Word Count.

2(g)(i) Discussion and Conclusions About Totals of Words Written by a Sample of 50 Children Viewed as A Single Secondary Group.

Even allowing for the qualifications made about the number of words written by the 50 children in the present sample and that of Ford's (1954) New Zealand children, the difference in favour of the English children is considerable. Had the English writing been straightforward description, it would have probably been even more fluent, as was the descriptive-type essay writing of Ford's other samples. Nevertheless, because of the qualifications referred to earlier, this writer does not wish to stress the absolute size of the word totals, but rather the direction of growth in a strongly upward movement of the English sample, shown in Figure 3, page 161. With this sample of 50 children there is - as yet - no sign of the slight dip at 12/13 years of age apparent in American children's work of an open-ended nature mentioned by Torrance. It may well be that the dip in this sample of English children's work will come one year later. To see if there is any indication that there is a one-year delay in the appearance in English children's

creative work of the earlier 'fourth grade dip' (ages 9/10), the writer examined the word totals written by a comparable local junior school group of children to the 50-child sample. He also wished to examine whether the main investigation's sample of words written was really representative or abnormal in relation to a larger English school population. As already mentioned, local junior school children were likely to be unrepresentatively better than average junior school children because of the importance placed on creative writing in the West Riding. However, the children in the writer's junior school could not be considered to be as fluent as the 50-child sample, even after allowing for their lower age ranges, because it had already been demonstrated that children at this school usually perform well below average on the verbally-biased Tomlinson Test.[1] Thus, this junior sample is probably nationally average or below.

Table 39. Comparison of 223 English Junior School Children's Total Number of Words Written in 25 minutes, with 525 New Zealand Children Sampled by Ford (1954).

The English children wrote the same essay title and had similar stimulation to the secondary samples of S.1/S.2. ('Help').

Age		7	8	9	10	Total
English	N	47	54	66	56	223
	Σ	5056	7160	11066	8082	
	$\bar{x}$	107.58	132.58	167.64	144.32	
New Zealand	N	47	128	166	184	525
	Σ					
	$\bar{x}$	75.2	96.8	132.9	161.5	

From the above, it can be seen that these verbally average or below average children wrote a larger number of words, except at age 10, than the comparable New Zealand children, and that the ratio between the two groups here remains the same, approximately, to that obtaining between the 50 secondary school children and the older New Zealand children.

Thus, we can conclude, firstly, that the 50 children in the main investigation's sample are quite representative (or under-representative if we accept that the junior children are only average in verbal ability) of the local writing ability, as regards fluency in creative English writing.

[1] See report of a χ^2 test carried out on the I.Q. results of 9-year old children at this school - page 39 above.

Secondly, a regression due to either the 'fourth grade dip' or to some abnormal condition of sampling or environment appears in the junior school writing at approximately the same age as it does in the writing of the New Zealand children.(The graph on page 102 above shows their regression beginning at age 10 through11). However, both the English and New Zealand samples appear to show a dip in creative work one year later than the North American children tested by Torrance. From this evidence of local junior school children, it is possible to suppose that the writing of the local secondary school children will reveal a dip in quantity of attainment one year later than the 12/13 age range finally sampled in the main investigation. Indeed, as Table 26, page 162 above shows, the significant differences in number of words between the 50 children's S.1/S.3 (age 11/13;<.01), and S.1/S.2 (age 11/12;<.05) give way on analysis of S.2/S.3 (age 12/13) to significance greater than .01: a slowing down in the rate of growth of words used has already, therefore, taken place during the second year.

2(g)(ii) Comparisons Between Totals of Words Written by Girls/Boys, Grammar/Secondary Modern Samples, Quantity/Quality.

Appendix 0.1 shows that girls do write more than boys, but Table 27, page 162 has shown that there are no significant differences between the sexes' totals of words written, possibly due to the girls in the mixed schools not performing so fluently as those in the two girls only schools.

In all three samples of writing, the grammar school children wrote significantly more words than the samples of secondary modern school children, (P = <.01). The analyses of co-variance which made allowance for initial differences, and showed the secondary modern samples within the same range of marks as the grammar school samples, are therefore all the more surprising at first sight.

It is not surprising when the high correlation

(.913) between the numbers of words and the marks given for the quality of writing is known, for clearly, the analyses not only allow for initial differences in quality but also for the incidental but inevitable quantity. The high correlation affords some grounds for having confidence in the existence of an admittedly generalised, crude relationship between quantity and quality, where quality is understood to be more concerned with the ideas expressed rather than the form the ideas are in.

2(h) Summary of Main Conclusions Regarding the Quality and Quantity of 50 Secondary School Children's Creative Writing Over Two Single-Year Periods and Over the First Two-Year Period.

1. The highly significant improvements between any two samples of creative writing of the whole group of 50 children from the time they enter their secondary schools to the end of the second year is as one would expect. Because of the initially unsettled conditions on entry, it cannot be certain that the S.M. writing on entry is as good as that done previously in the junior schools.

2. Single-year and two-year improvements, in 4 out 5 schools, are not sufficiently differentiated from one another for significant differences between schools to emerge. The only school to show a significantly superior improvement over any other was the Gr.(F). In one first-year and the second-year analysis, no significant differences between the school samples was evident.

3. Only the Gr.(F) sample showed a significant improvement over the first year and over the two year period, while both S.M. schools showed a highly significant failure to achieve the final means expected of them from their low initial marks, though the S.M. (F) sample did better over the two-year period.

4. Significantly more words were written by the whole group of 50 children over the first year, over the two years, but not

over the second year. No significant differences were found in the numbers of words written by girls compared with boys, though two grammar samples wrote significantly more than the two secondary modern samples.

5. A high correlation was found between mean marks given for quality and the quantity of words used.

6. The performances of the girls in single sex schools over either boys and girls or boys only, justify the commonly-accepted view that girls write better than boys, though whether this is due to differences in outlook between the sexes or due to differences in school environment cannot be ascertained from this investigation.

7. Though the S.M. (F) school showed an improvement in the first year and the two-year period equal or superior to two of the grammar samples, this was only so when initial differences were allowed for. The unadjusted means showed all three grammar samples ahead of the two secondary modern samples consistently, so confirming the theoretical and experimental views of other workers who have pointed to the strong links between creative expression and general intelligence.

8. The system of multiple impression marking appears suitable for the reliable marking of creative writing, especially when approached from a common but generalised criterion framework. A completely inexperienced marker can work reliably provided he uses an average amount of care, as measured by the time spent in marking, compared with the work of others in the team.

3. Discussion and Conclusions About the Methods Experiment with 11/12 Year-old Secondary Modern Boys.

Summary of Group Treatments -

Group I ($\bar{x}$IQ=108.33) - control group, no strong sensory stimulation.

Group II ($\bar{x}$IQ=101.12) - partial experimental group, no strong sensory stimulation except once per week essay writing time.

Group III ($\bar{X}$IQ=103.50) - full experimental group, strong sensory stimulation, plus an open-ended training programme.

3(a) Intellectual, Motivation and Assignment Variables.

In examining the results, it has to be remembered that the three groups of 24 boys in each class were not randomly selected samples. They are the two-thirds of the members of each class who happened to be present during the drawing of the four samples or writing and tests done in the twelve-week period. The groups' classes had been streamed by the school. Thus, Group I's superior I.Q. mean compared with the two experimental groups could neutralise the effects on this group's writing of a deprivation of strong and varied sensory stimulation; their I.Q. range could compensate for the planned lack of stimulation.

Additionally, the possible failure of the Group I English teacher to co-operate whole-heartedly in the project may have led to the group being given some sensory training of a similar kind to that enjoyed by the two experimental groups. Over a long period of 12 weeks, lack of sympathy with the aims of the experiment as they affected this group could have led to an unconscious introduction of compensatory work. However, this must remain speculative in the absence of definite evidence.

3(b) Analysis of the Three Groups of 24 Boys as One Group of 72 Secondary Modern Boys, Examining the Differences in Writing Ability Between the Beginning and End of the Experiment.

Though the loss of .314 grades between the beginning and end of the experiment is not significant, it is an interesting fact that the whole sample of 72 boys performed less well after an experiment in which at least two of the groups might have been expected to improve sufficiently to bring about an overall improvement. The loss is insignificant, and so one cannot make inferences about

other samples in similar situations.

3(c) Examination of the Experiment's Results.

In the sense that the fresh impressions of the training programme might be blunted, it was unfortunate that the experiment fell behind by about two weeks due to unavoidable discontinuity through whole school and first year activities. This deferred the final essay writing until after a holiday. However, the break in schooling prior to final sampling of writing ability may have resulted in a more reliable indication of the medium rather than the short-term effects from such varied treatment than would normally be obtained.

Inspecting the groups' initial raw means, it is apparent that they follow the mean I.Q. order of I, III and II. However, when initial differences are allowed for, the full experimental Group III did significantly better than the partial experimental Group II (Table 34, page 168; $P = <.01$) but insignificantly better than the control Group I. The drop in mean mark of 1.28 grades by Group I has been shown to be due to regression.

The superiority of Group III over the less well stimulated, but possessing similar I.Q. ability, Group II, was expected. The failure of Group III to attain a significant improvement over and above that of Group I's was not expected. Of the possible causes for this failure, the most likely reason for it lies in Group I's superior intelligence. Similarly, this Group's verbal intelligence was enough to compensate for a deprivation of sensory stimulation such as Group II enjoyed, and Group II's final adjusted mean was almost half a grade below that of Group I's mean.

Thus, intelligence can enable children to overcome poor or inadequate teaching (assuming such was carried out), it was certainly enough (though not significantly so) for

the less intelligent (and less well stimulated than Group III) Group II to perform worse than Group I, but intelligence alone was not sufficient for Group I to outperform the less intelligent but better taught and stimulated in a varied, strong, sensory way, Group III. However, since two out of these three comparisons are insignificant ones, these inferences cannot be applied to other samples in similar situations.

In conclusion, it would appear safe to infer that any group of similar children of average,or below, intelligence could benefit, given adequate preparation and teaching about the importance of sensory exploration, from the introduction into their experience of vivid and interesting stimuli. It is not sufficient, however, for such objects of interest to be 'offered' to children of this range of intelligence, since they will be unable to exploit their possibilities into satisfactory and habitually interesting-to-themselves writing, without teacher guidance.

The intercorrelations between creative writing ability (as measured rather inadequately by a summation of the initial and final experimental writing), performance on a non-verbal intelligence test, and performance on an open-ended test were all positive, and support the view that creative ability is correlated with general intellectual ability. Presumably, had a more reliable measurement of normal creative writing ability been available, the correlations would have been even higher.

3(d) Re-Statement of the Methods Experiment Hypotheses.

(Taken from chapter 4B where the plans of the investigation were set out, and re-stated here for ease of reference in considering the decisions upon the hypotheses in the next section 3(e)).

MH_o = That there will be no significant differences between the quality of creative writing at the beginning of the 12-week period of varied training and that at the end of the period -
in which Group I has no stimulation of a vivid, sensory perception nature before writing, and has an English work programme with traditional emphases;
Group II does have such vivid, sensory stimulation, but has no supporting programme of work; and
Group III has the same sensory experience opportunities as Group II but also an intensive programme of open-ended English work; where - - -

- $MH_o(a)$ - the three groups are considered as a single group of 72 secondary modern first-form boys;
- $MH_o(b)$ - the three separate groups of 24 boys are compared with one another;
- $MH_o(c)$ - the individual groups' later samples are compared with their own earlier ones.

MH_1 = That there will be significant differences between the quality of creative writing at the beginning of the 12-week period of varied training and that at the end of the period - - -

- $MH_1(a)$ - by the three groups considered as one group of 72 boys;
- $MH_1(b)$ - the three groups of 24 boys, with the full experimental, the partial experimental, and the control group gaining significantly distinct final positions from one another, in that order;
- $MH_1(c)$ - and by each one of the two experimental groups, with their final mean scores comparing significantly better than their initial ones, while the control group will be significantly adversely affected.

3(e) Decisions on the Hypotheses Regarding the Creative Writing Work of 11/12 Year-old First-form Secondary Modern Boys After a 12-Week Period of Varied Training.

Considering the three sub-headings of the methods null hypotheses, and their alternatives where any null hypothesis is rejected -

- $MH_o(a)$ - can be accepted. (Page 167);
- $MH_o(b)$ - can be accepted in the cases of Groups I and II. It can be rejected in the case of Group III over Group II ($P = <.01$)(Table 34, p.168); and $MH_1(b)$ can be accepted;

- $MH_0(c)$ - can be accepted in the cases of Groups I and III whose final means were insignificantly under and over, respectively, the final means that could have been expected from their initial performances. $MH_0(c)$ can be rejected, and $MH_1(c)$ has also to be rejected* in that Group II has done significantly less well than could have been expected from its earlier performance (<.01)(Table 35, p.169).

*N.B. $MH_1(c)$ specifies an improvement for Group II, and the group did significantly less well than could have been expected.

3(f) Summary of Main Conclusions Regarding the Methods Experiment.

1. The results tend to support the view that strong motivation of Secondary Modern boys of average, and below average, intelligence, can improve their creative writing if it is accompanied by training in varied sensory stimulation, and is part of a flexible, open-ended programme of English work.
2. The fact that the most intelligent Group I did not decline significantly below the full experimental group's level of attainment suggests that boys (and in view of the findings of the main investigation, certainly girls) of average, and above average, intelligence would also benefit from exposure to vivid and varied sensory stimulation prior to writing.
3. The poor performance of the less well stimulated Group II suggests that mere presentation of stimuli - no matter how interesting they may be to the children concerned - cannot, by themselves, help secondary modern boys of average or below average intelligence improve their writing. A sympathetically presented programme of open-ended work is required.
4. The theoretically and experimentally argued connection between creative expression and intelligence is supported by the findings regarding Group I, and the positive correlations

between I.Q., creative writing and open-ended testing performance.

5. In view of the above findings and tentative suggestions, it is considered that secondary schools should make use of sources of stimulation such as the West Riding School Museum Service, to obtain exhibits to use in a similar way to that practised by West Riding primary schools. The latter mainly use the exhibits as stimuli for creative expression in varied media, and frequently for the stimulation of creative English writing. Such Museum services should not continue to be used by secondary schools principally - and in many cases, solely - as the providers of visual aids for children of below average, and average, intelligence; there are indications that creativity is linked with intelligence up to a level of I.Q. 120, and it seems reasonable to suppose that a large proportion of grammar school pupils could benefit equally well from deliberate exposure to, and training in ways of, sensorily exploring events and objects of unusual interest.

4. Recommendations for Future Research.

4(a) Present Longitudinal Investigation into Secondary School Creative English Writing.

It is proposed that the present main investigation be continued, subject to agreement from the five schools taking part in it, matching the subjects' next two essays for their S.4 and S.5 samples of writing[1], and having them marked by the same team of judges using the same method of marking. Additionally, the writer hopes (given a little more time) to obtain the services of another team of markers to increase accurate assessment of reliability and validity. He would also

[1]At the time of writing, raising of the school leaving age has again been deferred; thus, the S.M. samples will, for the most part, vanish towards the end of their fourth year in school.

like to measure in as thorough a way as possible the development in content over the writing samples drawn, from entry to the time of leaving the secondary school.

4(b) Need for a Larger Developmental Investigation Sampling Typical School Systems.

Both the present researches have, in the writer's opinion, demonstrated the practicability of reliably measuring the creative writing of children. The writer has, throughout the investigations, been frequently troubled by the dilemma, on the one hand of keenly wanting to develop a practically, rather than a theoretically-orientated project[1] that takes account of day-to-day school and classroom operational difficulties that are likely to be found nationally rather than just locally. On the other hand, he has felt an awareness of the limitations that must be imposed on a single, part-time investigator who has the full-time job of teaching at the same time.

Had more time been available, there could have been an inclusion of most of the junior schools in the areas served by the five main investigation schools. There is certainly a need for such a junior school sample to be drawn in more settled conditions than one can expect on transfer to the secondary school. This would enable us to be more certain that the first year secondary school writing was not untypical of the standard of creative writing done by the same children in their junior schools. Probably the comparison criterion to be drawn first could, in view of possible dips in open-ended creative work in the fourth year[2], consist of a third year sample, followed by a fourth year one.

A large-scale investigation, beginning in an assessment of the standards and nature of children's

[1]The writer feels strongly - as indicated in the introductory chapter - that effort in research work should not only be of a competant standard, but should satisfy a criterion of practical usefulness in attempting to shed light where such is really needed.

[2]Quality ≠ quantity necessarily, but if one assumes it does, then the data in Table 39, page 187, may indicate a 4th. year dip in quality as well as quantity.

third year creative writing, could follow samples of children through all types of secondary school, including varied ability comprehensive streams. It could not only partly replicate all of the present main investigation with a larger sample, noting any features such as notable dips in creative writing output both at certain ages, and perhaps after transfer to secondary school, girl superiority over boys, and girls and boys, in quality and quantity, in different types of schools. With a team of investigators, as well as being able to attend to the servicing of the judges' marking and its eventual analysis, it would also be possible for a careful linguistic study of c content and length differences. (Of particular interest would be an examination of variation in the amount and nature of imagery in the scripts between ages, sexes (male, female and mixed) and school types (comparing similarly operating schools working towards G.C.E. examinations which, nevertheless, manage to approach their work in different ways - e.g. formal and informal and integrated curriculum activities).
It must be emphasised that such an investigation should desirably cover a wide range of of intellectual ability, in view of the main investigation's finding that after allowing for initial differences, there is not a widespread degree of significant improvement by grammar school samples compared with secondary modern ones.

A comparison of marking by similar impression methods, and using at least two teams to obtain two comparative multiple impression marks, perhaps with one team containing inexperienced markers as well as experienced ones, could be made. It might also be instructive to contrast the marking of these two teams with independent marking, following the detailed marking system devised by Torrance's associates and so warmly recommended by Goldman and Clarke (1967).

4(c) Further 'Methods' Experiments on the Development of Optimum Conditions for the Creative Writing of Secondary School Children of all Ages and Abilities.

From the results of the present methods experiment one must consider whether the considerable demands on judges' time and energy justify further research.

This writer feels that secondary school examination pressures will remain heavy, and therefore children of above average intelligence will continue to be deprived of opportunity for open-ended work, particularly involving varied and vivid sensory stimulation, throughout the curriculum, and in direct contrast to their experiences in primary education.

Thus, any effort devoted to discovering, with larger and more representative samples of above and below average intelligence children, if they can be helped to greater verbal fluency by means of sensory stimulation plus an open-ended programme of work, or by sensory stimulation alone (in the case of more intelligent children), is recommended.

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PROJECT ON THE DEVELOPMENT OF SECONDARY SCHOOL CHILDREN'S CREATIVE WRITING. SUGGESTED STANDARDISED ADMINISTRATION FOR SETTING OF ESSAY 1, SEPTEMBER, 1965, TO ALL FIRST FORM CHILDREN.

The whole project's success is heavily dependent on each teacher who actually sets the children's work: since the work is designed to take place within an ordinary English period on the timetable, there will probably be different teachers setting it to different classes within the same school. Further, when the second sample is drawn in about a year's time, there may be possibly again a different teacher for some of the children.

It would be appreciated tremendously, therefore, if each teacher would adhere as closely as possible to the following standardised procedure:-

I. If any child knows it will definitely be leaving the Pontefract/Castleford area within the year, could this be noted at the top of the script, please?

II. After giving out paper, and asking the children to write their christian names and surnames, their date of birth (eg.21/8/54), and their class name or number, could you please proceed by saying:-

"Now, I would like you to write an essay entitled 'The Threat.'
You can imagine you are in any place or situation. It can be you who is threatened or someone else.
Words to repeat once, please. Start off by saying where you are, and remember to describe such feelings as anger or fear, to describe sounds, smells, the touch of anything, as well as what people or things look like. On this occasion (only?) spelling mistakes won't matter; just spell words as well as you can.
You've got 25 minutes to write in, so begin by imagining what the place you are in looks like.
I'll repeat once.....

III. No other information, stimulation, or re-writing should be given or allowed, please.

IV. At the end of the 25-minute writing period, could you have anyone who has not finished write "Not finished" at the bottom of script.

Thank you very much for your help.

J.C. Conder.

Copy to H.G. Armstrong, Esq., WRCC Educational Psychologist.

Note 1 to the Appx. Para. IV was added primarily so that teachers administering the test would not perhaps feel so tempted to permit longer than 25 minutes for the writing

Note 2 to the Appx. All correspondence with schools was also circulated to Mr. Armstrong as a matter of courtesy.

Appendix C. Main Investigation, List of Subjects, Schools, Ages, Code Identities and Sexes.

S.	Age	S.1	S.2	S.3	S.4[1]	Sex
Grammar Technical (FM).						
1.	12. 5.54	T. 1	U.50	V. 1	W.50	M
2.	3. 8.54	T. 2	U.49	V. 2	W.49	M
3.	3.10.53	T. 3	U.48	V. 3	W.48	M
4.	16. 6.54	T. 4	U.47	V. 4	W.47	M
5.	22. 7.54	T. 5	U.46	V. 5	W.46	F
6.	22. 6.54	T. 6	U.45	V. 6	W.45	F
7.	2. 2.54	T. 7	U.44	V. 7	W.44	M
8.	1. 1.54	T. 8	U.43	V. 8	W.43	M
9.	21.10.53	T. 9	U.42	V. 9	W.42	F
10.	26. 9.53	T.10	U.41	V.10	W.41	F
Grammar (F).						
11.	4.10.53	W.40	T.11	U.40	V.11	F
12.	2. 5.54	W.39	T.12	U.39	V.12	F
13.	20. 4.54	W.38	T.13	U.38	V.13	F
14.	8.10.53	W.37	T.14	U.37	V.14	F
15.	10.12.53	W.36	T.15	U.36	V.15	F
16.	7.12.53	W.35	T.16	U.35	V.16	F
17.	11. 4.54	W.34	T.17	U.34	V.17	F
18.	21.10.53	W.33	T.18	U.33	V.18	F
19.	27. 4.54	W.32	T.19	U.32	V.19	F
20.	31. 1.54	W.31	T.20	U.31	V.20	F
Secondary Modern (F).						
21.	9. 4.54	V.21	W.30	T.21	U.30	F
22.	19. 2.54	V.22	W.29	T.22	U.29	F
23.	11. 3.54	V.23	W.28	T.23	U.28	F
24.	8. 9.53	V.24	W.27	T.24	U.27	F
25.	6. 9.53	V.25	W.26	T.25	U.26	F
26.	23. 4.54	V.26	W.25	T.26	U.25	F
27.	3. 7.54	V.27	W.24	T.27	U.24	F
28.	3. 1.54	V.28	W.23	T.28	U.23	F
29.	6. 4.54	V.29	W.22	T.29	U.22	F
30.	24. 3.54	V.30	W.21	T.30	U.21	F
Grammar (FM).						
31.	1. 3.54	U.20	V.31	W.20	T.31	F
32.	14. 5.54	U.19	V.32	W.19	T.32	M
33.	17.11.53	U.18	V.33	W.18	T.33	F
34.	14. 2.54	U.17	V.34	W.17	T.34	F
35.	4. 5.54	U.16	V.35	W.16	T.35	F
36.	30. 9.53	U.15	V.36	W.15	T.36	F
37.	25. 2.54	U.14	V.37	W.14	T.37	F
38.	25. 7.54	U.13	V.38	W.13	T.38	M
39.	27.10.54	U.12	V.39	W.12	T.39	M
40.	15. 9.53	U.11	V.40	W.11	T.40	M

[1] S.4 Code identities, for future use, are given to show the pattern continuation.

S.	Age	S.1	S.2	S.3	S.4	Sex
Secondary Modern (M).						
41.	14. 2.54	TT.41.	U.10	V.41	W.10	M
42.	30. 8.54	T.42	U. 9	V.42	W. 9	M
43.	30. 9.53	T.43	U. 8	V.43	W. 8	M
44.	29.11.53	T.44	U. 7	V.44	W. 7	M
45.	3.10.53	T.45	U. 6	V.45	W. 6	M
46.	4. 5.54	T.46	U. 5	V.46	W. 5	M
47.	12. 7.54	T.47	U. 4	V.47	W. 4	M
48.	25. 7.54	T.48	U. 3	V.48	W. 3	M
49.	27. 4.54	T.49	U. 2	V.49	W. 2	M
50.	10. 2.54	T.50	U. 1	V.50	W. 1	M

N (F) = 30
N (M) = 20
N_{FM} = 50

Appendix D. - Sheets 1 and 2 'Warm-up' and Discussion of Creative Writing Given to the Five Judges Before the 1st. Marking.

JUDGES' SHEET 1 - TO BE READ BEFORE SHEET 2 PLEASE.

As a 'warm-up' you are invited to place in order of suitability for grammar school entrance the writers (aged about 12) of the three scripts underneath. Please write your marking order on 'Marking Sheet 1', after you have read one through the three scripts twice only.

A DAY AT THE SEASIDE.

A.

One day my father took me to the seaside. It was a boiling hot day, so he let me take off my boots and stockings and wade about in the water. It was great fun. My playmates built castles with sand which was upon the seashore. My father sat by the fire, warming the pies and making the tea, at the same time. At last the tea was poured out, so I had to stop playing, and go up to take my tea. After I had taken it, I ran down to the water. I was walking about when all of a sudden I let out a squeal. 'Whatever is the matter?'cried an elderly woman, who happened to be passing. 'I-i-it's a crab,' I sobbed. 'Nonsense,' was her reply, and walked on. I ran up to my father, and he soon removed the crab. 'Are you going to wade again?' asked my father. 'No,' I said, and to confirm my statement, I commenced putting on my boots and stockings. I walked along the shore, but I did not venture near the water. After an hour had passed my father and I walked along the beach in the direction of the village. We arrived home and I told my mother about the crab biting my toe, and she said it served me right for wading.

A DAY AT THE SEASIDE.

B.

'A Day at the Seaside' -what pleasure is in those words - for with them comes the echo of the waves lapping up on the golden sands and the memory of those thrilling donkey rides!

To children who live in the smoky towns the experience of a visit to the blue sea is delightful, and one may well notive the eager looks on the faces, pinched and pale, of the slum children, as they are packed into the railway carriages, bound for the seaside.

Poor little mites, is it not sad to think that they have come into this beautiful world only to see the lovely country and seaside once in a long while. However, the train steams into a small station, where the happy youngsters alight, and after the teacher (for doubtless they are some little flock belonging to a Sabbath School) has seen that no one is lost, she points out the shimmering sea in the distance, and laughing with glee, they all march down the path, perhaps singing some glad refrain.

They at length reach the sands where myriads of gay children are dancing happily in the summer sunshine, and after throwing off their caps and coats they run along the sands ready to join in their friends play, or bathe in the cool delicious waters of the deep blue sea.

A DAY AT THE SEASIDE.

C.

One fine summer morning I went a visit to the seaside. While trudging along at my ease, I discovered a little curious shell, picking it up I heard a most wonderful noise, putting it to my ear I heard the rustle of waves. With great glee and merriment I put it in my pocket and ran home to the house, and showed it to my mother, she said 'It's only a ordinary sea shore shell.'

When I heard this I was so angry that I laid it on the floor and smashed it. No sooner had I done this, I was away to the shore again to finish my exploration. The next place I went to was where all the large boulders were strewn all over the place.

Then I went up to the water's edge and there I bathed my feet in the cool water.

JUDGES' SHEET 2.

Grading notes on the three scripts of Judges' Sheet 1.

In an investigation by Boyd, W.(1924) 'Measuring Devices in Composition, Spelling and Arithmetic,' 271 teachers judged these three essays written by 12 year-old children. The order of merit, using mean scores, was B-A-C. The original examiners were assessing primarily verbal techniques.

In 1960, readers of the Summer issue of 'The Use of English' were invited to rate the three essays "in order of suitability for grammar school entrance." Despite this criterion supposedly being in harmony with the deep-rooted 'verbal technique' standards of most teachers' English marking, there was a considerable change in teachers' opinions from those apparent in 1924. The modern judges' opinions were almost equally shared between the orders B-A-C and C-A-B. In other words, only half the modern examiners were assessing primarily verbal techniques, while the other half were mainly concerned with quality in children's writing that one may term personal communication. It is this latter quality that we are concerned with in this small investigation, since unless there is a desire to communicate, the resultant written expression is likely to be an empty verbal form.

Imagery based on sensory stimulation practice.

Allowing that B writer was writing in a competent though nauseous manner, one has to consider how to distinguish between the deliberate but probably insincere imagery of this writing and the natural impression made upon the reader by C's story, which perhaps also contains intentional imagery. Is not one left with the feeling however, that C's writing is due to, or comes about from, an 'unconscious' flow of words that contain a little apposite imagery that has arisen incidentally rather than deliberately? Considering this point further, one has to remember that much of present-day primary and secondary school 'creative' writing is loaded with conscious imagery that is often due to teacher-inspired heightening of sensory awareness. The danger is that the more teacher-motivation there is behind a child's writing, the less likely it is that the writer, and hence the reader, will sense the actuality of the experience. Thus, as usual when considering English writing, one is forced back upon the conclusion that no hard and fast rules can be applied to one's judgement of it. All one can do is to be alert for what is truly a sincere piece of writing told in a satisfactory (to the reader) way, that may contain consciously-inserted imagery. Equally, one has to be alert for the conscious imagery that still leaves an impression of insincerity, despite the possible aptness of its language. This is particularly likely to arise in circumstances where teachers are trying to foster 'creative' writing: Image gimmicry, or merely 'awkward' imagery will probably appear to intrude in such cases. Perhaps the best criteria that can be applied in considering these scripts are those suggested in para. 2 of Judges' Sheet 3. All three aspects of writing considered by these criteria can only be satisfied if the prior condition of sincerity appears, due to the child's genuine interest in what it is doing.

Appendix E. Instructions to Judges for the 1st. Marking. E

(For the 2nd. and 'Methods' Markings, similar instructions were given, the only differences being in respect of the different sizes of sampling and numbers of samples to be marked.)

JUDGES' SHEET 3.

Instructions on Impression Marking.

1. You are asked to give your mark on your impression of the whole performance on each composition rated as imaginative or 'creative' writing. Subtotals for vocabulary, style, etc. are not to be used.

2. Considerations to Bear in Mind During Marking.

Errors in spelling have been corrected by this writer during the scripts' typing, but poor punctuation and grammar have been left, except for where the insertion of an obvious full stop was required. Thus, to help the marker, sentences have been clarified by full stop insertion and captial letter alteration at the beginning of the next sentence. Look for excellences rather than penalise deficiencies.

Look for a general language sense, with the following three three criteria in mind: (a)Pictorial Quality. Do you hear, see, feel the actuality of the experience presented? (b)Creativeness. To what extent is what the writer has written new, original, individual? (c)Feeling for Words. To what degree does the writer use words (i)strikingly and (ii)effectively? In short, how interesting do you find the piece of writing?

3. Time Factors in Marking.

And for these three criteria to equally be applied to all scripts, it is necessary to guard against the boredom that is likely to set in when you read a series of scripts on similar themes. For this reason, some may find it better to work insshort spells. Part of this inquiry concerns the speed at which work can be done. Please enter on the spaces provided on the mark sheet (a) the date, (b)the times of beginning and endingeach spell of work and (c)the approximate duration in minutes of any interruptions. In the two sortings of scripts, you are asked to make up your mind quickly keeping to the following rates; in the first 'rough' sorting - fifty or more scripts per hour, and in the second, more careful sorting - 25 or more scripts per hour.

4. Method of Marking, and Procedures of Sorting.

The method of marking used in the two investigations is 'impression marking', and, (for a change!) it means simply what it says. In order to establish a comparison standard in your mind, read a dozen or more scripts - picked at random from the whole set you have received - before you begin the first sorting, at the same time bearing the above three criteria in mind. Then try to make an individual judgement on each script bearing in mind the comparison standard based on the three criteria, and sort all the scripts into three piles, the best going into pile A and the poorest into pile C. There are 100 scripts in this set. Therefore, in the first 'rough sorting', if you use the whole marking scale, there must be 33 scripts in two of the piles, and 34 in the other. In the second sorting, it will be better for the purposes of the investigation if we use a nine-point scale and share the piles

proportionately - pile A subdivided between marks 9, 8, and 7 equally, pile B subdivided between marks 6, 5, and 4, and pile C subdivided between marks 3, 2, and 1. The marking is, as should now be clear, comparative between the scripts themselves, and not related to a 'mark' signifying some grading between 'all correct' and 'nothing correct' - 9 and 1 respectively. The 11 scripts given mark 9 will be the best 11 from pile A and so on.

5. Please return the completed mark sheets and do not keep any other record of the marks given.

N.B. The writer is indebted to Britton, Martin and Rosen's (1966) Appendix III to their investigation on impression versus conventional marking, for suggestions of points to make to judges.

The three criteria, as acknowledged in the thesis, come from the Composition Group of the London Association of Teachers, as reported by O'Malley (1950).

Appendix F. Two Examples of Scripts Written at the Time of S.1 and S.2, Receiving Low and High Marks Respectively.

S.1 - Script V.25 - Given a mean mark of 1.8(J4a); 1.4(J4b).
S.2 - Script T.18 - " " " " " 8.6(J4a); 8.8(J4b).

V.25. The Threat.

I received a letter when I woke up written by a man. It was a threat, and it said "We are going to kidnap you at 8 O'clock tonight." I was in a little cottage out in the woods with a dog and a cat. And I was terribly frightened and I never went out all day.

I tried to eat, but I couldn't eat a bite all day. It was now getting on for 5 O'clock. Suddenly a strong wind came up, and I kept hearing things move outside. The smell was different to what it was before. I couldn't really tell you what it smelt like. The dog suddenly started to growl. It made me rush up to the window to see what it was. I hear footsteps, but I bolted the door. It was now past eight, and I began to get over it, but sat there watching the fire.

T.18. Help.

The sun disappeared behind a large dark cloud at the seaside, and large drops of rain began to fall. A wind came from the north. A rather strong wind, I thought, and tossed the waves like a person tossing a feather. "Gosh, I do wish I hadn't taken on that dare," whispered Betty in my ear. "But I did, so now I have to face it," she continued with a shudder. We crept down the shingle, avoiding all the sharp stones as much as I could possibly. I waded into the water, followed by a wet and timid Betty. "Off you go," I commanded before I could weaken at the sight of her. She stood there in her swimming costume, shivering, and looking very white, as if she had been a ghost.

She bent down and let the waves roll over her, and then she mustered up all her courage and swam. I'll have to explain why Betty was doing this. It was because we both belonged to a club known as the 'dare club' and everyone had to do a dare. As you can guess, this was Betty's turn. The cliff loomed up in the mist behind us as Betty took a gulp and began a weak kind of stroke. (The wind had brought with it a mist, and now that mist surrounded us.) I could not see Betty any longer, because whe had swum out of sight. A terrified high-pitched scream rang out and through the damp atmosphere. "Betty!" A long shudder went down my spine. That could only mean one thing. Betty was in danger, real danger, and she needed help. "Keep shouting so I can be guided," I called to her. Once again a scream rang out, and I guessed she must have got cramp or had bumped out. I swam as strongly as I could towards the direction I thought she was in. The waves were lashing up against my face. I began to think I must have swallowed half the water. I swam better than I had ever done before . I caught hold of Betty to prevent her from going under when I saw her sinking into the depths of the water. She struggled and dragged both of us under, but when we came up again, I slapped her face, for I realised she was hysterical.

Not finished.

Appendix G. Example of Mark Sheet for the 1st. Marking.*
Mr. L. Davies, J4a. (Grammar Technical English Teacher).
Mark Sheet for the First Two Samples - Main Investigation.

1.'A Day at the Seaside.' Rating - (1st., 2nd., or 3rd.)
Script A.2nd.. Script B.1st.. Script C.3rd.

2. Times Taken in Marking.

Date	Time Begun	Interrup.	Time End
16.Mar.	..8-50.pm...	..15.min...	.10-35.pm.
17.Mar.	..6-20.pm...	...----...	..8-40.pm.
...(Space.provision.for.8.sessions).....			

3. Final Order of Scripts. Please put the script numbers opposite the final mark given, in any order. - There is no need for further ordering between the 11 or 12 scripts allocated to the same mark.

Scripts		1	2	3	4	5	6	7	8	9	10	11	12
From	Mark 9	T11	U19	T 3	U10	U11	U49	V34	W35	T17	U 8	U48	
Pile	8	U12	V32	W40	V40	V37	T20	T18	T16	T13	U50	V29	
A	7	V27	V38	T12	U 3	W37	W39	W38	U18	U20	U14	W34	
From	6	W33	W36	W28	W24	V39	V36	V35	V28	U46	U42	U41	
Pile	5	U16	U15	U13	U 9	U 7	U 6	T44	T43	T19	T14	T10	
B	4	T 9	T 6	T 5	T 4	T 2	T 1	T45	U 2	W31	T48	T15	
From	3	V33	T 7	T41	U47	V23	V25	V26	W27	W25	W23	W22	
Pile	2	W21	V24	V22	U45	U44	U43	U17	U 5	W26	T 8	W32	
C	1	W30	W29	U 4	T42	T46	T47	T49	T50	V31	V30	V21	U 1

*In the 2nd. Marking, the procedure was identical to this, but since 150 scripts were to be marked together, equal division between 9 grades meant the best 16 or 17 scripts had to go to Mark 9, the second best 16 or 17 to Mark 8, and so on.

Appendix H. Judges' Marks for S.1 and S.2 - 1st. Marking.

	S.1	J1	J2	J3	J4a	J4b	J5	$\bar{x}$(a)	$\bar{x}$(b)	S.2	J1	J2	J3	J4a	J4b	J5	$\bar{x}$(a)	$\bar{x}$(b)
Gr.T. (FM)	T 1	8	4	6	4	5	4	5.2	5.4	U50	4	5	9	8	8	8	6.8	6.8
	T 2	5	9	7	4	2	4	5.8	5.4	U49	7	2	4	9	4	8	6.0	5.0
	T 3	4	8	7	9	6	7	7.0	6.4	U48	6	9	9	9	9	9	8.4	8.4
	T 4	3	2	2	4	4	7	3.6	3.6	U47	4	1	3	3	3	6	3.4	3.4
	T 5	2	6	3	4	7	5	4.0	4.6	U46	5	5	3	6	7	2	4.2	4.4
	T 6	7	5	7	4	2	5	5.6	5.2	U45	6	7	6	2	3	3	4.8	5.0
	T 7	7	3	4	3	3	3	4.0	4.0	U44	1	2	7	2	3	6	3.6	3.8
	T 8	8	7	8	2	2	9	6.8	6.8	U43	6	4	4	2	6	8	4.8	5.6
	T 9	6	5	3	4	5	4	4.4	4.6	U42	3	7	5	6	6	6	5.4	5.4
	T10	5	6	3	5	3	6	5.0	4.6	U41	7	7	7	6	4	5	6.4	6.0
Gr.(F)	W40	8	5	7	8	8	7	7.0	7.0	T11	9	7	9	9	9	9	8.6	8.6
	W39	7	5	4	7	8	5	5.6	5.8	T12	9	8	8	7	9	7	7.8	8.2
	W38	6	1	6	7	2	6	5.2	4.2	T13	9	9	8	8	8	7	8.2	8.2
	W37	9	8	8	7	8	5	7.4	7.6	T14	9	6	7	5	7	9	7.2	7.6
	W36	2	1	4	6	4	5	3.6	3.2	T15	3	1	3	4	2	7	3.6	3.2
	W35	5	6	9	9	8	3	6.4	6.2	T16	4	3	4	8	7	3	4.4	4.2
	W34	2	5	8	7	8	4	5.2	5.4	T17	9	6	8	9	5	9	8.2	7.4
	W33	8	4	7	6	5	6	6.2	6.0	T18	9	9	8	8	9	9	8.6	8.8
	W32	3	9	7	2	3	2	4.6	4.8	T19	4	8	5	5	7	7	5.8	6.2
	W31	1	6	8	4	5	6	5.0	5.2	T20	6	6	9	8	6	9	7.6	7.2
SM (F)	V21	4	4	2	1	3	3	2.8	3.2	W30	1	3	4	1	3	1	2.0	2.4
	V22	2	6	3	2	4	2	3.0	3.4	W29	3	7	4	1	5	2	3.4	4.2
	V23	2	5	2	3	1	2	2.8	2.4	W28	5	4	6	6	6	4	5.0	5.0
	V24	8	8	2	2	3	2	4.4	4.6	W27	6	7	6	3	4	3	5.0	5.2
	V25	2	1	1	3	1	2	1.8	1.4	W26	5	4	6	2	7	3	4.0	5.0
	V26	2	1	2	3	1	1	1.8	1.4	W25	6	7	3	3	9	3	4.4	5.6
	V27	5	1	3	7	6	5	4.2	4.0	W24	3	7	5	6	8	8	5.8	6.2
	V28	3	8	1	6	1	3	4.2	3.2	W23	4	9	5	3	7	2	4.6	5.4
	V29	9	8	1	8	9	1	5.4	5.6	W22	8	4	2	3	5	5	4.4	4.8
	V30	2	4	1	1	1	2	2.0	2.0	W21	9	9	2	2	2	6	5.6	5.6
Gr.(FM)	U20	7	6	8	7	6	4	6.4	6.2	V31	8	3	2	1	3	6	4.0	4.4
	U19	8	9	9	9	9	9	8.8	8.8	V32	4	2	7	8	2	7	5.6	4.4
	U18	2	8	8	7	5	3	5.6	5.2	V33	4	4	5	3	1	2	3.6	3.2
	U17	9	9	6	2	7	4	6.0	7.0	V34	2	6	6	9	8	8	6.2	6.0
	U16	5	6	5	5	7	5	5.8	6.2	V35	7	3	4	6	5	7	5.4	5.2
	U15	5	2	4	5	7	5	4.2	4.6	V36	3	6	6	6	6	8	5.8	5.8
	U14	8	2	6	7	9	7	6.0	6.4	V37	6	2	5	8	5	8	5.8	5.2
	U13	4	3	1	5	7	3	3.2	3.6	V38	7	3	5	7	8	8	6.0	6.2
	U12	4	5	9	8	8	6	6.4	6.4	V39	7	2	9	6	2	8	6.4	5.6
	U11	6	8	5	9	9	8	7.2	7.2	V40	8	3	6	8	6	5	6.0	5.6
SM(M)	T41	3	3	3	3	2	1	2.6	2.4	U10	8	5	9	9	9	9	8.0	8.0
	T42	1	4	2	1	2	1	1.8	2.0	U 9	6	4	6	5	4	8	5.8	5.6
	T43	9	8	5	5	5	9	7.4	7.4	U 8	7	8	9	9	9	4	7.4	7.4
	T44	2	2	5	5	6	4	3.6	3.8	U 7	7	5	7	5	4	6	6.0	5.8
	T45	1	7	2	4	2	1	3.0	2.6	U 6	3	1	3	5	4	4	3.2	3.0
	T46	1	1	1	1	1	1	1.0	1.0	U 5	1	1	1	2	1	1	1.2	1.0
	T47	1	3	2	1	2	1	1.6	1.8	U 4	3	2	1	1	4	2	1.8	2.4
	T48	5	8	8	4	1	9	6.8	6.0	U 3	5	2	9	7	7	7	6.0	6.0
	T49	1	1	1	1	1	1	1.0	1.0	U 2	1	3	4	4	4	4	3.2	3.2
	T50	6	7	1	1	3	1	3.2	3.6	U 1	1	1	1	1	1	1	1.0	1.0

N = 50

Note to Appendix H. $\bar{x}$(a) = Mean mark for all 5 judges, incl. J4a
$\bar{x}$(b) = " " " " 5 " " J4b

Appendix I. Calculation of Rank Correlation Coefficients for Judges' Self-Consistency between Two Markings of S.1 and S.2, Using a Correction Factor for Tied Ranks.
(1st. Marking data set out in Appendix H; 2nd. Marking - Appx.M.1)

An Example of the Calculation Procedure: Calculation of the Rank Correlation between J1's 1st. Marking(X_1) and 2nd. Marking (X_2) of S.1.

1.Rank Calculation. A rank was assigned to each mark of J1 (1st.Mkg.) for the S.1 scripts. Similarly, a rank was assigned for the same scripts' marks, given by the same judge, at the time of the 2nd.Mkg.
2.Difference Between Ranks in X_1 and X_2. The difference between each of the 50 scripts' two ranks was obtained.

3.The Rank Differences Squared.	
841.00	625.00
529.00	196.00
12285	6.25
56.25	6.25
625.00	210.25
132.25	289.00
72.25	6.25
9.00	6.25
380.25	6.25
196.00	16.00
121.00	324.00
552.25	289.00
169.00	4.00
9.00	196.00
196.00	2.25
16.00	182.25
420.25	2.25
6.25	2.25
20.25	210.25
110.25	2.25
196.00	2.25
42.25	2.25
6.25	324.00
6.25	2.25
42.25	49.00
ΣD^2 =	7728.25

4.Correction Factor for X_1.
Number of Ties
(Correction from $(k^3-k)/12$).=C.)

Mark	Ties(k)	Correction(C)
9	4	5.0
8	7	28.0
7	4	5.0
6	4	5.0
5	7	28.0
4	4	5.0
3	4	5.0
2	10	82.5
1	6	17.5
N = 50		ΣCX_1 = 181.0 (Σx^2)

5.Correction Factor for X_2.
Number of Ties.

Mark	Ties(k)	Correction(C)
8	7	28.0
7	4	5.0
6	4	5.0
5	5	10.0
4	7	28.0
3	4	5.0
2	9	60.0
1	9	60.0
N = 49		ΣCX_2= 201.0 (Σy^2)

1 untied.

6.Computing Σx^2 and Σy^2. $\Sigma x^2 = \frac{n^3-n}{12} - \Sigma C$

$$\Sigma x^2 = \frac{50^3 - 50}{12} - \Sigma CX_1 = \frac{125000 - 50}{12} - 181.0 = 10412.5 - 181 = 10231.5$$

$$\Sigma y^2 = \frac{125000 - 50}{12} - 201.0 = 10412.5 - 201 = 10211.5$$

7.Compute Rank Correlation. $= \frac{\Sigma x^2 + \Sigma y^2 - \Sigma D^2}{\sqrt{2\ \Sigma x^2 . \Sigma y^2}}$

$$= \frac{10231.5 + 10211.5 - 7728.25}{2\sqrt{10231.5 \times 10211.5}}$$

$$= \frac{20443 - 7728.25}{2 \times 10221} = \frac{12715}{20442} = .622$$

Note to Appendix I. The team correlations (of S.1=.868 and S.2=.89) between the 1st. and 2nd.Mkgs. were calculated in the above way.

Appendix J. Calculation of the Direction and Magnitude of the Difference in Marks of the Matched Scripts of S.1 and S.2 Using the Wilcoxon Matched-Pairs Signed-Ranks Test for Large Samples. J

(With J4a's marks; data taken from Appx. H.)

Difference betwn. S.1 $\bar{x}a$ and S.2 $\bar{x}a$	Rank of Diffnce.	Rank with less frequent sign.
-1.6	-25.5	
-0.2	- 5.0	
-1.4	-22.5	
0.2	5.0	5.0
-0.2	-5.0	
0.4	12.0	12.0
0.4	12.0	12.0
2.0	29.0	29.0
-1.0	-18.5	
-1.4	-22.5	
-1.6	-25.5	
-2.2	-33.0	
-3.0	-42.5	
0.2	5.0	5.0
0	0	
2.0	29.0	29.0
-3.0	-42.5	
-2.4	-37.0	
-1.2	-20.5	
-2.6	-39.5	
0.8	16.5	16.5
-0.4	-12.0	
-2.2	-33.0	
-0.6	-15.0	
-2.2	-33.0	
-2.6	-39.5	
-1.6	-25.5	
-0.4	-12.0	
1.0	18.5	18.5
-3.6	-45.0	
2.4	37.0	37.0
3.2	44.0	44.0
2.0	29.0	29.0
-0.2	-5.0	
0.4	12.0	12.0
-1.6	-25.5	
0.2	5.0	5.0
-2.8	-41.0	
0	0	
1.2	20.5	20.5
-5.4	-47.0	
-4.0	-46.0	
0	0	
-2.4	-37.0	
-0.2	- 5.0	
-0.2	- 5.0	
-0.2	- 5.0	
0.8	16.5	16.5
-2.2	-33.0	
2.2	33.0	33.0
+ = 16; - = 31.		Σ= 324.0

(a) Calculation of z, and its Probability.

$$z = \frac{T - \frac{N(N+1)}{4}}{\sqrt{\frac{N(N+1)(2N+1)}{24}}}$$

$$z = \frac{324.0 - \frac{(47)(48)}{4}}{\sqrt{\frac{(47)(48)(95)}{24}}}$$

$$z = \frac{-240.00}{94.49}$$

$$z = 2.54$$

P = <.0110 (two-tailed)

(b) Calculation of the Extent of the Mean Gain.

Σ improvement = 54.6
Σ decline = 19.4
Net Gain = 35.2 mks.

$\bar{x}$ Net Gain = $\frac{35.2}{50}$
= .70399
= 0.7 marks

Appendix K. Calculation of the Direction and Magnitude of the Difference in Marks of the Matched Scripts of S.1 and S.2, Using the Wilcoxon Matched-Pairs Signed-Ranks Test for Large Samples. (With J4b's marks; data taken from Appx. H.)

1. As in Appendix J, the difference between S.1 $\bar{x}(b)$ mark and S.2 $\bar{x}(b)$ mark was obtained for each pair of scripts, was obtained.
2. The difference was then ranked.
3. The ranks with less frequent sign were extracted (18 plus signs, or 18 showing a drop between S.1 and S.2 marks) and summed to obtain T.

4. The Calculation of z, and its Probability.

$$z = \frac{T - \frac{N(N+1)}{4}}{\sqrt{\frac{N(N+1)(2N+1)}{24}}}$$

$$z = \frac{293 - \frac{45 \times 46}{4}}{\sqrt{\frac{45 \times 46 \times 91}{24}}}$$

$$z = \frac{-224.5}{\sqrt{7835.8}}$$

$$z = \frac{-224.5}{88.59}$$

$$z = \underline{2.5342}$$

$$P = \underline{<.0114 \text{ (two-tailed)}}$$

5. The Calculation of the Extent of the Mean Net Gain.

Σ improvement = 59.8
Σ decline = 22.4
Net Gain = 37.4 marks

Mean Net Gain = $\frac{37.4}{50}$

= 0.74801

= 0.75 marks

Appendix L. Calculation of the Analysis of Co-Variance for the 1st. Marking of S.1 and S.2, with J4a's Marks.

1. Calculation of the Sums of the Initial (S.1 - X) and Final S.2 - Y) Marks, the Sums of the Squares of X and Y, and the Sum of their XY Products.

$\Sigma X = 231.6$ $\Sigma Y = 266.4$
$\Sigma X^2 = 1247.09$ $\Sigma Y^2 = 1561.48$ $\Sigma XY = 1329.36$

2. Calculation of the Total and Mean for Each Group for Initial and Final Scores Separately.

School	Initial		Final	
	Total	Mean	Total	Mean
Gr.T.(FM)	51.4	5.14	53.8	5.38
Gr. (F)	56.2	5.62	70.0	7.00
SM. (F)	32.4	3.24	44.2	4.42
Gr. (FM)	59.6	5.96	54.8	5.48
SM. (M)	32.0	3.20	43.6	4.36
	231.6	23.16	266.4	26.64
		4.63		5.33

3. Analysis of Totals "Sums of Squares" for Initial and Final Scores Separately into Schools and Within Groups.

A. INITIAL SCORES.

(a) Sum of Sq. for Schools. $\frac{51.4^2+56.2^2+32.4^2+59.6^2+32.0^2}{10} - \frac{231.6^2}{50}$

$= \frac{11426.32}{10} - \frac{53638.56}{50} = 1142.632 - 1072.771$

$= 69.861$

(b) Sum of Sq. within Groups. $1247.09 - 1072.771 = 174.319$

Total Sum of Squares = 174.319

S. of S. within Grps. = $174.319 - 69.861 = 104.458$

B. FINAL SCORES.

(a) Sum of Sq. for Schools. $\frac{53.8^2+70.0^2+44.2^2+54.8^2+43.6^2}{10} - \frac{266.4^2}{50}$

$= 1465.208 - 1419.399$

$= 45.809$

(b) Sum of Sq. within Groups. $1561.48 - 1419.399 = 142.081$

Total Sum of Squares = 142.081

S. of S. within Grps. = $142.081 - 45.809 = 96.272$

	d.f.	Σx	Σy	Variance*
Schools	4	69.861	45.809	4.406
Within Groups	45	104.458	96.272	1.653 (44 d.f.)
	49	174.319	142.081	

*Calc'td. from secn. 10 and 11 below.

4. Total Sum of Products.

$1329.36 - \frac{231.6 \times 266.4}{50}$

$= 1329.36 - 1233.964 = 95.396$

5. Schools Sum of Products.

$\frac{51.4 \times 53.8}{10} + \frac{56.2 \times 70.0}{10} + \frac{32.4 \times 44.2}{10} + \frac{59.6 \times 54.8}{10} + \frac{32.0 \times 43.6}{10}$

$- 1233.964 = 1279.268 - 1233.964 = 45.304$

6. Schools Sum of Products, from Total Sum of Products to Secure Sum of Products within Groups.

$$= 95.396 - 45.304 = \underline{50.092}$$

7. The Adjusted Sum of Squares within Groups.

$$= 96.272 - \frac{(50.092)^2}{104.458} = 96.272 - \frac{2509.20}{104.46} = \underline{72.255}$$

8. The Adjusted Total Sum of Squares.

$$= 142.081 - \frac{(95.396)^2}{174.319} = 142.081 - \frac{9100.4}{174.32} = \underline{89.880}$$

9. The Reduced Sum of Squares for Schools.

$$= 89.880 - 72.255 = \underline{17.625}$$

10. The Reduced Variance for Schools.

$$= \frac{17.625}{4} = \underline{4.406}$$

11. The Adjusted Error (within groups) Variance.
(d.f. one less than for within groups variance.)

$$= \frac{72.255}{44} = \underline{1.653}$$

12. The F Value, from the Reduced Schools Variance divided by the Adjusted Error Variance.

$$= \frac{4.406}{1.653} = \underline{2.664} \quad \text{for } 4 \text{ d.f.}, \ 44 \text{ d.f.} \quad \underline{P = <.05}$$

For 4 and 44 d.f., an F needs to exceed 2.58 to be significant at the .05 level.

13. Calculation of the Adjusted Final Means, Differences Between Them, and Calculation of the Levels of Significance by t Testing Around the Means, (in section 14.)

Regression coefficient $= b_{yx} = \frac{50.092}{104.458} = \underline{0.47948}$

Schools		Ini $\bar{x}$	Gen $\bar{x}$	Dev'n	Fin $\bar{x}$	Adj. Final*
1.Gr.T.	(FM)	5.14	4.63	0.51	5.38	5.14
2.Gr.	(F)	5.62	4.63	0.99	7.00	6.53 *Calc.
3.SM.	(F)	3.24	4.63	-1.39	4.42	5.09 below.
4.Gr.	(FM)	5.96	4.63	1.33	5.48	4.84
5.SM.	(M)	3.20	4.63	-1.43	4.36	5.05

Calculation of the Adjusted Final Means.

School.1.5.38 - (0.47948)(0.51)=5.38000 - 0.24453 = 5.13547
.2.7.00 - (0.47948)(0.99)=7.00000 - 0.47469 = 6.52531
3.4.42 - (0.47948)(-1.39)=4.42000 + 0.66647 = 5.08647
4.5.48 - (0.47948)(1.33)=5.48000 - 0.63770 = 4.84230
5.4.36 - (0.47948)(-1.43)=4.36000 + 0.68566 = 5.04566

14. Calculation of Significance of Differences Around the Means.
(i) Estimated standard error, using the variance within groups, of a single school mean.

$$\sigma m = \sqrt{\frac{1.653}{10}} = \sqrt{0.1653} = \underline{0.407}$$

14. continued.

(ii) Estimated standard error of the difference between two school means - where all school groups are the same size.

$$\sigma_{\bar{x}_1-\bar{x}_2} = 1.414\sigma_m \text{ ***} = 1.414 \times 0.407 = \underline{0.575}$$

(iii) Application of the Obtained Standard Error to a Table of t Values.

There are 44 d.f. for this standard error of 0.575

Since, for 40 d.f. a t of 3.551 would be required for sig. <.001(2tt),
" " a t of 2.704 " " " " " <.01
" " a t of 2.021 " " " " " <.05

a difference between school means would have to be larger than -

3.551 x 0.575 = 2.042 to be significant at the .001 level (***)
2.704 x 0.575 = 1.555 " " " " " .01 " (**)
2.021 x 0.575 = 1.162 " " " " " .05 " (*)

15. The Effects of Regression: Calculation of Each School's Predicted Final Mean, from its Initial Mean; and the General Initial and Final Means for all Five Schools.

Regression coefficient = b_{yx} = 0.47948

X = Initial Mean; Y = Final Mean; Y' = Predicted Final Mean.

School.	X	GenX	Devn.	Y	GenY	Y'*
1.Gr.T.(FM)	5.14	4.63	0.51	5.38	5.33	5.57
2.Gr. (F)	5.62	4.63	0.99	7.00	5.33	5.80 *Calc.
3.SM. (F)	3.24	4.63	-1.39	4.42	5.33	6.00 below.
4.Gr. (FM)	5.96	4.63	1.33	5.48	5.33	5.97
5.SM. (M)	3.20	4.63	-1.43	4.36	5.33	6.02

[1]Inserted to show each mean's relationship to general initial mean.

Calculation of the Predicted Final Means.

School 1. 0.47948 x 0.51 + 5.33 = 0.24453 + 5.33000 = 5.57453
2. 0.47948 x 0.99 + 5.33 = 0.47469 + 5.33000 = 5.80469
3. 0.47948 x 1.39 + 5.33 = 0.66647 + 5.33000 = 5.99647
4. 0.47948 x 1.33 + 5.33 = 0.63770 + 5.33000 = 5.96770
5. 0.47948 x 1.43 + 5.33 = 0.68566 + 5.33000 = 6.01566

*** Lindquist, E.F.(1940) 'Statistical Analysis in Educational Research', to whose chapters V and VI the writer is indebted in general for the methods of analysis used, points out on page 102 that the est. $\sigma_{\bar{x}_1-\bar{x}_2} = 1.414$ for any two means differences.

Appendix M.1. Judges' Marks for S.1, S.2 and S.3 & 2nd. Marking with J4b and Showing Number of Words Written.

	S.1	Wds	J1	J2	J3	J4	J5	x̄	S.2	Wds	J1	J2	J3	J4	J5	x̄
Gr. T. (FM)	T 1	259	2	4	5	2	4	3.4	U50	239	2	6	9	7	6	6.0
	T 2	265	1	5	7	3	6	4.4	U49	363	3	5	6	4	8	5.2
	T 3	341	4	8	8	4	6	6.0	U48	255	6	8	9	9	9	8.2
	T 4	193	4	2	2	3	4	3.0	U47	267	1	2	2	2	5	2.4
	T 5	290	6	5	6	4	7	5.6	U46	207	7	5	5	7	2	5.2
	T 6	292	4	5	3	3	2	3.4	U45	170	8	3	7	4	2	4.8
	T 7	206	8	2	6	5	2	4.6	U44	215	6	3	4	4	5	4.4
	T 8	252	8	9	5	3	9	6.8	U43	218	7	9	5	7	2	6.0
	T 9	247	2	6	7	5	3	4.6	U42	231	3	6	5	4	5	4.6
	T10	318	2	5	6	5	6	4.8	U41	273	7	32	7	3	6	5.0
Gr. (F)	W40	304	5	6	7	5	4	5.4	T11	350	9	5	9	9	8	8.0
	W39	194	2	7	3	5	3	4.0	T12	267	8	6	7	9	7	7.4
	W38	297	3	2	66	3	3	3.4	T13	307	5	7	9	8	7	7.2
	W37	247	8	8	5	8	9	7.6	T14	340	7	7	4	9	9	7.2
	W36	244	4	7	3	3	5	4.4	T15	248	4	2	3	2	5	3.2
	W35	170	5	4	4	6	3	4.4	T16	245	3	3	2	4	4	3.2
	W34	159	5	6	7	3	5	5.4	T17	294	5	7	4	4	4	4.8
	W33	235	7	5	6	5	5	5.6	T18	388	9	8	8	6	9	8.0
	W32	160	2	8	7	8	5	6.0	T19	225	5	5	6	3	9	5.6
	W31	315	2	6	2	3	8	4.2	T20	385	5	4	8	5	9	6.2
SM (F)	V21	217	6	4	4	6	33	4.6	W30	151	1	2	2	6	2	2.6
	V22	140	1	4	4	2	1	2.4	W29	171	5	3	4	2	3	3.4
	V23	207	1	1	2	2	1	1.4	W28	234	2	4	3	7	5	4.2
	V24	158	7	3	4	6	1	4.2	W27	209	9	3	4	6	5	5.4
	V25	152	2	1	1	4	1	1.8	W26	225	6	2	3	7	3	4.2
	V26	131	36	11	5	1	2	3.0	W25	189	8	5	5	8	3	5.8
	V27	266	2	4	4	3	5	3.6	W24	322	6	3	5	8	8	6.0
	V28	184	3	1	4	1	3	2.4	W23	173	3	6	2	7	3	4.2
	V29	134	8	6	1	7	2	4.8	W22	244	4	3	6	5	5	4.6
	V30	163	4	1	2	1	2	2.0	W21	206	9	3	2	1	1	3.2
Gr. (EM)	U20	232	3	6	8	7	2	5.2	V31	328	5	3	4	3	6	4.2
	U19	330	7	9	9	6	9	8.0	V32	289	4	3	7	4	7	5.0
	U18	161	2	5	5	6	2	4.0	V33	223	5	4	6	2	2	3.8
	U17	174	8	5	9	8	4	6.8	V34	344	7	7	9	7	7	7.4
	U16	223	5	9	4	6	2	5.2	V35	374	5	6	3	3	7	4.8
	U15	207	8	5	3	7	2	5.0	V36	336	5	8	5	4	7	5.8
	U14	401	4	4	8	9	7	6.4	V37	391	6	4	2	4	2	3.6
	U13	212	3	1	1	8	2	3.0	V38	387	9	4	6	7	4	6.0
	U12	225	6	4	9	8	2	5.8	V39	284	6	6	8	1	4	5.0
	U11	358	5	7	9	9	6	7.2	V40	352	7	4	8	6	4	5.8
SM (M)	T41	125	1	3	1	1	4	2.0	U10	177	7	7	7	9	8	7.6
	T42	142	1	1	1	5	1	1.8	U 9	351	4	6	8	4	5	5.4
	T43	104	9	9	8	6	9	8.2	U 8	218	5	7	9	8	6	7.0
	T44	193	4	2	6	6	5	4.6	U 7	235	6	4	4	8	5	5.4
	T45	113	1	1	1	11	1	1.0	U 6	259	2	1	3	5	4	3.0
	T46	87	1	2	1	1	1	1.2	U 5	172	2	1	1	5	4	2.6
	T47	104	1	1	2	1	1	1.2	U 4	175	4	1	1	2	4	2.4
	T48	102	8	3	8	2	3	4.8	U 3	89	4	3	6	8	5	5.2
	T49	107	1	1	1	1	1	1.0	U 2	148	2	2	5	5	3	3.4
	T50	59	7	3	1	5	1	3.4	U 1	91	1	1	1	1	1	1.0

S.3 data is set out on page 220.

Appendix M.1 (continued). S.3 Word Numbers and Script Marks, 2nd. Marking, with J4b.

	S.3	Wds	J1	J2	J3	J4b	J5	$\bar{x}$
Gr. T. (FM)	V 1	259	3	8	2	6	6	5.0
	V 2	320	3	5	8	2	6	4.8
	V 3	239	3	3	3	8	4	4.2
	V 4	345	3	8	3	2	3	3.8
	V 5	210	3	2	6	2	6	3.8
	V 6	209	3	6	1	4	7	4.2
	V 7	333	44	4	6	7	6	5.4
	V 8	298	9	9	8	8	7	8.2
	V 9	244	5	9	8	6	5	6.6
	V10	349	9	8	7	3	7	6.8
Gr. (F)	U40	416	9	9	3	8	7	7.2
	U39	373	6	7	8	4	6	6.2
	U38	308	8	9	7	6	8	7.6
	U37	469	9	9	9	8	9	8.8
	U36	356	6	9	8	6	8	7.4
	U35	233	9	5	9	9	8	8.0
	U34	293	9	9	9	7	8	8.4
	U33	515	8	4	9	9	9	7.8
	U32	319	9	8	3	9	6	7.0
	U31	399	9	8	9	9	8	8.6
SM (F)	T21	160	6	7	5	5	3	5.2
	T22	282	6	7	8	5	7	6.6
	T23	244	8	4	2	1	4	3.8
	T24	169	7	7	6	9	8	7.4
	T25	315	6	8	5	4	8	6.2
	T26	151	1	1	3	1	3	1.8
	T27	304	6	8	7	9	9	7.8
	T28	215	8	5	4	5	9	6.2
	T29	138	7	6	4	3	6	5.2
	T30	303	4	2	2	2	3	2.6
Gr. (FM)	W20	409	9	8	6	8	1	6.4
	W19	307	8	7	3	5	9	6.4
	W18	263	7	9	7	7	9	7.8
	W17	208	8	8	8	9	9	8.4
	W16	339	7	9	3	7	8	6.8
	W15	440	7	5	1	2	7	4.4
	W14	403	9	7	7	7	8	7.6
	W13	332	9	8	3	4	7	6.2
	W12	425	3	3	7	2	8	4.6
	W11	305	2	7	1	3	8	4.2
SM (M)	V41	290	5	8	9	8	4	6.8
	V42	352	4	7	5	2	8	5.2
	V43	206	8	9	9	8	9	8.6
	V44	348	3	9	5	7	6	6.0
	V45	117	3	2	2	1	1	1.8
	V46	85	2	1	1	1	1	1.2
	V47	214	1	6	2	1	3	2.6
	V48	241	1	6	5	8	7	5.4
	V49	223	1	2	4	2	6	3.0
	V50	62	2	2	2	1	1	1.6

Appendix M.2. Three Wilcoxon Matched-Pairs Signed-Ranks Tests of the Differences in marks given in the 2nd. Marking of Matched Scripts from S.1 - S.2, S.2 - S.3, S.1 - S.3. (Procedure for Large Samples as Sown in Appendix J.)

(i) S.1 - S.2.

(a) Calculation of z, and its Probability.

$$z = \frac{T - \frac{N(N+1)}{4}}{\sqrt{\frac{N(N+1)(2N+1)}{24}}}$$

$$z = \frac{354 - \frac{49 \times 50}{4}}{\sqrt{\frac{(49 \times 50)(98 + 1)}{24}}}$$

$$z = \frac{-258.5}{100.52}$$

$$z = -2.5720$$

$P = <.0102$ (two-tailed)

(b) Calculation of the Extent of the Mean Net Gain.

Σ improvement = 58.8 marks
Σ decline = 21.2
Net gain = 37.6
Mean net gain = $\frac{37.6}{50}$
= 0.732 marks

(ii) S.2 - S.3.

(a) Calculation of z, and its Probability.

$$z = \frac{T - \frac{N(N+1)}{4}}{\sqrt{\frac{N(N+1)(2N+1)}{24}}}$$

$$z = \frac{358.5 - \frac{50 \times 51}{4}}{\sqrt{\frac{(50 \times 51)(101)}{24}}}$$

$$z = \frac{-279.0}{103.59}$$

$$z = -2.6931$$

$P = <.0072$ (two-tailed)

(b) Calculation of the Extent of the Mean Net Gain.

Σ improvement = 59.0 marks
Σ decline = 22.0
Net gain = 37.0
Mean net gain = $\frac{37.0}{50}$
= 0.74 marks

(iii) S.1 - S.3.

(a) Calculation of z, and its Probability.

$$z = \frac{T - \frac{N(N+1)}{4}}{\sqrt{\frac{N(N+1)(2N+1)}{24}}}$$

$$z = \frac{173.5 - \frac{(49)(50)}{4}}{\sqrt{\frac{(49 \times 50)(99)}{24}}}$$

$$z = \frac{-439.0}{100.52}$$

$$z = -4.3678$$

$P = <.00006$ (two-tailed)

(b) Calculation of the Extent of the Mean Net Gain.

Σ improvement = 87.6 marks
Σ decline = 13.0
Net gain = 74.6
Mean net gain = $\frac{74.6}{50}$
= 1.49 or 1.5 marks

Appendix M.3. Copy of Letter to the Five Judges, after they had Completed the 2nd. Marking, to Probe for Additional Views of the Marking Criteria. (Replies collated at Table 21). M.3

Pear Tree Farm,
Pontefract, Yorks.
1st. September, 1967.

Dear

Inevitably, in assessing the sets of English scripts over the past year, you may have possibly been guided by additional criteria of your own on top of the three suggested by me. This will be the main cause of variation between markers, and indeed, the multiple impression marking system was designed so that these differing views of the same writing can be sampled, presenting a composite reliable mark.

I think it would be most helpful if you could spare about ten minutes more of your time, please, to jot down on the back of this sheet, in no more than two or three sentences, any additional emphases or amplification that you were conscious of making to the three criteria I gave, while you were marking the three sets of writing. (I repeat the three criteria in the same form you have seen it before, at the bottom of this note). Additionally, could you hazard a guess, or say with certainty, whether you were unconsciously or consciously[1], respectively, influenced by more traditional 'grammatical' criteria, such as a generally polished sentence and vocabulary performance as distinct from an apt use of imagery. Finally, did the length of the script affect your judgement, bearing in mind that a 'free flow of words' is held by some people to be a possible indicator of the quality as well as the quantity of verbal response.

I will be most grateful for this further help, particularly coming, as it does, on top of the considerable assistance you have already given me during the last year.

Yours sincerely,

John Conder.

Criteria Previously Suggested.
(Please see copy at Appendix E, para.2).

I Additional Criteria that have Influenced my Marking.

II (Where * appears, please delete all but one category of reply.)

A. Unconscious influence on marking, of traditional English marking concepts.

I was influenced by 'grammatical polish and completeness' of the scripts, apart from choice of apt imagery, on traditional lines of marking -

*Almost certainly/Possibly/Unlikely/Most Unlikely

(continued on page 223 below).

[1]Note to Appx.M.3: see the discussion, on pages 125, 126 and 157 above, on the writer's motives in using these terms, and the consequent amalgamation of responses, in Table 21, page 158.

B. Conscious Influence, on Marking, of Traditional English Marking Concepts.

Despite the suggestions about consciously bearing in mind only creative writing criteria in marking, I did feel a conscious awareness of traditional marking criteria - Very persistingly/Perhaps occasionally/As far as I can recall, never/ Definitely never.*

C. Unconscious Influence, on Marking, of Length of Script.

I was influenced unfavourably/favourably* by the script length - Almost certainly/Possibly/Unlikely/Most Unlikely*.

D. Conscious Influence, on Marking, of Length of Script.

I was influenced unfavourably/favourably* by the script length - Very persistingly/Perhaps occasionally/As far as I can recall, never/Definitely never.*

Appendix N. Calculation of the Analysis of Co-Variance for the 2nd. Marking of S.1 and S.3, with J4b's Marks.

1. Calculation of the Sums of the Initial (S.1 - X) and Final (S.2 - Y) Marks, the Sums of the Squares of X and Y, and the Sum of their XY Products.

$\Sigma X = 213.0$ $\Sigma Y = 287.6$
$\Sigma X = 1078.20$ $\Sigma Y = 1860.88$ $\Sigma XY = 1327.16$

2. Calculation of the Total and Mean for Each Group for Initial and Final Scores Separately.

School	Initial		Final	
	Total	Mean	Total	Mean
Gr.T.(FM)	46.6	4.66	52.8	5.28
Gr. (F)	50.4	5.04	77.0	7.70
SM (F)	30.2	3.02	52.8	5.28
Gr. (FM)	56.6	5.66	62.8	6.28
SM (M)	29.2	2.92	42.2	4.22
	213.0	4.26	287.6	5.75

3. Analysis of Total "Sums of Squares" for Initial and Final Scores Separately into Schools and Within Groups.

A. INITIAL SCORES.

(a) Sum of Sq. for Schools. $\frac{46.6^2+50.4^2+30.2^2+56.6^2+29.2^2}{10} - \frac{213.0^2}{50}$

$= \frac{9679.96}{10} - \frac{45369.00}{50} = 967.996 - 907.38$

$= 60.616$

(b) Sum of Sq. within Groups. $1078.20 - 907.38 = 170.82$

Total Sum of Squares = 170.82

S. of S. within Grps. = $170.82 - 60.616 = 110.204$

B. FINAL SCORES.

(a) Sum of Sq. for Schools. $\frac{52.8^2+77.0^2+52.8^2+62.8^2+42.2^2}{10} - \frac{287.6^2}{50}$

$= \frac{17229.36}{10} - \frac{82713.76}{50} = 1722.936 - 1654.075$

$= 68.861$

(b) Sum of Sq. within Groups. $1860.88 - 1654.075 = 206.805$

Total Sum of Squares = 206.805

S. of S. within Grps. = $206.805 - 68.861 = 137.944$

	d.f.	Σx^2	Σy^2	Variance*
Schools	4	60.62	68.86	8.830
Within Groups	45	110.20	137.94	2.513 (44 d.f.)
		170.82	206.80	

*Calcul'd. in secns. 10 and 11 below

4. Total Sum of Products.

$1327.16 - \frac{213.0 \times 287.6}{50}$

$= 1327.16 - 1225.176 = 101.98$

5. Schools Sum of Products.

$\frac{46.6 \times 52.8}{10} + \frac{50.4 \times 77.0}{10} + \frac{30.2 \times 52.8}{10} + \frac{56.6 \times 62.8}{10} + \frac{29.2 \times 42.2}{10}$

$- 1225.176 = 1272.256 - 1225.176 = 47.08$

6. Schools Sum of Products from Total Sum of Products to Secure Sum of Products within Groups.

$$101.98 - 47.08 = 54.90$$

7. The Adjusted Sum of Squares, within Groups.

$$= 137.94 - \frac{(54.90)^2}{110.20} = 137.94 - \frac{3014.01}{110.20} = 110.59$$

8. The Adjusted Total Sum of Squares.

$$= 206.80 - \frac{(101.98)^2}{170.82} = 206.80 - \frac{10399.00}{170.82} = 145.91$$

9. The Reduced Sum of Squares for Schools.

$$= 145.91 - 110.59 = 35.32$$

10. The Reduced Variance for Schools.

$$= \frac{35.32}{4} = 8.83$$

11. The Adjusted Error (within groups) Variance. (d.f. one less than for within groups variance).

$$= \frac{110.59}{44} = 2.513$$

12. The F Value, from the Reduced Schools Variance divided by the Adjusted Error Variance.

$$= \frac{8.830}{2.513} = 3.5136 \text{ for } 4 \text{ d.f.}, 44 \text{ d.f. } P = <.05$$

A value of 2.58 is significant at the .05 level for these d.f. The obtained value is almost high enough to be sig. at the .01 level which requires a value of 3.78.

13. Calculation of the Adjusted Final Means, and the Differences Between them, (Placed at Table 19, page 155).

Regression coefficient $= b_{yx} = \frac{54.90}{110.20} = 0.49821$

Schools	Ini $\bar{x}$	Gen $\bar{x}$	Dev'n	Fin $\bar{x}$	Adj. Final*
1.Gr.T. (FM)	4.66	4.26	0.40	5.28	5.07
2.Gr. (F)	5.04	4.26	0.78	7.77	7.38 *Calc.
3.SM (F)	3.02	4.26	-1.24	5.28	5.88 below
4.Gr. (FM)	5.66	4.26	1.40	6.28	5.58
5.SM (M)	2.92	4.26	-1.34	4.22	4.89

Calculation of the Adjusted Final Means.

School 1. $5.28 - (0.49821)(0.40) = 5.28000 - 0.19928 = 5.07072$
School 2. $7.77 - (0.49821)(0.78) = 7.77000 - 0.38859 = 7.38141$
School 3. $5.28 - (0.49821)(-1.24) = 5.28000 + 0.80372 = 5.88372$
School 4. $6.28 - (0.49821)(1.40) = 6.28000 - 0.69750 = 5.58250$
School 5. $4.22 - (0.49821)(-1.34) = 4.22000 + 0.66759 = 4.88759$

14. Calculation of Significance of Differences Around the Means.
(i) Estimated standard error, using the variance within groups, of a single school mean.

$$\sigma_m = \sqrt{\frac{2.513}{10}} = \sqrt{0.2513} = 0.501$$

14. continued.

(ii) Estimated standard error of the difference between two school means - where all school groups are the same size.

$$\sigma_{\bar{x}_1-\bar{x}_2} = 1.414\ \sigma_m = 1.414 \times 0.501 = \underline{0.7084}$$

(iii) Application of the obtained standard error to a table of t values.

There are 44 d.f. for this standard error of 0.7084
Since, for 40 d.f. a t of 3.551 would be required for sig. <.001(2tt)
" " " a t of 2.704 " " " " " " <.01
" " " a t of 2.021 " " " " " " <.05
a difference between school means would have to be larger than -
3.551 x 0.7084 = 2.5226 to be significant at the .001 level.(***)
2.704 x 0.7084 = 1.9155 " " " " " " .01 " (**)
2.021 x 0.7084 = 1.4316 " " " " " " .05 " (*)

15. The Effects of Regression: Calculation of Each School's Predicted Final Mean, from its Initial Mean; and the General Initial and Final Means for all Five Schools.

Regression coefficient = b_{yx} 0.49821

X = Initial Mean; Y = Final Mean; Y' = Predicted Final Mean.

School	X	Gen$\bar{x}$[1]	Dev'n[1]	Y	GenY	Y'*
1.Gr.T.(FM)	4.66	4.26	0.40	5.28	5.75	5.95
2.Gr. (FM)	5.04	4.26	0.78	7.70	5.75	6.14 *Calc.
3.SM. (F)	3.02	4.26	-1.24	5.28	5.75	6.37 below.
4.Gr. (FM)	5.66	4.26	1.40	6.28	5.75	6.45
5.SM. (M)	2.92	4.26	-1.34	4.22	5.75	6.42

[1] Inserted to show each mean's relationship to general initial mean.

Calculation of the Predicted Final Means.

School 1. 0.49821 x 0.40 + 5.75 = 0.19928 + 5.75000 = 5.94928
2. 0.49821 x 0.78 + 5.75 = 0.38859 + 5.75000 = 6.13859
3. 0.49821 x 1.24 + 5.75 = 0.61778 + 5.75000 = 6.36778
4. 0.49821 x 1.40 + 5.75 = 0.69750 + 5.75000 = 6.44750
5. 0.49821 x 1.34 + 5.75 = 0.66759 + 5.75000 = 6.41759

Appendix 0.1. Words Written in Three Samples of the First Two Years' Secondary School Writing of 50 Children. 0.1

	S.1	M	F	S.2	M	F	S.3	M	F	S1–S2 diff.	S2–S3 diff.	S1–S3 diff.	S1–S3 %ofTotal
Gr. T. (FM)	T.1	259		U50	239		V 1	259		− 20	+ 20	0	0
	T 2	265		U49	363		V 2	320		+ 98	− 43	+ 55	+ 20.8
	T 3	341		U48	255		V33	239		− 86	− 16	−102	− 29.9
	T 4	193		U47	267		V 4	345		+ 74	+ 78	+152	+ 78.8
	T 5		290	U46		207	V 5		210	− 83	+ 3	− 80	− 27.6
	T 6		292	U45		170	V 6		209	−122	+ 39	− 83	− 28.4
	T 7	206		U44	215		V 7	333		+ 9	+118	+127	+ 61.6
	T 8	252		U43	218		V 8	298		− 34	+ 80	+ 46	+ 18.3
	T 9		247	U42		231	V 9		244	− 16	− 13	− 3	− 1.2
	T10		318	U41		273	V10		349	− 45	+776	+ 31	+ 9.7
	Grp$\bar{x}$=266.3				243.8			280.6		− 22.5	+ 36.8	+ 14.3	+ 5.4
Gr. (F)	W40		304	T11		350	U40		416	+ 46	+ 66	+112	+ 36.8
	W39		194	T12		267	U39		373	+ 73	+106	+179	+ 92.3
	W38		297	T13		307	U38		308	+ 10	+ 1	+ 11	+ 3.7
	W37		247	T14		340	U37		469	+ 93	+129	+222	+ 89.9
	W36		244	T15		248	U36		356	+ 4	+108	+112	+ 45.9
	W35		170	T16		245	U35		233	+ 75	− 12	+ 63	+ 37.1
	W34		159	T17		294	U34		293	+135	− 1	+134	+ 84.3
	W33		235	T18		388	U33		515	+153	+127	+280	+119.1
	W32		160	T19		225	U32		319	+ 65	+ 94	+159	+ 99.4
	W31		315	T20		385	U31		399	+ 70	+ 14	+ 84	+ 26.7
	Grp$\bar{x}$=232.5				304.9			368.1		+ 72.4	+63.2	+135.6	+ 58.3
SM(F)	V21		217	W30		151	T21		160	− 66	+ 9	− 57	− 26.3
	V22		140	W29		171	T22		282	+ 31	+111	+142	+101.4
	V23		207	W28		234	T23		244	+ 27	+ 10	+137	+ 66.2
	V24		158	W27		209	T24		169	+ 51	− 40	+ 11	+ 7.0
	V25		152	W26		225	T25		315	+ 73	+ 90	+163	+107.2
	V26		131	W25		189	T26		151	+ 58	− 38	+ 20	+ 15.3
	V27		266	W24		322	T27		304	+ 56	− 18	+ 38	+ 14.3
	V28		184	W23		173	T28		215	− 11	+ 42	+ 31	+ 16.8
	V29		134	W22		244	T29		138	+110	−106	+ 4	+ 3.0
	V30		163	W21		206	T30		303	+ 43	+ 97	+140	+ 85.9
	Grp$\bar{x}$=175.2				212.4			218.1		+ 37.2	+ 5.7	+ 42.9	+ 24.5
Gr. (FM)	U20		232	V31		328	W20		409	+ 96	+ 81	+177	+ 76.3
	U19	330		V32	289		W19	307		− 41	+ 18	− 23	− 7.0
	U18		161	V33		223	W18		263	+ 62	+ 40	+102	+ 63.4
	U17		174	V34		344	W17		208	+170	−136	+ 34	+ 19.5
	U16		223	V35		374	W16		339	+151	− 35	+116	+ 52.0
	U15		207	V36		336	W15		440	+129	+104	+233	+112.6
	U14		401	V37		391	W14		403	− 10	+ 12	+ 2	+ 0.5
	U13	212		V38	387		W13	332		+ 75	− 55	+120	+ 56.6
	U12	225		V39	284		W12	425		+ 59	+141	+200	+ 88.9
	U11	358		V40	352		W11	305		− 6	− 47	− 53	− 14.8
	Grp$\bar{x}$=252.5				330.8			343.1		+ 78.5	+ 12.3	+ 90.8	+ 36.0
SM(M)	T41	125		U10	177		V41	290		+ 52	+113	+165	+132.0
	T42	142		U 9	351		V42	352		+209	+ 1	+210	+147.9
	T43	104		U 8	218		V43	206		+114	− 12	+102	+ 98.1
	T44	193		U 7	235		V44	348		+ 42	+113	+155	+ 80.3
	T45	113		U 6	259		V45	117		+146	−142	+ 4	+ 3.5
	T46	87		U 5	172		V46	85		+ 85	− 87	− 2	− 2.3
	T47	104		U 4	175		V47	214		+ 71	+ 39	+ 10	+ 9.6
	T48	102		U 3	89		V48	241		− 13	+152	+139	+136.3
	T49	107		U 2	148		V49	223		+ 41	+ 75	+116	+108.4
	T50	59		U 1	91		V50	62		+32	− 29	+ 3	+ 5.1
	Grp$\bar{x}$=113.6				191.5			213.8		+ 77.9	+ 22.3	+100.2	+ 88.2

Appendix 0.2. Calculation of, and Testing for, Significant Differences between the Numbers of Words Written, on Three Occasions, by Various Categories of Secondary School Children, Using the Kolmogorov-Smirnov Two Sample Test in Various Forms. 0.2

(Data taken from Appendix 0.1; references to these illustrative, and additional, calculations are on pages 161 - 164 above.)

0.2(a) Differences between the Number of Words Written at Ages 11, 12 and 13 by 30 Girls and 20 Boys Considered as One Sample of 50 Secondary School Children. (Report of S1/S2 and S2/S3 - p.162).

Differences Between Number of Words Written at Ages 11 and 13.(S1/S3)

	Below100	101-150	151-200	201-250	251-300	301-350	351-400	Above400
S.1	2	10	12	12	7	5	1	1
S.3	2	2	3	12	6	14	4	7
S_{X1}	2/50	12/50	24/50	36/50	43/50	48/50	49/50	50/50
S_{X2}	2/50	4/50	7/50	19/50	25/50	39/50	43/50	50/50
D	0	8/50	17/50	17/50	18/50*	9/50	6/50	0

One-tailed test for significance with large samples.

$$*D = \frac{18}{50} = .360$$

$$\chi^2 = 4D^2 \frac{n_1 n_2}{n_1+n_2} = 4(.360)^2 \frac{2500}{100} = (4 \times .130) \times 25 = .520 \times 25 = 13.00$$

For 2 d.f., where $\chi^2 = 13.00$, P = <.01

0.2(b) Differences Between the Number of Words Written by Boys (20) and Girls (30) in the Three Samples of Writing Drawn at Ages 11, 12 and 13. (Report of Age 12 (S2) and Age 13 (S3) differences - p.162

Differences between Number of Words Written by Boys and Girls at 11.

	Below 100		101 - 150		151 - 200		201 - 250		251 - 300		301 - 350		350 +	
M	2/20		7/20		2/20		3/20		3/20		2/20		1/20	
F	0/30		3/30		10/30		9/30		4/30		3/30		1/30	
X_{M20}	2/20	0.1	9/20	.45	11/20	.55	14/20	.70	17/20	.85	19/20	.95	20/20	1.0
X_{F30}	0/30	0	3/30	.10	13/30	.43	22/30	.73	26/30	.86	29/30	.96	30/30	1.0
D		.1		*.35		.12		.03		.01		.01		0

One-tailed test for significance with large samples.

$$*D = .35$$

$$\chi^2 = 4(.35)^2 \frac{(20)(30)}{20+30} = (4 \times .1225) \frac{600}{50} = .4900 \times 12 = 5.88$$

For 2 d.f., where $\chi^2 = 5.88$, P = >.05

0.2(c) Differences Between the Number of Words Written by Grammar School (20) and Secondary Modern (20) Children in Three Samples of Writing Drawn at Ages 11, 12 and 13.(Ages 12 and 13 report - p.163)

Differences between Number of Words Written by Grammar and Secondary Modern Children (20 each) at Age 11.(Omitting Gr.T. sample).

Gr	Below100	101-150	151-200	201-250	251-300	301-350	Above350
Gr.	0	0	6	8	1	3	2
SM.	2	10	5	2	1	0	0
$S_{Gr.}$	0/20	0/20	6/20	14/20	15/20	18/20	20/20
S_{SM}	2/20	12/20	17/20	19/20	20/20	20/20	20/20
K_D	2/20	*12/20	11/20	5/20	5/20	2/20	0

One-tailed Test for Significance with large samples.

$*K_D = 12$

Where N = 20, a value of $K_D = 12$ is significant for both a one-tailed and a two-tailed test, according to Table L in Siegel, S.(1956) 'Nonparametric Statistics for the Behavioral Sciences.', at the .01 level.

0.2(d) Differences Between the Number of Words Written by Grammar School (20) and Secondary Modern (20) Children in these Three Samples of Writing, Considering Only the Percentage Increase of the Third Sample Over the First's Number of Words Written by Each Child.

%	Below0	0.1-20	20.1-40	40.1-60	60.1-80	80.1-100	Above 100
Gr.	2	3	3	3	2	5	2
SM.	2	8	0	0	1	3	6
SGr.	2/20	5/20	8/20	11/20	13/20	18/20	20/20
SSM	2/20	10/20	10/20	10/20	11/20	14/20	20/20
K_D	0	*5/20	2/20	1/20	2/20	4/20	0

$*K_D = 5$

Where N = 20, a value of $K_D = 5$, is not significant for a one-tailed test, at the .05 level.

0.2(e) Correlation between the Five Schools' Mean Word Totals for S.1, S.2 and S.3 and their Mean Raw Marks of the 2nd. Marking.

	SC	W	w.	w^2	M	m	m^2	wm
S.1	1	266.3	16.5	272.25	4.66	0.35	0.1225	5.775
	2	232.5	17.3	299.29	5.04	0.03	0.0009	0.519
	3	175.2	74.6	5565.20	3.02	1.99	3.9601	148.454
	4	252.5	2.7	7.29	5.66	0.65	0.4225	1.755
	5	113.6	136.2	18550.00	2.92	2.09	4.3681	284.658
S.2	1	243.8	6.0	36.00	5.18	0.17	0.0289	1.020
	2	304.9	55.1	3036.00	6.08	1.07	1.1449	58.957
	3	212.4	37.4	1398.80	4.36	0.65	0.4225	24.310
	4	330.8	81.0	6561.00	5.14	0.13	0.0169	10.530
	5	191.5	58.3	3398.90	4.30	0.71	0.5041	41.393
S.3	1	280.6	30.8	948.64	5.28	0.27	0.0729	8.316
	2	368.1	118.3	13995.00	7.77	2.76	7.6176	326.520
	3	218.1	31.7	1004.89	5.28	0.27	0.0729	8.559
	4	343.1	93.3	8707.90	6.28	1.27	1.6129	118.491
	5	213.8	36.0	1296.00	4.22	0.79	0.6241	28.440
Σ		3747.2		65074.16	75.19		20.9918	1067.697
$\bar{x}$		249.8			5.01			

$$r = \frac{\Sigma xy}{\sqrt{\Sigma x^2 \Sigma y^2}} = \frac{1067.697}{\sqrt{65074.16 \times 20.9918}} = \frac{1067.7}{\sqrt{65074 \times 20.992}} = .913\ (\pm.04)$$

Appendix P. Copy of Sheet Sent to the Three Teachers of the Three Methods Experiment Classes of 11/12 year-old Secondary Modern Boys.

CREATIVE WRITING - INVESTIGATION 2 - INITIAL AND FINAL ESSAYS.

1. Before your class's programme of work (or absence of some type of work in two classes' cases) begins, could you please have your boys write the following essay. The title should be written on the lackboard after administrative details of name, class, and age of child have been put at the top of their papers. They should be allowed 25 minutes writing time, and no other directions or help given to them, please.

'The Crocodile.'

2. When the programme of work for your class has been completed and a week has elapsed after the last set essay subject in the programme has been written, could a final essay be set, with a similar procedure to the first as above, please?

'The Police Truncheon.'

Thank you very much for your help.

Appendix Q. Instruction Sheet for the Control Group's Teacher.

GROUP I (Control Group) - Class 1A1 - PROGRAMME.

Each week, please give the title of the appropriate week by writing it on the blackboard.

The teacher introduction and handling of the subject should be on whatever lines are usually followed, but to maintain comparative value of the experiment, the following two exceptions should be adhered to from your normal practice, throughout the eight-week programme:

Exception to normal practice 1.

All mention of experiencing through the use of children's senses should be omitted; thus, no mention of feelings or sounds, tastes, etc. should be made by the teacher.

Exception to normal practice 2.

Presumably,, in imaginative writing, spelling and grammatical emphasis take a back place. For these eight weekly essays, however, what is normal practice at many secondary schools (so one is led to understand) - even for imaginative writing - should be brought into prominence by emphasising, before each essay is begun, the following formula. It should be said immediately before the subject introduction, and repeated immediately before writing begins- (in other words two repetitions of the formula) -

"Correctness of spelling is what really matters, and pay careful attention to how you make up your sentences. Of course, the story is important too, but you'll be marked mainly on your spelling and form of sentences."

Week 1. The first steam boat, using paddle wheels as well as sails, and its voyage across the Atlantic. (Exact shorter title to be suggested by you, please.)

Week 2. A suit of armour.

Week 3. The Normans invade King Harold's England.

Week 4. A foreigner arrives in a chinese village.
Week 5. A caveman builds the first hut, to house his family.
Week 6. Exploring in the desert hills looking for historical remains.
Week 7. Fight with a crocodile, or just 'the Crocodile.'
Week 8. The Cavalry Sword.

Thank you very much for your co-operation.
John Conder.

Appendix R. Instruction Sheet for the Partial Experimental Group.

GROUP II - Class 1A3 - PROGRAMME.

Throughout the eight-week period, this class's training is designed to make possible, during the once-per-week creative or imaginative English writing period, any influence which stimulating objects may have (through a full use of the children's senses) on their English writing abilities. To help maintain control over the variables that the investigator is concerned with, for Group II the influence of the teacher in this weekly lesson should be as neutral as possible, merely following the suggested pattern of -

-concealing the stimulus object until the class is quietly ready to write;
- bringing into view the object (or uncovering it);
- suggesting that (if the object is not glass-encased) the children examine it closely by touvhing, holding, etc., before and during writing. They should be encouraged to leave their place quietly to examine it better;
- suggesting that they write an imaginative story around the object;
- suggesting that they leave the title until the story is finished and make their own title up.

Exception to normal class practice in all other English periods.
Apart from this once-per-week exposure to sensory stimulation, no other work, during the programme's course, on sensory perception; or any emphasis that may normally be followed up from other English work involving sensory perception of a vivid nature, should be permitted.

Stimulus Objects.

Week 1. The steamer 'Sirius', one of the first boats to cross the Atlantic using steam.
Week 2. A suit of armour. It should be both touched and worn, though the latter should be quickly barred from any would-be humourist if his humour isn't going to stimulate other class members in a useful way.
Week 3. The Normans invade King Harold's England: a model of a prefabricated Motte and Bailey Castle. A tape recording is part of this exhibit, and should be played, if possible, after a brief explanation but before the castle model is shown; it is an account of an immediate construction of the castle after landings by the Norman forces, and as seen by an observing Anglo-Saxon.

Week 4. A Chinese snakeskin quiver containing ivory chopsticks, a toothpick (fragile), and a food knife. After examination, suggest the story be viewed from either a Chinese or a foreigner's position, perhaps set in a village. (+bowl and spoon).

Week 5. Early pit and hut dwellings, and a set of bronze age axes, both shafted and with duplicate heads to show how they were made and developed.

Week 6. Model jar of the Dead Sea Scrolls type, and model of a Roman legionary.

Use these words twice. "Tell the story from the point of view of one of the Jewish monks who hid the scrolls, to keep them safe from enemies, in the wild desert hills of Qumran; from the point of view of one of the grumbling Roman legionaries stationed in Palestine, who perhaps had to hunt for these monks; or from the standpoint of a modern archaeologist exploring the caves chosen as hiding places for these holy scrolls."

Week 7. Model of a crocodile.

Week 8. British Army cavalry sword, (scabbard fragile).

Thank you for your co-operation.

John Conder.

Appendix S. Instruction Sheet for the Full Experimental Group.

GROUP III - Class 1A2 - PROGRAMME.

Both the once-per-week essay writing lesson and any other English period available in this class's working week have a suggested programme which is designed to maximise a combination of sensory stimulation (from the stimulus objects) and the effects of the creative training programme. It is hoped that if these factors do provide optimum conditions for the development of creative writing in boys of this age, a significant difference will show up by the end of the training period.

Presentation of Stimulus Objects.

(N.B. to Appx. S. - An identical prgramme of essays and directions to that given above in Appendix R was set out three exceptions were made to Group II's work programme. -

(i) There was, of course, no prohibition of sensory perception work in other lessons.

(ii) An emphasis that "spelling mistakes will not matter in the writing of these stories" was requested.

(iii)After each week's suggestions for treatment, where given to Group II, the Group III teacher was asked to emphasise that if any child could think of some different viewpoint to write from, rather than that suggested, he was to do so.

(Additionally, the instruction sheet for the essay administration had detailed suggestions (the remainder of Appx.S) for the type of supporting programme that the writer felt might aid the development of creative writing ability. This was accompanied by a diary sheet for the teacher's completion, and is at Appendix T.).

GROUP III - Class 1A2 - TRAINING PROGRAMME.

Much of the undermentioned activities will already be normal practice. However, it would be appreciated, during the English periods of these 8 weeks, if the class could be given as many as possible of these activities during each of the eight weeks.

Some of the activities designed to develop ideational fluency and verbal fluency need occupy only a few minutes at the beginning and end of a period with a short written activity followed by class discussion. These 'quick and often' activities are outlined under heading 'A' below. It is hoped that the other training activities which involve sensory perception work and experiences, and their literary application, the development of constructive critical habits leading to habitual subsequent amendments to obtain appropriate, richer imagery, and the activities intended to foster mental flexibility such as activities 9 and 10, all could occupy whole lesson periods. If no more than two periods a week, say, were to be devoted to these category 'B' activities, or introduced to one of the class's other activities with you in English, it is felt that the children will have been given a fair coverage, by the end of the eight weeks, of open-ended work.

So that the investigator, or anyone who may make use of the experiment and its results, can attempt to assess the influence of any one of the suggested activities in relation to the time spent on it by you, could you, the teacher of Group III, please fill in the approximate time, in whole periods, where you consider the period was principally devoted to a particular activity?

CATEGORY 'A' ACTIVITIES. ('Quick and often!')

Activity 1. Development of Unusual but Suitable Imagery. Suggest some similar oral presentation to this: "Write down on a piece of paper the word 'pencil'." (You could put it onto the left-hand side of the blackboard for later 'chalk and talk' additions). "Next to it, write as many objects or activities that describe what a pencil looks like or does, e.g. spear, pillar, whispering marker, ..." After a brief interval, see if anyone has invented any unusual connections between the stimulus object (pencil) and some commonplace but hitherto never-before-thought-of object in association with a pencil. "What I'm after is the joining of two ordinary ideas or objects - pencil and something that describes it suitably - that no one has ever thought of joining to a pencil." You could, perhaps, go on with some illustration such as "For instance, we don't usually think of a pencil with snails describing it. But you could say - and it would be quite clear what you mean - 'the pencil left a twisting, snail-trail along the paper.' You can think of more suitable and ingenious connections that no one else has ever thought of before - like an inventor or discoverer. Try 'Fire'. Write it down and then think of something like fire that no one else has ever thought of joining up to it to describe it." (I have dealt at length with this activity because it is at the root of any arresting and out-of-the-ordinary imagery. Moreover, it can be fitted in, once the class understands

what is desired, in the space of a few minutes. If, in class discussion afterwards, great excitement, humour, or a sense of achievement can be generated, it is amazing how often so-called 'backward in verbal ability' children will reveal a considerable ability for fresh creative thinking (of unusual and useful ideas), especially when the work is not handicapping them through the need to wrestle with letter shapes and combinations. Any objects or emotions that are observable in the room can be made use of of. Transfer to writing must be encouraged.

Activity 2. Verbal Fluency. I'm doubtful of the value of remote exercise imposition (particularly by outsiders who neither know the children nor their culture) in developing verbal fluency. It seems probable that fluency comes from ample reading and listening and writing that has some insightful comment on experiences known to children. However, discussion by the teacher of words or categories of words, when their need is experienced by some or most of the class's children, is valid. Any activity to do with vocabulary and imagery probably helps develop verbal fluency provided it is not presented 'in vacuo'. For facilitating dictionary usage (to help children check spellings after any writing has been finished) the teacher could, if he considers it of value, have the children make lists of words that come within some child- or teacher-given class, e.g. - 'fruit', and the teacher could impose additional restriction by asking for the responses to be written down in alphabetical order - 'apple, banana, currant, date,'etc. Other classes could be - trees and plants, colours, shapes, animals, feelings, etc. This will help develop the habit of searching one's mind for words other than the first one that leaps up.

Activity 3. Unusual Heading Invention after Writing. In the latter half of a writing lesson, when writing has been finished, invention of suitable, but unusual titles could be encouraged,by each boy. Activity 7 could help this.

Activity 4. Library Reading and Literature Lessons - Prose and Poetry. This is really the encouragement of reading in the boys' own time. To stimulate appetite, the lesson could begin with the teacher reading a 2 to 3 minute extract from a longer story,(or a whole story or poem in literature lessons) that illustrates the work of a writer or poet. Obviously the work should desirably combine beauty of expression with a clarity that can be understood by boys of this level of I.Q. Apart from intelligence, the subject-matter must be interesting, and the difficult parts should look after themselves provided there aren't too many of them. Poetry or prose reading should never be laboured by too much preliminary or 'post mortem' examination. (This is not to deny the value of drawing attention in an unlaboured way to how the writer has managed to give us an enjoyable experience; further, if the extract or work has been enjoyed by the class, they will probably want to discuss it and hear it later, again. They could be encouraged to find equally exciting or 'real' descriptions, in stories or poems, by themselves. On a sheet of paper, individuals who find such pieces of writing could enter their own name, the title of the book, anthor, and page numbers. Begin,on another exhibited piece

of paper a list of "keen readers" who have joined, and regularly use, the school and the public libraries, and who read at least one book a week. Frequent oral commendation for the active readers.

Activity 5. Encouraging Own Choice Writing at School and Home. Strong commendation of any writing done at home often reinforces children towards greater effort disproportionately to the teacher-effort involved. If possible, any home 'offerings' on paper (not homework in books but additional writing) should be pinned up on a wall, possibly - though not always - after neat re-writing, or it could be placed in an equally displayed folder. Help by suggesting that any unusual or interesting event is worth 'capturing' in describing words, just as we would 'capture' a scene we wanted to remember in a photograph. It must be something that is actually seen, heard or directly experienced outside school; perhaps something out of the window, a brother, sister, parent, some game played, or television action.

Activity 6. Revision of Written Thought. ('Second and third thoughts better than first thoughts only'). At first, class oral exercise, in going over a plain description like 'the man' did something, and inserting qualifying, 'colouring' words. Rarely allowing to pass a first, easy 'name' of something or a person without qualifying it adjectivally or adverbially, should be encouraged into a habit formation - though care should be taken to avoid staleness or sheer revulsion from too long or insistent practice. Activity 7 will be usefully combined with this, after individuals have had time to revise and amend with more interesting 'describing' words.

Activity 7. Own and Neighbour Positive Criticism After Writing. Development of habitual criticism, mainly aimed at 'colouring' noun and verb use, is what is meant here. The dual principle of constructive criticism must be learnt and known so well that each boy can appreciate its transfer capabilities to any activity, whether football, art, craft, or, as we are concerned with here, English imaginative writing. After a piece of writing is finished, they could have their neighbour listen to it, making notes under two headings - (a) being 'the things that are good' and (b) 'the things that can be improved'. One or two pairs' criticisms could be highlighted in front of the whole class. This formula, though naive in expression, can be made the framework for a more sensitive approach to their own work, but it requires constant re-iteration, like all new activities do, at first.

CATEGORY 'B' ACTIVITIES. (Requiring fuller treatment, perhaps occupying a whole period).

Activity 8. Sensory Stimulation. Frequent written and oral descriptions of objects and states or conditions (i.e. human feelings) after using maximum sensory perception, and whenever possible, the teacher emphasising complete self-identification with the stimulus being experienced. It is essential that, as in the eight essay subjects, the boys actually experience, using as many senses as many senses as possible, close contact with the stimulus. They should also be reminded, quietly during writing, in generalised terms to really mention how their different senses were affected. The best stimuli are those which are thrown up spontaneously in some topical way which is likely to grasp the boys' attention

vividly - e.g. snow beginning to fall. Other stimuli may have to surmount (with minimum teacher intrusion) the initial difficulty of over-familiarity, e.g. desk, a passing dog, a ball, a tree, a giant boy, etc. Special follow-up attnetion, with emphasis on the sensory perception displayed in it, is essential after writing on the weekly essay assignment.

Activity 9. Developing a Flexibility of Standpoint. This is similar to the self-identification with the stimulus encouraged in the previous activity, but attempts should be made here to encourage a shift in stnadpoint from which the action being considered is viewed. Some fairly dramatic scene can be constructed with two or more people whom the boys might imagine they are, and write or talk about them from their respective viewpoints. (E.g. car accident - standpoint of driver, victim, bystander, police, etc.; a boy doing something that some of his friends defend, while others oppose; a railway station - porter, policeman, worried, nervous traveller, etc.; house on fire; and so on. As usual, wide limits should be set so that extra child invention is encouraged.

Activity 10. Provision of Multiple Possible Solutions. Written and oral discussion of short stories, half read by the teacher. After writing, class discussion of multiple possible endings to the story can be attempted. Emphasise desirability (from teachers' and boys' points of view) of endings which are (a)clever or unusual; (b)humourous; (c)serious; and (d)sad.

As stated at the beginning, description compels distinctions to be made in the above activities where really there are none; for especially as the programme develops, it is hoped that you, the teacher of Group III,will be able to weave the various strands as and when they may be required into apposite combinations of activities. This is the root trouble with textbooks,of course: apart from their understandable failure to really fit the peculiar and unique needs of any single group of children, by offering a framework that seems so well-designed and planned,they can seduce a teacher - though not bored children - from the realities of a life that is flexible, topical, has individually-weighted points of contact with different children and requires great sensitivity.

Finally, this research would be completely impossible without the help and assistnace of the Group III teacher, and this will be quite obvious to anyone who reviews the findings of the experiment.

Thank you very much indeed.

John Conder.

Copies to: H.G. Armstrong, Esq., WRCC Educational Psychologist.
E.J. Woodward, Esq., Organiser, WRCC School Museum Service.

Appendix T. Diary Completed by Class 1A2 (Group III)'s English Teacher, showing Approximately the Number of Sessions Spent on Each Activity of the Creative English Training Programme Outlined in Appendix S.

DAYS WITH GROUP III	ACTIVITY 1	2	3	4	5	6	7	8	9	10
1		x								
2				x						
3							x	x		
4		x								
5	x					x				
6		x								
7			x				x			
8	x			x						
9			x				x			
10		x				x				
11) 12)			x	x						
13	x									x
14			x		x					
15) 16)						x	x		x	
17		x						x		
18) 19)			x		x					
Fortnight break – On return to school, in keeping with the other two groups, general revision for one week.										
Σ	3	5	5	3	2	3	4	2	1	1

Appendix U.1. Secondary Modern Boys' Sensory Stimulation Experiment Mean Impression Marks, I.Q. and Open-Ended Test Marks. (X = 1st., and Y = 2nd., essay marks).

GpI	X	Y	Σ	IQ	OE	GpII	X	Y	Σ	IQ	OE	GpIII	X	Y	Σ	IQ	OE
S 7	8.0	6.0	14.0	99	25	S 4	4.8	2.0	6.8	106	10	S 5	8.4	5.4	13.8	99	18
8	1.4	3.0	4.4	104	16	6	2.4	1.2	3.6	108	5	9	3.8	4.0	7.8	103	5
13	4.0	3.4	7.4	118	8	19	1.0	1.4	2.4	93	9	11	7.0	5.6	12.6	96	14
15	6.4	5.4	11.8	96	14	20	3.0	3.4	6.4	94	7	12	7.0	4.8	11.8	109	12
18	5.0	4.6	9.6	107	18	32	5.0	4.8	9.8	122	12	14	5.4	7.0	12.4	103	20
21	7.2	8.4	15.6	105	12	33	3.4	4.6	8.0	85	10	25	7.0	1.6	8.6	103	10
22	6.8	5.2	12.0	110	9	34	8.6	6.0	14.6	110	7	29	6.0	6.2	12.2	118	19
24	5.4	4.8	10.2	116	13	35	3.8	3.4	7.2	101	13	30	5.4	6.8	12.2	108	9
26	7.8	5.2	13.0	109	6	38	6.8	3.4	10.2	99	23	31	6.6	5.2	11.8	98	15
27	5.8	6.4	12.2	97	9	40	3.0	6.6	9.6	113	11	36	3.6	6.0	9.6	115	13
37	5.2	1.8	7.0	105	5	47	7.8	4.0	11.8	115	11	41	3.6	3.6	7.2	100	18
39	5.6	3.4	9.0	108	7	48	1.6	4.4	6.0	102	4	43	5.4	7.0	12.4	89	10
42	7.8	6.2	14.0	111	25	54	2.2	6.0	8.2	104	11	50	2.2	4.6	6.8	111	10
44	7.8	4.2	12.0	113	11	60	2.2	1.0	3.2	108	9	52	3.2	3.6	6.8	98	2
45	8.6	7.8	16.4	119	15	62	5.4	4.0	9.4	106	6	55	3.2	3.4	6.6	114	7
49	5.2	4.0	9.2	110	10	64	5.2	4.8	10.0	96	18	57	6.6	6.8	13.4	102	16
56	9.0	5.6	14.6	99	10	65	3.0	2.4	5.4	97	9	58	6.6	5.2	11.8	89	10
61	4.8	5.0	9.8	124	17	68	1.0	3.8	4.8	91	9	59	3.4	6.4	9.8	109	8
63	5.0	6.0	11.0	107	22	75	1.0	3.2	4.2	96	4	66	5.2	3.0	8.2	122	13
67	5.4	3.4	8.8	118	17	77	2.8	5.8	8.6	89	4	71	2.4	5.6	8.0	104	27
69	6.4	5.8	12.2	105	21	81	1.0	1.0	2.0	96	6	74	6.4	5.4	11.8	104	16
72	5.6	4.8	10.4	100	14	82	2.8	4.4	7.2	108	12	76	5.6	7.0	12.6	96	20
73	8.8	4.0	12.8	113	11	89	4.4	5.0	9.4	86	3	79	9.0	8.2	17.2	103	17
78	7.4	5.4	12.8	108	6	90	2.0	3.0	5.0	102	21	83	3.2	6.4	9.6	91	9
Σ 24	150.4	119.8	270.2	2601	321	24	84.2	89.6	173.8	2427	234	24	126.2	128.8	255.0	2484	318
			$\bar{IQ}$=108.33						$\bar{IQ}$=101.12						$\bar{IQ}$=103.50		

Appendix U.2. Calculation of the Wilcoxon Matched-Pairs Signed-Ranks Test of the Difference in Marks for the Initial and Final Essays by the Sample of 72 11-12 Year-old Secondary Modern Boys.

N = 70, since 2 subjects tied.

(a) Calculation of z, and its Probability.

$$z = \frac{T - \frac{N(N+1)}{4}}{\sqrt{\frac{N(N+1)(2N+1)}{24}}}$$

$$z = \frac{1033.5 - \frac{70(70+1)}{4}}{\sqrt{\frac{70(70+1)(2\times70+1)}{24}}}$$

$$z = \frac{-209.0}{\sqrt{\frac{700770}{24}}}$$

$$z = -1.2231$$

$$P = <.2224 \text{ (two-tailed)}$$

Thus, P = >.05 for a two-tailed test.

(b) Calculation of the Extent of the Mean Net Gain, or Loss.

Σ improvement = 49.4 marks
Σ decline = 72.0
Net loss = 22.6
Mean net loss = $\frac{22.6}{72}$
= 0.314 marks

Appendix V. Calculation of the Analysis of Co-Variance Between 3 Groups of 24 Secondary Modern First-Form Boys' Samples of Creative Writing Before and After an Experimental Period of Comparative Writing Methods.

1. Calculation of the Sums of the Initial (X) and Final (Y) Marks, the Sums of the Squares of X and Y, and the Sum of their XY Products.

$\Sigma X = 360.8$ $\Sigma Y = 338.2$

$\Sigma X = 2158.08$ $\Sigma Y = 1784.32$ $\Sigma XY = 1816.70$

2. Calculation of the Total and Mean for Each 'Method' for Initial and Final Scores Separately.

Method Group	Initial		Final	
	Total	Mean	Total	Mean
I	150.4	6.27	119.8	4.99
II	84.2	3.51	89.6	3.73
III	126.2	5.26	128.8	5.37
	360.8	5.01	338.2	4.70

3. Analysis of Total 'Sums of Squares' for Initial and Final Scores Separately into 'Methods' and 'Within Groups'.

A. INITIAL SCORES.

(a) Sum of Squares for Methods. $\frac{150.4^2 + 84.2^2 + 126.2^2}{24} - \frac{360.8^2}{72}$

$= 1901.51 - 1808.01$

$= \underline{93.50}$

(b) Sum of Sq. within Groups. $2158.08 - 1808.01$

Total Sum of Squares. $= 350.07$

S. of S. within Grps. $= 350.07 - 93.50 = \underline{256.57}$

B. FINAL SCORES.

(a) Sum of Squares for Methods. $\frac{119.8^2 + 89.6^2 + 128.8^2}{24} - \frac{338.2^2}{72}$

$= 1623.73 - 1588.60$

$= \underline{35.13}$

(b) Sum of Sq. within Groups. $1784.32 - 1558.60$

Total Sum of Squares. $= 195.72$

S. of S. within Grps. $= 195.72 - 35.13 = \underline{160.59}$

	d.f.	Σx^2	Σy^2	Variance*
Methods	2	93.50	35.13	7.090
Within Groups	69	256.57	160.59	2.045 (68 d.f.)
		350.07	195.72	

*Calcul'd. in secns. 10 and 11 below.

4. Total Sum of Products.

$1816.70 - \frac{360.8 \times 338.2}{72}$

$= 1816.70 - 1694.76 = \underline{121.94}$

5. Methods Sum of Products.

$\frac{150.4 \times 119.8}{24} + \frac{84.2 \times 89.6}{24} + \frac{126.2 \times 128.8}{24} - \frac{360.8 \times 338.2}{72}$

$= 750.75 + 314.35 + 677.27 - 1694.76 = \underline{47.61}$

6. Methods Sum of Products from Total Sum of Products to Secure Sum of Products within Groups.

$121.94 - 47.61 = \underline{74.33}$

7. The Adjusted Sum of Squares within Groups.

$$= 160.59 - \frac{(74.33)^2}{256.57} = 160.59 - 21.53 = \underline{139.06}$$

8. The Adjusted Total Sum of Squares.

$$= 195.72 - \frac{(121.94)^2}{350.07} = 195.72 - 42.48 = \underline{153.24}$$

9. The Reduced Sum of Squares for Methods.

$$= 153.24 - 139.06 = \underline{14.18}$$

10. The Reduced Variance for Methods.

$$= \frac{14.18}{2} = \underline{7.09}$$

11. The Adjusted Error (within groups) Variance.
(d.f. one less than for within groups variance).

$$= \frac{139.06}{68} = \underline{2.045}$$

12. The F Value, from the Reduced Methods Variance divided by the Adjusted Error Variance.

$$= \frac{7.090}{2.045} = \underline{3.47} \text{ for } 2 \text{ d.f.}, \quad 68 \text{ d.f.}, \ \underline{P = <.05}$$

A value of 3.13 is significant at the .05 level for these d.f.
A value of 4.92 would be required for significance at the .01 level.

13. Calculation of the Adjusted Final Means, from which the Differences Between them can be Obtained. (Tables 33 and 34, p.168).

Regression coefficient $= \frac{74.33}{256.57} = \underline{0.28971}$

Methods	Ini$\bar{x}$	Gen$\bar{x}$	Dev'n	Fin$\bar{x}$	Adj. Final*
I	6.27	5.01	1.26	4.99	4.62
II	3.51	5.01	-1.50	3.73	4.17 *Calc.
III	5.26	5.01	0.25	5.37	5.30 below.

Calculation of the Adjusted Final Means.

Method I. $= 4.99 - (0.28971)(1.26) = 4.99000 - 0.36504 = 4.62496$
Method II. $= 3.73 - (0.28971)(-1.50) = 3.73000 + 0.43501 = 4.16501$
Method III. $= 5.37 - (0.28971)(0.25) = 5.37000 - 0.07243 = 5.29757$

14. Calculation of Significance of Differences Around the Means.
(i) Estimated standard error, using the variance within groups of a single mean.

$$\sigma_m = \sqrt{\frac{2.045}{24}} = \sqrt{0.085208} = \underline{0.29190}$$

(ii) Estimated standard error of a difference between any two method means - where all method means are from groups of the same size.

$$\sigma_{\bar{x}_1 - \bar{x}_2} = 1.414\ \sigma_m = 1.414 \times 0.29190 = \underline{0.413}$$

(iii) Application of the obtained standard error to a table of t values.

There are 68 d.f. for this standard error of 0.413.

Since, for 60 d.f. a t of 3.460 would be required for sig. <.001 (2tt
" " a t of 2.660 " " " " " <.01
" " a t of 2.000 " " " " " <.05

a difference between method means would have to be larger than -

3.460 x 0.413 = 1.429 to be significant at the .001 level.(***)
2.660 x 0.413 = 1.101 " " " " " .01 " (**)
2.000 x 0.413 = 0.826 " " " " " .05 " (*)

15. The Effects of Regression: Calculation of Each Method's Predicted Final Mean, from its Initial Mean; and the General Initial and Final Means for all Three Methods.

Regression coefficient = b_{yx} = 0.28971

X = Initial Mean; Y = Final Mean; Y' = Predicted Final Mean

Method Group	X	[1]GenX	[1]Devn	Y	GenY	Y'*
I	6.270	5.011	1.260	4.992	4.697	5.06
II	3.508	5.011	-1.503	3.733	4.697	5.13 *Calc.
III	5.258	5.011	0.247	5.370	4.697	4.77 below

[1]Inserted to show each mean's relationship to the general initial $\bar{X}$.

Calculation of the Predicted Final Means.

Method 1. 0.28971 x 1.260 + 4.697 = 5.06
2. 0.28971 x 1.503 + 4.697 = 5.13
3. 0.28971 x 0.247 + 4.697 = 4.77

Appendix W.1. Calculation of the Intercorrelations between an Estimate of Writing Ability, I.Q. and Open-Ended Test Score in a Group of 72 First-Form Secondary Modern Boys. (Pearson Product-Moment Correlation Coefficient).

Correlation Between Writing and I.Q.

$$r_{w.iq} = \frac{1236.0}{\sqrt{801.84 \times 5605.3}}$$

$$= .583$$

Correlation Between Writing and Open-Ended Test[1] performance.

$$r_{w.oe} = \frac{933.40}{\sqrt{801.84 \times 2307.2}}$$

$$= .686$$

Correlation Between I.Q. and Open-Ended Test Performance.

$$r_{iq.oe} = \frac{2094.0}{\sqrt{5605.3 \times 2307.2}}$$

$$= .582$$

Appendix W.2. Example of Open-Ended Test Sheet Given to all 72 First-Form Secondary Modern Boys in the Methods Experiment.[1]

(Positive scoring - - for each change of response made by each subject, carried out by the writer himself). Subject used - S.8 of Group I; his other marks may be seen in Appendix U.1.

USES FOR THINGS

Listed below are five objects. Your task is to write down as many different uses as you can for each object. Several examples are given. You will have approximately 15 minutes. Be sure to write down some uses for each object. Write down anything that comes to mind, no matter how strange it may seem.

Name.....S.8..... Class..~~141~~..... Score - 16

1.BRICKS build houses, doorstep, factory, chimnn, stacking, barn, prop something up, wall, to put in a desk

2. PENCILS write, bookmark, for catipulting, draw, chew, sharpen, dart, use for legs on potatoes (model),

3. PAPER CLIPS clip paper together, make a pattern, wait (weight) for flying wing, wait for aroplane, make hook, make a ring,

4. TIN CAN hold water, use as skittle, to kick, hold food, make lantern, make valve cover, hold pop,

5. SHEET OF PAPER write on, make aeroplane, make present wrapper, make ball, cut out, make boats, paint on, for money, toy motor on bike,

[1]The writer is indebted to the Appendix on page 226 of Getzels and Jackson (1962), for the format of this test, originally devised by Guilford and his associates. Torrance amended item 4 - 'Toothpick' into 'Tin can' for use with children.

Appendix X. Two Revisions of Wilcoxon Matched-Pairs Signed-Ranks Tests for Small Samples Originally Carried Out by Myers, R.E.(1960) in a Methods Experiment with Two Groups of Twelve 11-12 Year-old Children.[1]

1. Myers matched 12 children with 12 more from the same class who had similar I.Q. and socio-economic backgrounds (as measured by fathers' occupations), and carried out an interim writing test which gave a T value of 26.5 ($P = >.05$), and a final test some weeks later which resulted in a T value of 7 ($P = \leq.01$).
2. The present writer's similar interests led him to re-match Myers' two samples of children, so that the 12 'trainees' first interim test writing performance (in ranks) could be matched against their own final performance. Similarly, the 12 'non-trainees' were matched against their own performance by contrasting their ranks given for their interim performance at writing with those given for the final assessment.

Trainees						Non-Trainees					
Sub	S.1	S.2	d	Rank	L.Freq.	Sub	S.1	S.2	d	Rank	L.Freq.
1	7	2	5	2.5		1	4	20	-16	-10	
2	12	21	- 9	- 7	- 7	2	20	23	- 3	- 2.5	
3	6	12	- 6	- 4	- 4	3	24	24	0	0	
4	1	1	0	0		4	8	17	- 9	- 7	
5	3	11	- 8	- 5.5	- 5.5	5	14	9	5	4.5	4.5
6	9	13	- 4	- 1	- 1	6	2	17	-15	- 9	
7	10	2	8	5.5		7	22	5	17	11	11
8	17	7	10	8.5		8	15	14	1	1	1
9	23	4	19	11		9	13	10	3	2.5	2.5
10	18	8	10	8.5		10	19	6	13	8	8
11	21	16	5	2.5		11	10	15	- 5	- 4.5	
12	5	19	-14	-10	-10	12	15	22	- 7	- 6	
N=11 (1 tie)					T = 27.5	N=11 (1 tie)					T = 27.0

With N = 11, a T value must be 11 or less for significance at the .05 level.

N.B. Since Trainees and Non-trainees were originally ranked by Myers into 24 comparative ranks, based on their performance on the first writing test, and again into 24 ranks for performance in the final writing test, this investigator used (above) Myers original ranks when he matched each child against itself.

To see if a significant difference was obtainable by a different method of ranking, the writer also re-ranked into 12 ranks Myers' ranks that were given to the Trainees for the first writing but which were out of the 24 scale that included the Non-trainees as well. The same was done to the ranks given the Trainees for their performance in the second writing test. The result was even less significant than the test above, since a T of 29.5 was obtained.

An identical procedure for the Non-trainees resulted in a T of 31.0.

[1] Myers, R.E. (1960) 'Creative Writing and Training in Divergent Thinking.' An unpublished M.A. Thesis, Portland, Oregon; data taken from pages 22 and 23.