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THE RESIDENTIAL SCHOOL; SOME ASPECTS OF THE PHYSICAL AND SOCIAL ENVIRONMENT.

ABSTRACT

C.P.M. KING

M.A. THESIS

1992.

This thesis considers the environment of mainstream residential schools largely from the viewpoint of the pupils' perception. The nature of the physical environment and in particular the evolution of the built environment is discussed in detail. The temporal element is not forgotten in this context, as major influences, be they personalities or trends are assessed for their impact. The second major element of the environment is then considered, being the social climate. A whole range of factors are assessed for the level of impact in terms of their influence on the atmosphere of a residential school.

The role of Government, and in particular the impact of the Children Act, (1989), is covered in detail. The range of areas where the legislation impinges on the form of the physical environment is discussed.

Behaviorialism as an approach to the study of the perception of the environment is developed as a concept. The major trends in developing an approach to perceptual studies are traced and individual contributors are given due recognition. From this a field programme is created, drawing upon ideas employed in the past for the assessment of the environment. The field programme is applied to a variety of residential schools, which declare themselves to have a distinctive ethos. The field programme is completed by the pupils in the schools in order to assess their perception of the effectiveness of the school environment in their educational experience.

Fifteen case studies are detailed to illustrate specific points of contrast between schools. The mean school for comparative purposes is calculated and recommendations for the improvement and development of the whole residential school environment are made.

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THE BOARDING ENVIRONMENT

PREFACE

This thesis developed out of my experience in residential schools over a period of twenty years, initially as a pupil and later as a teacher. The subject matter naturally drew my attention, given my background as a honours graduate in Geography from Durham University and experience therefore of the behavioural aspects of the subject in an environmental context. I have taught for fourteen years in a number of public boarding schools and currently I hold the post of Head of Geography at Rendcomb College, Cirencester where I am also a Senior Housemaster. Opportunity for the study of the environment of residential schools has been afforded to me by my membership of the Holbrook Group, an independent assembly of people all involved actively in research into aspects of the residential school, both mainstream and special.

Image and component parts.

Boarding school life is characterised and caricatured by the paradoxical images of its environment, fostered by the media and fed by literature. Elitism in the setting of the spartan atmosphere of a Dickensian workhouse perhaps best summarises that image. A 'concerned environment' within which the individual can develop is not something the latter day Oliver Twists are envisaged as enjoying. The picture of teachers with a superior air, dressed in gowns and wielding their discipline with an iron

fist as boys sit in rows, chanting Latin verses and looking forward to cold showers and muscular games sessions is still perpetuated as the norm by many. However, those of us within the walls of such establishments, and I am primarily concerned from my experience here, with the independent boarding school, know that the school of the early 1990's is a business. As such it seeks a market, and if a school gets its market research wrong, or more importantly interprets that research incorrectly, then it will fold like any other business, through a lack of customers.

In order to gain and retain these customers the public school has responded by adjusting the 'package' that it makes available to parents of potential pupils. That package has many facets, but significant amongst them are its setting and the physical environment of the boarding school. Robinson, (1990) examined many of the relevant facets in drawing the distinction between the "family" and the "formal" paradigms. In the former the house parent aims for a close relationship with the pupil and it is where there is a "drive to domesticate the boarding house and make it as much like home as possible, to compensate for the perceived deprivation (as a result of the removal of daily emotional contact with parents and family) of the inmates. After the soft furnishings, kitchens and televisions, come smaller house groups of mixed ages." Robinson, (1990).

In the latter as Robinson expresses it, "To argue that boarding should emulate the family conceals the great virtue of boarding: boarding is different from family life and has certain advantages over it. Boarding should ideally complement the good

first as boys sit in rows, chanting Latin verses and looking forward to cold showers and muscular games sessions is still perpetuated as the norm by many. However, those of us within the walls of such establishments, and I am primarily concerned from my experience here, with the independent boarding school, know that the school of the early 1990's is a business. As such it seeks a market, and if a school gets its market research wrong, or more importantly interprets that research incorrectly, then it will fold like any other business, through a lack of customers.

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In the latter as Robinson expresses it, "To argue that boarding should emulate the family conceals the great virtue of boarding: boarding is different from family life and has certain advantages over it. Boarding should ideally complement the good

family life, not simply supplement it, and the differences should be emphasised and extolled, not minimised and hidden under the new carpet. Boarding should provide a "challenge", not from the regime but from "those with whom the child eats, plays and sleeps." Robinson (1990). The spartan, however, though apparently lamented in some quarters, appears to be on the way out, to be replaced by carpets, central heating and video recorders. Ambitious building programmes have been undertaken as no effort or apparently expense, is spared to make sure that the physical manifestation of the package is up to date and reflects the current demands of the market.

Also significant within the package is the 'atmosphere' or 'social climate' within which the individual is guided towards the future. One instantly gains a "feel" for any institution one enters. Is it "warm" or "cold", is there a welcoming or distancing force evident, is it superior or inferior? The educational process is played out on the school's environmental chessboard which is composed at one and the same time of the physical and social elements.

But is that package the best possible? How do pupils perceive the boarding environment? Is there a close or poor match between the stated goals of a school as the determinants of the atmosphere of an individual school and the goals that the older pupils perceive as actually aimed at by the school. Indeed what do the pupils think should be the aims of the school? What is the sixth formers' cognitive map which the school has helped to create? Are there lessons to be learnt regarding the geography and facilities of boarding schools from the examination of the

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perceptual world of senior pupils? Will the package continue to attract?

This thesis aims to address these aspects and questions and in doing so provide a means by which individual schools might measure their own environment and its impact.

This work would not have been possible without the help of a great number of people. Having promised anonymity (we live in highly competitive times!) to those Headteachers that have been good enough to let me work within their schools I do not feel I can fully acknowledge my debt to them. However, I have contacted them directly with extracts of my work which is of most relevance to them and I hope that they will accept here my general thanks.

The Headmaster of Rendcomb College, John Tolputt, has been most enthusiastic supporter of my work and colleagues within and outside my own school have been invariably interested and helpful as appropriate.

The Holbrook Group has through its membership stimulated me to progress with this work and to open my eyes to the wider world of residential education. The infectious enthusiasm of Dr. Ewan Anderson lies behind this study, and in any case no serious attempt at research into the residential school environment would be valid without reference to him.

Finally my wife and three sons, who I hope have understood that this was something I had to do, have been remarkably tolerant, encouraging, constructively critical and generally supportive throughout the period of the research.

INTRODUCTION

Research has shown that school effectiveness can be broken down into eleven categories. These are quoted by Reid, Hopkins and Holly, (1987) as being school leadership, school management, school ethos, discipline, teachers and teaching, the curriculum, student learning, reading, pupil care, school buildings and school size. It is clear that much more has been written about some of these eleven areas than others. In particular this thesis concentrates directly on school ethos and school buildings, though all these categories impinge or are impinged upon by the research. However, the viewpoint developed in the field programme is from an aspect on which there has been very little research; that of pupils' perceptions.

The design of the field programme is outlined in Chapter 5 but it is worth mentioning at this point some of the unique aspects of this work. Much has been written about the residential school in general, and numerous historical accounts of individual schools exist such as the histories of Rendcomb College, (Osborne, James and James, 1976) or Malvern College, (Blumenau, 1965) often written from within by recently retired members of the teaching staff. Fewer attempts have been made to assess the nature of residential schools from the point of view of the outsider looking in objectively.

There are some notable researchers who have published books on the Public School "phenomenon" such as the work of Gatherer-Hardy, (1977) and Honey, (1977). The most definitive research in the late 1960's and early 1970's on the Public School was carried out by Royston Lambert, (1975). Lambert's team visited one in

three of the HMC schools for a period of about two weeks, and four schools were studied minutely during a period of continuous observation and survey lasting in each at least half a term or more. Lambert's team were thus able to achieve depth and breadth. The work of Walford, (1986,1987) amply illustrates recent examples of work focused on the Public School. Indeed he takes considerable trouble to discuss the relative merits of alternative methods of research but at the same time it is clear that the body of knowledge derived from research within Public schools is very limited in scope and depth. This is in contrast, however, with the research that has been done in the area of special needs where residential schooling is felt appropriate.

Much of the available written work that attempts to go beyond the merely historical is anecdotal in nature and in the case of Lambert's work for example, rather dated. However, there would seem to be a need for active research into the nature of residential schools. Why? The Bulletin of the Wagner Development Group edited by Beecher and Statum, (1991) summarises this well; "If the lifestyle of children and young people living in groups is to have a positive image, it is essential that those same people gain from their stay in residence a positive experience. This can happen only if their care givers know what 'good practice' is and are capable of putting it into operation".

The paradoxical situation is however, that not all areas of residential education are perceived as of equal worth. The situation is summarised well by a newsletter of the Wagner Development Group which said; " A noticeable - and disturbing- feature of residential provision for the young is the enormous

difference between the value accorded to one particular variety of it and that placed on almost all the others. Life in a main stream boarding school is held by many parents and educators to be not only 'normal' but also praiseworthy - a privilege to be treasured by children fortunate enough to attend one. From this perspective, boarding is one of the best available ways to uphold the right of a child to teaching of high quality and favourable career prospects. In sharp contrast, living in a children's home if you are in care, or in a residential school if you have special needs, is seen by many parents and teachers - but especially by workers in the personal social services - as 'abnormal', as a last resort to be used only if all other alternatives turn out to be impracticable".

Again from the bulletin "....there are ... a number of examples of good practice in all the sectors of group living. But where good practice is deficient, it won't emerge by some magic process in mainstream boarding school where caregivers (mainly teachers) assume they know all there is to be known in virtue of their school's high standing with parents.....Good practice has to be continuously explored, re-evaluated, learned and reinforced; and in this process all categories of group living have much to learn from others."

This work then has largely been carried out within my own school and in other Public or independent boarding schools. However, taking up the theme expressed above other schools with specialist functions but with a residential component to their role were visited in an attempt to give added breadth to the work. In total, twenty five boarding schools

were visited and the research questionnaire applied in fifteen. Those visited represent over ten percent of all independent HMC boarding schools and the number of questionnaires completed is in excess of three hundred and fifty.

From discussions and trials of the questionnaire a research programme with three main aims developed.

THE AIMS

Those aims were:

1. To identify the characteristics of residential schools that combine to create the physical and social climatic environment of residential schools, as revealed by the perceptions and associated cognitive maps of senior pupils.
2. To assess the effects of organisational change within the residential environment upon senior pupils' cognitive maps perceptions and interactions.
3. To formulate recommendations to improve the effectiveness of residential education from an environmental viewpoint.

CHAPTER 1.

THE ENVIRONMENT

The key throughout these aims is "environment" and the theoretical implications of this deserves further debate.

"Environment" is the buzz word of the moment, but as such it is used far too glibly and deserves a far more detailed examination in the context of this thesis. It is important to remember that the environment exists at two levels; the objective and the perceived. The objective environment of residential schools has in turn two elements; the physical and the social climate. Moos, (1974) says that human behaviour cannot be understood apart from the environment context in which it occurs and that though there may be two elements to the environment; "...physical and social environments must be studied together". This is, of course entirely fair and ample examples may be thought of to illustrate the idea. Schools for instance that historically were built with close ties to monasteries or convents were often built in a similar style. This imposition of monastic style extended to the enforcement of associated customs, such as earlier this century girls having to take baths in shifts and not being allowed to look at their own bodies when they were in the bath.

The physical environment is both natural and built. It has history and even though in part, at least, termed "natural", invariably it is almost wholly managed. The physical environment supplies the ecological dimension with its attendant geographical, meteorological, architectural and design variables.

The physical environment is listed as the primary determinant of behaviour by many researchers. Altitude, soil characteristics, and humidity are some elements of the physical environment that have been studied particularly. Phenomena of great importance have been attributed to the climate. In 1965 riots in Los Angeles and Chicago were widely believed, in part, to have had their origins in the particularly hot weather at that time. Similarly and more recently there would appear to be a significant correlation between the sustained period of hot, sultry weather of the summers of 1981 and 1985 and the rioting in several British inner city areas such as St. Paul's in Bristol and Toxteth in Liverpool. Dramatically higher rates of suicide occur in times of depression weather. School public examinations are almost invariably sat during the period of warmest, most humid meteorological conditions! to the great discomfort of asthma and hay-fever sufferers.

To what extent the physical environment is the reinforcing "stimulus" is perhaps something which can only be assessed in the context of individual events. More often it is thought that it is the "setting event" which forms the conditions for the response to occur. Architects and designers often proceed, when given the opportunity, on the assumption that there is this link between psychological events and environmental factors. Some colours are described as "cheerful" or "gloomy". Red is often seen as a "warm" colour and blue as "cold". The American architect, Frank Lloyd Wright, at times designed confining corridors in order that on entering an open space the contrast of openness and light would be enhanced. Slater and Lipman,

(1980) considered the effectiveness of design in creating an environment suitable for the care of the elderly. Although clearly the demands of old people are different in specifics from that of the adolescent in a residential school, the principles suggested have a wider application. They suggested that the five "themes" for evaluation of the effectiveness of the environment should be; choice, independence, convenience, privacy and comprehensibility. It is interesting to note that The Children Act (1989) has taken up some of these themes in setting out the requirements for all residential schools.

The boarding house of a residential school exhibits choice in the variety of functions attached to it by the curriculum and extra curricular activities offered by the school. Independence is a term to express the physical ability of the individual to move about the House. Corridor width and staircase position would be important here. Furniture and fittings may restrict or promote independence. Convenience often is arranged from the viewpoint of authority and the opportunity for pupils to affect the convenience of their House may be limited. However, convenience is of high priority to pupils. It will become clear as the research unfolds that there is a general desire to be in close proximity to school facilities such as the dining room, sports hall and classrooms.

Privacy is underplayed traditionally in residential education; locks and keys are not generally available to pupils. Privacy or rather the lack of it may have a great effect on some pupils who may not be able to adjust to boarding life and specifically the Children Act, (1989) requires this to be recognised. Privacy

is important as a simple example illustrates. A girl of 10 or 11 may still be thought of as a 'little girl' who is unconcerned at the prospect of standing naked, and exposed in the shower. However, adolescence suddenly arrives and that same girl becomes prudish and hides her nakedness discreetly, if that is possible, behind the shower curtain. Comprehensibility concerns the ideas of familiarity and has many complex manifestations. A very important expression is the personalising by pupils of their rooms. Posters and magazine cuttings mixed with photographs and slogans reflects the persona of individuals. An interpretation of such decorations is beyond the scope of this work. However, there is no doubting the fact that the decoration or personalising of their rooms reflects the personality of the individual often set in the fashion of the time, but with a tempering element as a result of the ethos of the school.

This study has taken the opportunity provided by the Children Act, (1989) to investigate the 'total' environment of the boarding school, by taking up the message of Moos and investigating both the objective and the perceived world of the boarding school. What follows from this is a study that initially looks at the physical/built environment and then continues by having regard to the social climate. How pupils perceive the world in which they are asked to live and learn is a vital ingredient of this study, for though an individual may harbour a misapprehension the world that he sees is to him the world he lives in. The study is believed to be unique in that it is the first to consider the implications of the Children Act on the physical environment of the school. In keeping with one of the

central themes of the Act the study sets out to enable pupils to express their own views of their school environment. In doing this it draws upon my training as a Geographer and in particular the field of perception studies. Prior to a consideration of the field programme and research element a discussion of relevant theory and background material is thoroughly pursued.

SUMMARY

Chapter 1 discusses the meaning of the term 'environment' initially in generalities and then in specifics related to the residential school. The idea is put forward that the environment is composed of a physical character and a social climate. The environment can be studied objectively and as it is perceived.

CHAPTER 2

THE BUILT ENVIRONMENT.

The built environment of the boarding school deserves particular attention. Frank Lloyd Wright, once defined design as "art with a purpose". If that is true then if we know the purpose behind a building in a residential school then we are well on our way to understanding this particular built environment. In 1873 the architect Robson, (1972) said "a school should appear like a school and not like a monastery, a town hall or a set of almshouses. Large towers and prodigious roofs, exaggerated gables are all better avoided". By implication then this has not always been the case. The Clarendon Commission of 1864, said of the collegiate architecture so evident in many of the public schools in existence in the nineteenth century that its development with emphasis on quadrangles, cloisters, and late Gothic styles may be seen as an attempt to emphasise the close links between public school and university". Undoubtedly the association was made, and intentionally so, and the impact can be revealed in other ways even in the latter part of the twentieth century.

A conversation overheard between two boys of a visiting school to Cheltenham College on the occasion of a cricket match; "What chance have we got today?" "Not much, have you seen the size of their chapel?!" The talent or otherwise of the home side was not assessed by the playing record or first hand experience of their skill but by the imposing "superior" nature of the built environment. As the

visiting member of staff said, his team had "lost before the first ball was bowled".

In recent years behavioural studies have highlighted the growing belief that the designed environment though it may not determine experience does at least support satisfaction, happiness and effectiveness in combination with social influences. The designed environment often however does not "work" with respect to its impact on human experience. It can be awkward, even destructive rather than supportive of personal competence and growth. The temporal element should not be overlooked, as what may fit the particular time that a building was conceived, may not suit so well a year, a decade, a century, later?

Many of our residential schools retain buildings which were not built originally to be schools. Even if they were, they belong to a different age of thought on what makes good educational practice. They have been, in some but not all cases, modified, modernised and adapted but are they always suited to their use? Debate on such issues is not new of course; throughout the second half of the nineteenth century the debate was for and against the teaching by "divisions". That is, that much teaching took place in one large, often roofed, imposing room but with the pupils subdivided into "divisions" where perhaps different members of staff would conduct different lessons. Physical distinction of those "divisions" was rare but as the century progressed so developed the argument for single classrooms. Eton up to 1885 had "up to three divisions" taught regularly in one room but, as a result of an energetic building

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programme, by 1886 each group was taught in a single classroom. We have little evidence of peoples perceptual view of classrooms at that time. However an argument advanced by the President of the Royal Institute of British Architects (R.I.B.A.) (Robson, 1972) at the end of the century in a speech he claimed that "the aesthetic crudity of many English industrial products could be attributed to the influence of ugly classrooms". A viewpoint maybe but there is a need for a more relevant appraisal of the residential environment. Firstly, for such as the information is available, the historic development of the architecture of residential schools can be traced.

Early days.

Though not many in number, a few schools can genuinely lay claim to their origins in the Middle Ages and a few of them have buildings which date from those times. The grammar schools such as Westminster, Winchester and Eton can be said to fall into this category. Architecturally perhaps it is the school which uses buildings, wholly or partly derived from monastic houses that are the most impressive. At Canterbury, for example, the King's School was reorganised in 1541 and from 1573 to 1859 occupied significant parts of the Cathedral. Sherborne School, Dorset is another that came to occupy previously monastic buildings. The close connection between religion and education was evident from the buildings and of course from the fact that the vast majority of teachers were clerics. In the Elizabethan period interest in school building and organisation showed an increase and reflecting this perhaps, Richard Mulcaster, (1888) made this comment in 1582 on the ideal position of grammar school

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buildings. "I could wish that grammar schools were planted in the outskirts and suburbs of towns near to the fields where partly by enclosure of some private ground, for the closer exercises(and) partly for the benefit of the open fields for exercises of more range there might not be much want of room, if there were any at all". This may be the earliest recorded example of the Gestalt theory (see Chapter 4 and (Koffla,1935) applied to a residential school setting. All this, as Mulcaster admits "will require a good mind and no mean purse" but he went on to boast the "we have no great cause to complain for number of schools and founders" as indeed the number of schools was increasing.

However residential schools went through, without exception, a very chequered time until the 1840s. Many were founded and then fell on hard times only to disappear altogether. Some carried on with relatively small numbers often in antiquated overcrowded conditions. The difficulty of funding as a consequence of a divergence of interests between the ecclesiasts and the pedagogues meant that building and development was often at best piecemeal, at worst non-existent.

However, in the period after 1840 the term "public school" came into general use to mean a boarding school and the sort of place where the well-to-do parents almost automatically sent their sons. Schools founded after 1840 often incorporated architecture of the Gothic style on an impressive scale and with elaborate internal planning. Schools such as Cheltenham and Marlborough were established from the proprietary idea that funds were raised through a system of shareholding. This eventually

proved to be a transitional stage in the development of secondary education the successful schools eventually became either endowed or private schools.

The use of the word "college" rather than "school" was indicative of the essentially middle class outlook of the promoters of the new foundations. Cheltenham College was founded in 1840 and by 1863 there were 405 boarders and 222 day boys. Cheltenham though by no means a large town and of relatively recent growth had become a fashionable watering-place and had an abnormally high proportion of middle and upper class parents. Such parents, moreover, who were sensitive about their social position, for the Committee which founded the new college at Cheltenham decided that only "gentlemen" should be allowed to take out shares, "no retail trader being in any circumstances to be considered". Many parents settled in the town at least in part, to take advantage of the schools, so that it has been said that the schools replaced the waters as the towns principal source of income.

Cheltenham was, in the 1840s, an Evangelical stronghold and the speech made at the opening ceremony by the Reverend Francis Close, the Vicar of Cheltenham with its condemnation of the "abominable mythology of the ancients", (Morgan, 1968), showed the disinterest with which Evangelicals regarded some forms of classical learning. Equally significant was the connection with the Army and Navy which was important in the decision to have a "modern side" as large as the "classical side". All these ideas were reflected in the original buildings of Cheltenham College. The main block was in Perpendicular Gothic style which was by

then usual for middle class schools, but constituted a major break from the style prevalent in the town which was very largely Regency in character. The architect was James Wilson of Bath. The classical and modern departments formed the principal front and were divided by a central tower; 'Big Classical' was opened first in 1843, 'Big Modern' was not roofed over until 1850. The internal planning developed rapidly during the 1850s following the style of Rugby where there were separate rooms for each form. A chapel was added so as to form a quadrangle.

many important colleges were founded in this time including Marlborough, Wellington (Berks.), the Woodard Schools and Radley. The setting of the school was considered of great importance both for the reasons of public prestige and because of the need for large playing fields in the new era of 'muscular Christianity'. The sites for the colleges at Clifton and Malvern were examples of locations chosen with care; the former on the edge of a well to do suburb and the latter at the foot of the Malvern Hills. The total effect is now best seen from aerial photographs as the vista is now somewhat spoilt by later developments. The layout of such schools may be said to have summed up thirty years of school planning and equally have set the pattern for many other school buildings for the rest of the nineteenth century and later.

In general school buildings and internal organisation are an index, not only of the development of particular schools but also of the educational and social outlook of the time. For example, the increasingly precise social class differentiation, which found expression in school buildings, after 1840, in the various

grades of middle class school built by Nathaniel Woodard. It was in the Woodard schools however, that a coherent philosophy of education found its most compelling architectural expression. Woodard realised that the growing middle class of the mid 1800s included not only members of the lesser gentry and the ancient professions but also men working at various levels in industry and commerce. In 1848 he published a pamphlet entitled "A plea for the middle classes", in which he outlined a scheme for providing a nation-wide system of schools, divided into "three distinct grades" corresponding with the upper, middle and lower divisions of that section of society which lay between the rich and the poor: the rich were already catered for by the major public schools and the poor by the national schools.

Woodard founded his first college (St Nicholas) at Shoreham in 1848 and it moved to new buildings at Lancing in 1857. This was an upper school for the sons of "clergymen and other gentlemen" and was followed by a middle school (St Johns) for the sons of "substantial tradesmen, farmers, clerks and other of similar station" which opened at Hurstpierpoint in 1850. The lower school (St Saviours) for the sons of "petty shopkeepers, skilled mechanics and other persons of very small means" moved to permanent buildings at Ardingly in 1870. Woodard believed that Education should be the handmaid of Religion and the "no system of education would be perfect which did not provide for the cultivation of the taste of the pupils through the agency of the highest examples of architecture", (Kirk,1952). He sought to achieve these objectives with a number of architects, notably RC. and RH. Carpenter. Woodard took a keen personal interest in all

the details of the buildings and then chose the school sites all of which have considerable merit. Each college was built on the same basic plan: there were two quadrangles, into which were fitted a chapel, large school room, dining hall and classrooms with dormitories above. In this way physical expression was given to ideas born of religious beliefs. This is but one example of where educational ideas found representation in buildings of schools built in conformity to those ideas. During the nineteenth century the concept of education became fully institutionalised and a long period of uneven development ended with the residential school taking pride of place as a distinctive social and architectural form.

From Clarendon to date.

The Clarendon Commission 1864, found in the major public schools that " the school buildings.....are by no means all that could be desired.....there is not infrequently a want of suitable classrooms.....though this is gradually being supplied".In the latter part of the nineteenth century it seems that there was growing concern about the built environment in which the education process was intended to take place.The Schools Enquiry Commission for Grammar Schools identified standards that should be met in schools.Schools should be equipped with "good/well ventilated classrooms, decent offices,a good master's house, a grass playground" all within a "healthy accessible site."

At the time the development of a 'collegiate' architecture, with emphasis on quadrangles, cloisters and late Gothic styles may be seen as an attempt to emphasise the close links between

public school and university. University at this time essentially meaning the college style classical education available at Oxford, Cambridge, Durham and the Welsh and Scottish equivalents of St. David's, Lampeter, and St. Andrew's.

The early twentieth century saw little in the way of significant school building styles. A number of schools were founded especially in the 1920s but they owed their architectural style to their adoption in many cases of former Estate Houses. The built environment owed more to the whim of the former wealthy land and estate owner than to educational considerations. Up to and between the wars public schools tended towards two things: firstly, construction of imposing premises with Tudoresque elevations and secondly though less frequently a few dabbled with modern buildings. In the latter case this was usually only for extensions with an unashamedly 'modern' function such as laboratories and art rooms. For example the Marlborough science block (1933) where the Headmaster told the architect that "I have in mind's eye, not so much an academic block, as generally understood, as an elegant factory." What he got was an ultra modern building with precast cement blocks but a traditional room arrangement.

In the latter part of the twentieth century the urge to build has been a major motivating force. In many cases the buildings constructed by schools have had their origins in the school's desire to present a dynamic modern outlook with a wave of language laboratories, computer suites, and Technology departments being built in turn as new educational fashions emerge. Piecemeal modernisation is another characteristic of the

last 25 years as many schools have to wrestle with the fact that they have ancient and listed buildings dictating the style at least externally, that their schools must adopt.

SUMMARY

Chapter 2 discusses in more detail the nature of the built environment. A brief history of the development of the built environment in mainstream boarding schools is given and illustrated with examples thought to be characteristic of particular periods.

CHAPTER 3

THE SOCIAL CLIMATE.

A second objective characteristic has been stated as the social climate. Moos, (1975) says that "the character of an environment is dependent in part of the typical characteristics of its members", and again that, "the college environment depends on the personal characteristics of the students, faculty, administration and staff of the institution". The logical conclusion from this is that different schools have different climates determined by the stated goals of a school and the pupils' practical interpretation resulting from their perception of those goals. Hoffman and Lippit, (1975) suggested a seven-fold taxonomy of various levels of educational environments. They suggested the following:

1. Cultural setting reflected in the values of the school
2. Current school setting including its class, values and locale.
3. School characteristics
4. School organisation
5. Personal characteristics of the teachers
6. Student orientated teacher attitudes
7. Teacher behaviour.

What they say will distinguish school A from other schools is what they called the "educational climate" of the school. The educational climate reflects the framework imposed by buildings and the physical environment but further the social climate.

Schools, including residential ones, which are often in remote

rural areas may be physically cut off from the outside world still do not exist in isolation. They are conditioned by factors external and internal to society and it may be that they are unable wholly to direct their own destinies. Government action, the prevailing financial climate and competition amongst similar schools are bound to shape thoughts and attitudes within the residential school. Other factors which must bear powerfully on its aims, means and effectiveness are those of history and tradition. The experience and culture of its staff, parents and pupils is also worthy of consideration.

Historical forces in particular have shaped residential schools. A large majority of Public Schools are still linked to a particular religious faith. In general the Anglican schools are less sectarian in their intake or in the preparation for particular Christian roles but their association gives them clear expressive aims. Dean Close, Cheltenham emphasised the Evangelical tradition and the Woodard Schools such as Ellesmere and Lancing emphasise the Anglo-Catholic traditions and practices.

Catholic schools, though more open now than in the past remain relatively closed. Some Catholic schools are still associated in organisation and routine to resident monastic or teaching orders. Ampleforth and Downside are still run by Benedictine Monks. Today twelve of Britain's HMC schools are denominational in the sense of not being Church of England, with seven being Methodist, one Quaker and four Roman Catholic. This excludes the many other schools outside of the HMC with affiliations that may be Jewish or even Islamic.

Other aspects of historical influence include such things as the 'Arnold Tradition' from the nineteenth century which aimed to prepare boys to become responsible, tolerant, intellectually competent, physically healthy and Christian leaders or administrators. The 'Arnold Tradition' continues to have a profound influence on today's public school and echoes of this are explicitly expressed in many a school's glossy prospectuses. Traditionally boarding schools have been single sex schools, where schooling was designed to fit boys for their eventual positions in various elite groups, but girls were schooled to find their reward in motherhood and a good marriage. Major changes have of course occurred in this approach and opportunities for women have opened up. In the early 1960s no public school was co-educational though there were independent co-educational schools; the best known was probably Bedales. In 1979 sixty out of the then 210 schools in the Headmasters' Conference admitted girls and of these 26 had gone fully co-educational. Table 1.3 shows the number of boys and girls who are boarding and day pupils in H.M.C. schools. Care must be taken when comparing the two years.

Headmasters' Conference schools, usually equated with the term 'public school', have their origins in 1869 when Edward Thring, the then Headmaster of Uppingham School, sent letters to the heads of thirty-seven schools which he considered to be the leading boys' grammar schools, suggesting that they should meet annually to discuss ways of dealing with the threat to their existence. It has grown from the twelve who attended the first meeting to 230 schools. The Headmasters' Conference (HMC) has,

as it has expanded, also diversified the nature of its membership and it is now true that a minority of HMC schools are all or even mostly boarding.

Table 1.3 Number of boys and girls in HMC schools.

	Number of Schools	Boarders		Day	
		Boys	Girls	Boys	Girls
1984	221	41,901	4,478	73,438	10,786
1990	230	37,223	7,568	90,421	17,967
1991	232	35,932	7,996	91,558	19,251

Data, Independent schools Information Service

The implications of this table are however clear. The boarding population that is male is in decline and indeed has been since 1975 when there were 46,307 boy boarders. The number of girl boarders has increased as has been the case throughout the seventies and eighties. However the total boarding population has declined relatively little from 47,699 in 1975 to 44,791 in 1990, a 9.4% fall. The proportion that are girls has risen from 11.7% in 1984 to 23% in 1990. This is very significant today in terms of numbers to boarding schools. What has been their impact on the social climate of such schools? An idea can be gauged from the way in which schools portray their girls in their prospectuses.

Wycliffe College, Gloucestershire, makes no specific reference to girls but in its prospectus under its third 'aim' says, "co-education enables both the sexes to develop natural and relaxed friendships in a structured environment", thereafter making reference only to "pupils" not "boys and girls". Views expressed in informal interviews with teaching staff varied but at one school about to undertake the dramatic change from a 700 strong

all boy community to an even split of 350 girls and 350 boys and all within a planned period of two years, the responses were at one extreme; "I'm against it. This is a boys' school and always has been. The whole atmosphere of the place will change when girls are allowed in... "

through; "On the whole I must say it will be a good thing. I think it will have a civilising influence on the school on the boys..."

to; "I think it will improve the standards of the school."

and; "I'm all for it. Its more natural isn't it?"

Uncertain in manner it may be but the implication is that girls for good or ill, affect the social-climatic atmosphere.

The male, female ratio may have changed dramatically in the last 15 years but so has the balance of day with full boarding pupils. There are more day pupils de facto but also the proportion of day in ostensibly boarding schools has increased. Some schools insist that their day pupils behave as if they were resident in almost all aspects of school routine with pupils staying on in the evening to do prep and in some cases returning to school on Sunday morning for the school Chapel service. This for example happens at Dean Close School, Cheltenham. The objective is clearly to retain the ethos of a boarding community.

Walford, (1986) makes reference in his chapter on "girls in a male world" to a choice faced by many boarding schools between, as he puts it, "females or foreigners". As Walford points out, faced with the choice, given the desire to retain a viable sixth form it is far easier for a school to take in a number of foreign pupils of the same sex as the rest of the school. The numbers

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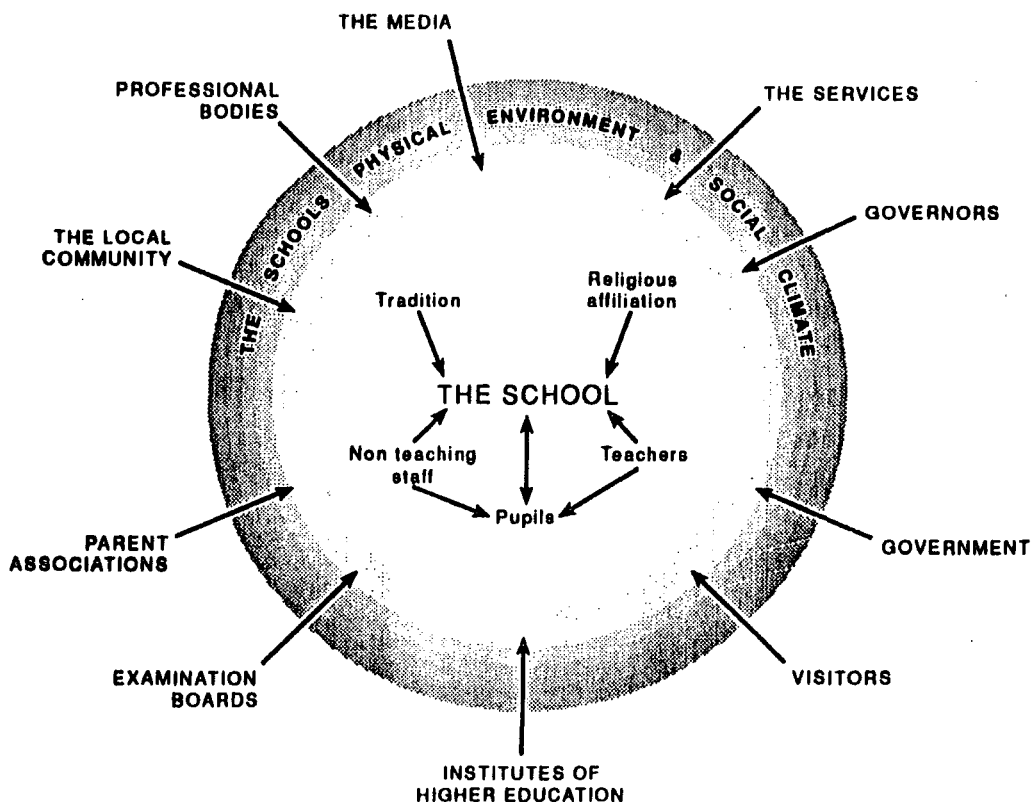
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needed to make a viable community are far fewer than that to make the introduction of girls to a boys school a viable proposition. Again, such pupils as Walford points out, can be difficult to integrate into the school and the boarding House where the existing boys are already "socialised into the rituals, hierarchies and responsibilities during their time there".

There is danger at this point that discussion can drift into a listing of innumerable factors that affect residential schools though perhaps really what one would be saying is that these are factors that affect society in general. A summary diagram (Fig 1.3) has therefore been drawn which attempts to identify all the major forces responsible for shaping the social climatic environment.

By showing the physical and social climatic boundary as an ellipse that is closed then the implication is that the institution is "closed". Royston Lambert, (1975) made the following observation; "though all schools belong to the species of organisations, boarding schools differ from day schools in that they are also closed or "total" societies. Such societies are marked by the exercise of complete control over their members' behaviour and value orientations by the provision of all their basic necessities within their boundaries". Now he did go on to point out that residential schools are in some senses only partially "total" in that, "their members leave at the end of every term and then are exposed to the freedoms and the values of the wider society" and other outsiders may be admitted from time to time" These comments were published in 1975 but reflected the situation as it was in the late 1960s and early 1970s.

FIG 1.3 THE FORCES ACTING ON THE RESIDENTIAL SCHOOL



They could not reflect the critical period between 1974 and 1976 when the full effects of inflation particularly in relation to teachers' pay awards as a result of the Houghton Review saw increases in fees of 35.29% for small HMC boarding schools and 32.91% for major HMC boarding schools. This should be set against a rate of inflation of 26% during the year September 1974 to September 1975. These figures from Rae, (1981), were the "critical" years according to the author. The effect they had on residential schools was to remove a great deal of the barriers that made up the total society.

Parents looked for, even demanded, and achieved, more influence on the schools activities. Even more significant was the way in which schools increasingly recognised that they were a business, competing in the market place. Therefore we see this

reflected in the model of forces affecting the social climatic environment of the residential school. There are the elements of the closed system inside the boundary. This does not mean necessarily stagnation, though, to many change may be woefully slow! A series of internal loops are identified which represent stability and the known social atmosphere. However the residential school is very obviously affected by a number of external influences that shape the product and image that a school chooses to project.

Government: A major force in determining the social climate.

The Government would seem to have an enormous influence on residential schools both at a local or national level. The scale of influence runs from fire regulations to corporal punishment. The built environment is regulated by two specific instruments. Firstly, the Children Act, (1989), in effect sets the context for other specific requirements of governmental legislation. It says in the introductory statement that "When a court determines any question with respect to;

- (a) the upbringing of a child; or
- (b) the administration of a child's property or the application of any income arising from it,

the child's welfare shall be the court's paramount consideration."

The key word here is "welfare" as throughout the Act it is this that individual and institutions are charged to guarantee. The Act contains a great deal of specific mechanisms intended to direct such people and organisations to achieve this

aim and in part XII, it says "where a child is provided with accommodation by any health authority or local education authority ("the accommodating authority")...." the local authority "the responsible authority," shall be notified and "take such steps as are reasonably practicable to enable them to determine whether the child's welfare is adequately safeguarded and promoted while he is accommodated by the accommodating authority..."

In a similar fashion the legislation extends to include children accommodated in independent schools where " it shall be the duty of;

(a) the proprietor of any independent school which provides accommodation for any child; and

(b) any person who is not the proprietor of such a school but is responsible for conducting it,

to safeguard and promote the child's welfare."

The Act goes on to make the local authority responsible for determining whether the "child's welfare is adequately safeguarded and promoted while he is accommodated by the school". In effect the local authority has to develop a system of inspections and a procedure to be followed.

What is not clear is what will be expected as necessary to safeguard the welfare of the child in terms of the dimensions, proportions and aesthetics of the built environment in boarding schools. For ideas we can turn to the second Government Instrument, The Education (School Premises) Regulations 1981 No.909 . which applies to boarding schools in the maintained sector and defined in the Statutory Instrument as "a school with

boarding pupils whether or nor it has day pupils..." . This Instrument is currently under review at the Department of Education and Science and the possibility is that the future Instrument will be somewhat less precise in its prescription. However, the existing Instrument is likely in at least the immediate future to be the best guide to good practice. Part IV specifically relates to the boarding accommodation and includes the following precise requirements.

The school "shall include sleeping accommodation for the number of boarding pupils thereat.." and where pupils have attained the age of eight " the sleeping accommodation shall be such that such boys and girls are not required to share a dormitory".

A dormitory "shall be such that;

(a) the floor area is not less than the aggregate of 4.2m² for each pupil sleeping therein and 1.6m², and

(b) there is a distance of not less than 900mm between any two beds.

A cubicle for a pupil shall have its own window and shall be of a floor area not less than 5.0m².

A bedroom for a pupil shall be of a floor area not less than 6.0 m²."

The washroom accommodation is detailed with the requirement that they should be distributed throughout the building so as to be reasonably accessible to the sleeping accommodation and that specifically;

" there shall be at least one water closet for every 5 boarding pupils.

There shall be at least one washbasin:

(a) for every 3 of the first 60 boarding pupils;

(b) for every 4 of the next 40 boarding pupils, and

(c) for every further 5 boarding pupils.

There shall be at least one bath or shower for every 10 pupils and at least a quarter of the minimum number of such fittings shall be baths."

The "living accommodation" meaning the area used for the purposes of private study and for social purposes should be at the rate of 2.3m² per pupil but reduced where such things as study bedrooms are employed. All these points are very specific and a host of other requirements are made of the school as a whole. These include the provision of sick rooms, dining and food preparation areas, and even an airing room, sewing room and storage space for bedding. A number of structural requirements are made but in general terms. Such things as fire prevention, heating, lighting, acoustics and water provision are broadly covered by measures clearly intended to ensure the welfare of the child. For example, "Washbasins, baths, showers, water closets and urinals shall have an adequate supply of cold water and washbasins, baths, and showers shall also provide an adequate supply of warm water, in the case of baths and showers, at a temperature not exceeding 43.5 degrees C. It would seem that the inspections by local authorities must involve the use of tape measure, thermometer and calculator!

There are clearly some problems with such instructions as certain issues are not acknowledged. For instance in the case of the dimensions for dormitory or bedroom the steep incline of a sloping ceiling may severely inhibit the movement and comfort of an individual. The question of the ratio of urinals to W.C.s is

another 'grey' area. A finer point of debate is the matter of differing types of requirement according to custom of use. For example, does the size, and quality of room, furniture, and fittings have to be the same for a pupil who is in residence for only four nights per week compared to a pupil who is in the house on a permanent basis?

The final and perhaps most useful clues as to what might be expected of the built environment comes from the HMI report 'Boarding in Maintained Schools': A Survey 1990'

This report was written following the inspection of boarding provision in 43 local education authority maintained schools in England during the period January 1986 to March 1990. In the course of visiting HMI developed and refined in the light of experience, criteria for what constitutes good physical provision and features of good practice. They made many observations which give direction to thoughts on what the built environment should contain. They said;

- (1) "In the houses that were seen to be in very good decorative order it was clear that the boarders took very great care of their environment and were proud of their surroundings"
- (2) "For most youngsters who board, dormitories and bedrooms are reasonably comfortable and most have carpeted floors which add to the feeling of homeliness and privacy.....Although furnishing is generally satisfactory, storage space for boarders' clothes and other belongings is often limited". They cite examples of shared cupboards, wardrobes and situations where

boarders, "were unable to create any sense of presence let alone ownership of their rooms. There is concern that a deep sense of rootlessness could be acquired by boarders in this situation;...." However they went on to state that instances of very poor practice are rare and " it is heartening to see how increasingly schools are looking to purpose designed furniture of good robust quality, pleasant to the eye and in keeping with the needs of the boarders concerned."

- (3) In all schools visited there were sufficient numbers of wash basins, baths or showers and toilets as defined by Statutory Instrument 909. It is of course important that these are well maintained to ensure privacy is retained.
- (4) It is considered important that the provision of common rooms, television rooms and indoor games should be as broad and unrestricted as practically possible. It was noted that "too often...it is very difficult to for younger children to separate themselves from older" Where the house caters for boarders with mild behavioural or emotional difficulties the nature of the distribution of spaces for children to withdraw and let off steam is crucial" Does a house have rooms set aside for hobbies, games and quiet for individuals and small groups? The report goes on to say "when considering developing common space schools should always consider these alternative possibilities as very proper means to extend the quality and variety of spaces available

- (5) In too many cases the boarders' library "is confined to a shelf in a corridor or a small cupboard in a public room and stocked with out of date and often tatty story and reference books." Poor provision of newspapers and journals was also noted. A library of quality and the taking of periodicals and newspapers are thought to be good practice.
- (6) "Many boarding houses have little in the way of public space. Nevertheless what there is can be important in helping to create an overall ethos which visitors can appreciate on entering".
- (7) On the subject of personal space and privacy the HMI commented that "almost all schools allow boarders to personalise the space around their beds with posters and pictures although in many instances there is insufficient pin-board space to allow this to be done neatly and attractively. . . . The creation of such semi-private space for boarders is of great importance in their social development."
- (8) It was commented that girls' rooms were often arranged so as to produce "a homely atmosphere" but also that "much boys' accommodation (is) also attractively arranged and personalised with the sensitive use of plants. This most often occurs where boarding staff actively encourage boys to be conscious of the quality of their personal and shared environments."

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(9) The comment on housekeeping forms a neat summary of the forces that determine the state of the environment within the house. "There are two contradictory elements in managing a house which need a measure of reconciliation. The first is the need to maintain a tidy and hygienic environment and the second is the need to create a homely atmosphere in which the boarders can live comfortably. Most houses are well managed without destroying a necessary degree of cosy untidiness."

In Appendix A of the HMI Report the inspectors state what they regard as "'good boarding provision. This apparently "consists of a complex and successful interplay of often very subtle factors." That recognised the first two elements for good boarding provision should include:

"Accommodation that is of a reasonable standard in its state of maintenance and decoration. Particular considerations will be given by the school to health and safety matters and to setting good aesthetic standards."

and "The availability of a wide range of kinds of space for boarders to live in. Boarders will have personal and semi-private space, space to ,carry out a range of activities and space to get away from it all. Boarding staff will be aware of the importance of space both in the buildings and outside, including grounds, and of the importance of access to local facilities. Boarders inhabit a closely communal world which ranges from the personal, small and private through open, populous and at times noisy and boisterous and the characteristics of both

accommodation and organisation will reflect this."

Here then is a multitude of clues as to what should be inspected and questioned in any survey of good boarding provision intended to effectively provide for the welfare of the child. However, things are not as simple as just listing all items that go to make up good boarding environment (provision). In the Department of Health, The Welfare of Children in Boarding Schools: Practice Guide (1991) general but significant comments are made concerning the common rooms, bedrooms, dining rooms and sanitary accommodation. This guide was written to assist Social Service Departments in implementing their duty to inspect independent boarding schools. It says that "Common room space should be sufficient for the age and number of boarders present in a house. It is important to have a range of rooms (in the house or close by and accessible in the school) for boarders to relax and follow a variety of indoor activities". The opportunity should exist for the boarder to pursue quiet as well as the more boisterous activities. "Furniture and accommodation should be in a good decorative order". "All pupils should have access to snack and hot-drink making facilities (commensurate with ability, maturity and supervision)." In respect of bedrooms they should be "...warm and comfortable and not overcrowded. Beds should be comfortable and in good condition. Boarders should always have space to store personal possessions in their own lockable cupboards.....and space that they can personalise." There should be telephone facilities available to boarders.

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The Government's influence goes beyond the detailed areas discussed and some of the more significant ways in which it

affects residential bodies are through the charitable status of such schools, the Assisted Places scheme, and with the fees of pupils from Service families. The Government does, of course, fund directly some residential schools, for example the state boarding schools such as Woodroffe School, Dorset, and schools with specialist functions such as Cloughside, Bury. Further, the Government has made wide ranging changes in GCSE, AS and modified A levels. What the impact of the National Curriculum, not compulsory for independent schools, will have, we shall again have to wait to see.

Oxfordshire Social Services Department (SSD) were one of the four areas to carry out pilot investigations with a view to enacting the legal requirement to inspect. Oxfordshire decided that when it came to the built environment it was important to have some form of base line and they took Statutory Instrument 909 as that base. They found that one of the key issues that had to be addressed occurred under Section 63 of the Act. This section refers to Children Homes but it says that "an independent school is a children's home if; it provides accommodation for not more than fifty children.." The attitude of the S.S.D. is critical here for in Volume 4 of the Guidance and regulations relating to the Children Act, (1989) there are far more statements on the principles to be followed in the establishment of the built environment of a children's home. The decision on this determines whether one or two standards are to be applied to pupils who will nevertheless regard themselves as being at school.

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Services has led to a Department of Health, (1992) publication on the views of pupils on boarding. This publication reveals the children's views be they positive or negative. A few of the most frequently and strongly held views according to Dr. Morgan are that the preferred dormitory size is for four or five pupils. However, the older age range at any level in a school be it preparatory or 13- 18 secondary school age have a preference for single studies. The one most consistent criticisms of boarding houses cited by pupils was of noise transmission invading their privacy. On the question of washing facilities individual showers were considered to be the best. Privacy was not found to be an issue but there is a move away from communal washing though it is more acceptable following games or sporting activities. Plumbing is considered an important subject by the Social Service Departments particularly the provision of hot water and the control of its temperature. According to Dr. Morgan a major criticism of boarders is the unreliability of hot water supply and the variability of its temperature. To the S.S.D. there is the concern for the handicapped or individuals who are, because of age or disability, unable to discriminate water temperature, being injured by water that is too hot. Related to this is the question of the temperature of surfaces such as radiators. Perhaps here is an example where the school and the S.S.D. will have to come to meet each other when one is dealing with physically able young people.

When one comes to consider and then assess the merits or otherwise of the school environment the individual receives a plethora of stimuli being the product of all the forces

previously discussed. Nevertheless the impact made upon that individual results from an overview of the total school created by the sum of the individual stimuli. After this consideration may be more exacting and responses may differ in the light of an individuals experiences.

It would seem plausible that two or more individuals of disparate backgrounds meeting to discuss the environment of a residential school could be expected to agree in large measure on their assessment of the built environment. The answer to the question; is that building made of brick ? is a simple yes or no. However, the answer to the question; of what kind of brick is that building constructed? may bring a far wider range of answers. A brick can be London, red, or blue, but it can also be "cold", "bare" or "majestic". The environment it seems is in the eye of the beholder and open to an individuals perception of it.

How individuals perceive the world in which they live is something that the residential school is much exercised at the present time as it undertakes the task of projecting an attractive image. ISIS the Independent Schools' Information Service provides a forum for the independent schools to project their image and recently the state boarding schools have formed their own organisation to perform much the same task. In all cases the message is; "Boarding Education is good for you". Under the heading "The lure of the blackboard jungle" in the Daily Telegraph Rachel Billington, (1991) writes on her observations of how parents select a school for their offspring. "Oh the luxury and the agony of choosing schools! The shiny prospectuses appear,

like travel brochures, depicting stately homes chock-a-block with computer labs and Olympic sized swimming pools. Outside, the ruggar fields writhe with eager boys who play under great oaks planted by Capability Brown". The image of the best of the old combined with the best of the new sells itself to the parents who has the added advantage of seeing the tangible evidence that they need to justify to themselves the substantial financial outlay. This superficiality is not enough for the more discerning to assess the effectiveness of a school and others have written far in advance of the Children Act, (1989) of the elements of a school that roster effective schools. On the subject of school buildings there are suggestions that effective schools are linked with:

The provision of a clean, comfortable and well maintained physical environment for students, (Rutter et al, 1979). And again with schools which take trouble over building upkeep and maintenance of their grounds (Pablant and Baxter, 1975).

A favourable school climate or school ethos is linked with:

1. An atmosphere of order, purposefulness and pleasure in learning (Weber, 1971),
2. A co-operative atmosphere in the school (Venezky and Winfield, 1979),
3. Discipline and order in a supportive atmosphere, (Glenn, 1981),
4. Joint planning by teachers in staff development programmes (Glenn, 1981),
5. An efficient, co-ordinated scheduling and planning of activities, resources and people (Glenn, 1981)
6. A general sense of educational purpose (California State

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6. A general sense of educational purpose (California State

Department of Education, 1980),

7. Unique features of schools which operate differently within every institution (California State Department of Education, 1980),
8. A strong school spirit (NIE, 1978),
9. Students sensing that the school is a social system is not a meaningless environment in which they can exert little control over what happens to them (NIE,1978),
10. Staff consensus on the values and aims of the school as a whole (Rutter et. al, 1979),
11. The establishment of clearly recognised principles and guidelines for student behaviour (Rutter et. al,1979), and
12. A formal attitude and expectation of academic success coupled with specific actions that emphasises those attitudes and expectations.(Rutter et. al, 1979).

SUMMARY

Chapter 3 discusses at length a wide range of factors that influence the social climate of the boarding school. A summary diagram is drawn to show the inter-relationship of the forces combining to shape the social climate. The role of government in the context of this chapter is detailed and in particular the Children Act, (1989) is given due weight of consideration.

CHAPTER 4

BEHAVIOURISM AND THE ENVIRONMENT

The particular interest of this thesis is the spatial environment as perceived by senior pupils who are being educated in a residential school. Human geography deals with many aspects of the world which are part of peoples' everyday experience. However some of the methods which geographers use to try and understand the human scale subject matter are similar to the methods used by ordinary individuals. Such similarities between individual and geographic understanding allow one to work with individuals, the pupils, and receive information that is readily analyzed by someone with a training in geography.

An individual's behaviour will depend upon his or her understanding of a given circumstance. A person's understanding at a particular time depends on his past experiences; the way he was brought up by his parents, contacts with friends, formal education in school, exposure to books, radio, television, films and so on. From such experiences an individual builds up his knowledge about the natural and human world, skills in operating within it and in obtaining new knowledge, skills and values. In one sense every person's understanding is unique, because his experience is unique, but since he has learned from the people he has known there are many resemblances between people in knowledge, skills and values. Language is a crucial factor in all these processes; it is the means by which the individual communicates with the people he meets, gains ideas from the mass media and is absolutely essential in building an image of the

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world.

Groups of people who have interacted over substantial periods of time tend to show similar beliefs and values and to "speak the same language". The question being asked by this part of the thesis is to what extent are the experiences of sixth formers in individual schools unique or similar to those found in other boarding schools. In order to communicate effectively with the pupils it is advantageous for us to speak the same language. The word "environment" is central to that communication and its twin components of the natural and man-modified environment. In the data collection stage it is the individual who is of central importance and therefore the term environment denotes a range of features which surround the individual and with which he has contact.

There was a time when geographers were interested in the everyday behaviour in the real world whereas psychologists concentrated on intensive experimental studies. More recently each discipline has evolved a branch concerned with human behaviour and they have become known as behavioural geography and environmental psychology. These two sub-fields have now a good deal in common.

One of the key contributors was the series of studies of child development by Piaget, (1955, 1956). Piaget suggested that children are initially confronted with mobile and plastic perceptual images and only gradually organise their sensation into objects, people, places and symbols. Young children perceive the world egocentrically; they include only objects and people of which they have direct experience and believe that even

inanimate objects exist for the child's purpose and under its direction. Gradually the child learns that people and things it experiences are related to each other and are not under the child's direction. Ultimately the child who is now approaching adolescence comes to locate people, places, objects and symbols in terms of general systems of reference. Mental effort is needed to understand even the signals from sense organs and even larger effort is needed to organise ones experiences into a conception of an independent and structured world. Piaget, (1955) emphasises the nature of the mental activity by using the terms "construction" rather than "discovery". The idea that individuals create their own mental reconstruction of their world is fundamental to the comprehension of individuals understanding of their environment.

If the world was merely discovered, people would be likely to come to similar understanding, but the need to reconstruct, to create one's own understanding is likely to lead to different results from person to person. However, people with similar interests and similar experiences might be expected to have similar images of their environment. The common denominator of the boarding school environment may mean that pupils experiencing that environment have common images or that the individual school so unique, as is often claimed in prospectuses, that it imposes a unique range of images on the pupils. The research aims to find this out.

Approaches to study of man and his environment have, outside of geographical thinking, been largely concerned with human behaviour and experience rather than its setting. This is

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Approaches to study of man and his environment have, outside of geographical thinking, been largely concerned with human behaviour and experience rather than its setting. This is

not difficult to understand if one considers the psychologist's viewpoint who is concerned with Man and not his environment. Man traditionally was not even considered to be part of his environment. Three major approaches to the theoretical consideration of Man developed: psychoanalysis, Gestalt psychology and behaviourism. Each of these theories formed a watershed for the development of still other theories.

The psychoanalytic view as proposed by Freud, (1933, 1940) did not conceptualise the environment. However that is not to say that the environment was not important to Freud. Freud conceived of man and all events that resulted from his position at the head of the phylogenic scale, as having their origins in a set of inherited instructual drives; the life (Eros) and death (Thanatos) instincts. The real meaning of what individuals thought, did and felt remained at an unconscious level. Freud conceived the more conscious and reality orientated drives and attitudes, which he called the EGO, that reconciled the demands of the instinctive drives (the ID) and the physical, social, and cultural standards of society.

Freud felt the social and interpersonal environment shaped and guided the form and consequences of the person's life and death strivings. All inherent succession of psychosexual stages beginning at birth unfold under the influence of particular people who are responsible for overseeing the child's basic experiences and activities in prescribed human settings (home, playground, school). These people in these settings determine the level and particular patterning of development. Therefore, to Freud the physical environment is experienced rather than

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observed or responded to as if it existed in some objective sense. Physical environments, their form, content and meaning express the unconscious needs, values and conflicts of the person. In Freud's system the expressive symbolism of man's built environment does not reflect so much the underlying psychodynamics of individual behaviour and experience. Man's cultural, social and physical systems express a universal basic personality structure that is rooted in the conflicts among the satisfactions of 'unstructural' drives.

Gestalt psychology was derived from the research laboratories of German universities in which the visual perception of human movement was the initial problem being considered. The term Gestalt has no exact counterpart in English, but suggests the "form" or "configuration". The important idea, however is that what is perceived is the whole whether an object, a person, an event or a physical setting. To subject any of these to analysis or study in terms of its parts as though these add up to the whole is to violate the integrity of the phenomenon being studied. Any event, behaviour or experience consists of the patterned relationship among the various parts. The theoretical formulations of Gestalt psychology, despite the forms on perception and other cognitive processes embrace the study of man in general.

For environmental psychology at least three of the basic assumptions have great importance and whether one accepts them or not they are crucial, for by acceptance or rejection one chooses between vastly different approaches to this subject. The followers of this approach said that they saw things not as

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assemblages of elements but as wholes. One of the leading exponents of this idea was Koffla, (1935) and he distinguished between the geographical environment, the environment as it really exists, and the behavioural environment or the environment as the person experiences it. It is the latter that Koffla sees as the determinant of an individuals behaviour. He assumes that what is there and what is perceived as being there are often quite different. Gestaltists believed that the properties of geographical environments become part of the behavioural environment experienced by the individual: in addition, although each individual in principle perceives uniquely, the perception of geographical environments leads to communalities in the behavioural environments of different environments, largely because of some superimposed socializing experiences.

Finally explicit in the Gestalt approach was the view that behaviour was rooted in cognitive processes and was not determined by stimuli.

In the context of this work an analogy can be drawn with the use of the residential school. One does not understand the way a residential school operates by considering its boarding houses, its sports halls and fields, its classrooms and offices, maintenance department and catering facilities on an individual basis, that is, as distinct and unrelated institutional settings. Only when one sees each of these settings operating in relation to the others does the concept of the residential school make sense. Indeed it is the school as a total reality which explains the functioning of each of its specific settings.

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Behaviourism contrasts to the other theories. Its main concern was to establish the precepts for a science of human behaviour. Behaviourism has at its centre only those events that can be observed and empirically specified have any legitimacy for a science of man. The unit of analysis is the S-R or "stimulus-response relationship, in which observable behaviour is elicited by equally observable and measured stimuli. Some basic S-R units are biologically determined and innately rooted; all other behaviour rests upon these essential response systems and is learned through a process of forming new S-R relationships. Whenever problem situations arise in which available S-R units no longer provide an adequate solution to the problem new responses are evoked and those that lead to satisfaction become established as new S-R units. Such satisfactions may either be drive-related objects such as food or water, for example that are intrinsically satisfying to the person and are known as positive reinforcers or rewards. Alternatively they may result from responses that help to avoid objects, situations or events that are threatening to the person and are known as negative reinforcers or punishments.

Behaviourism eliminates conscious cognitive activity, not denying that there are internal processes but that their study and understanding required them to be translated into observable responses. The environment, physical, social and cultural, plays a crucial role for the behaviourist. Indeed behaviourism comes close to conceptualising the environment making it real, measurable and existing in its own right. However to understand behaviour the particular objects, things, people, environment,

does not matter, as it can be explained no matter what its complexity, in the simplest of terms, namely as a stimulus or stimuli which evoke behaviour.

Teachers therefore as people responsible for the development or change in behaviour of pupils should know what the appropriate activities, behaviours or responses to be learned were and should then be able to establish the conditions, stimuli, necessary for learning them. The environment that people create such as that of the residential school is simply a function of the school environments or objects in the school environments that lead to positive or negative reinforcements. Such environments are an assortment of stimuli but in giving almost all attention to the S-R "equation" limitations are contained within the constraining measures of the concept.

Kurt Lewin, (1951) has had a significant and varied influence on thinking about man and his environment. A Gestalt psychologist he extended and developed these ideas but always kept an acute awareness of the significance of the environment. Lewin's field theory represents a formal attempt to provide a set of analytical tools that would take account of all the factors that determine behaviour. Lewin believed that human behaviour resulted from the contriving interaction of factors within the person for example needs, values, feelings and predispositions with other external factors as they are perceived in a behavioural setting. Therefore it was neither needs, nor stimulus objects that determined how, when and in what way a person behaves but the innumerable inner and outer influences that he experiences.

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This thinking was at the hub of Lewin's concept of the LIFE-SPACE which he defined as $B=f(PE)$ in which the behaviour B is seen as a function (f) of the interaction of personality and other factors (P) of the perceived environment of the individual (E). Although not specifically stated it is clear that this concept of "life-space" included more than just the social and cultural environments. Important are some of the terms he employed to describe the environment generally. Thus, objects, situations or other people in the person's life space may have positive or negative 'valences' depending on their ability to reduce or increase respectively the needs or intentions of the person. 'Locomotion', which could either be social, conceptual or physical means a change of position with respect to some goal region. A 'barrier' is a boundary in the life space of the individual that offers resistance to locomotion. It may be a physical barrier or a social barrier. Lewin never viewed the life space or the experienced world of a person as so supreme in relation to behaviour that reality and non-conscious events had no place in his approach. Thus he pointed out that consciousness, or what the person was actually aware of could not be used as a criterion of what existed psychologically. "There is no question, for instance, that when the person is in a familiar room, the part of the wall that is behind him is part of his momentary environment" (Lewin, 1936). In this way Lewin believed that what was real and therefore to be included in the life space was anything that had effects. Lewin was very aware that besides factors of which the person was unaware still other factors outside the life space and therefore

not subject to psychological laws also influenced behaviour.

Barker, (1963a, 1963b, 1968) a colleague of Lewin's was also trained in Gestalt theory but however formulated the problem of human behaviour in very different terms. His "ecological psychology" can be defined as the psychology of environment or what he calls a "behavioural setting". A behavioural setting is bounded in space and time and has a structure which interrelates physical, social and cultural properties so that it elucidates common regularised forms of behaviour. Barker's objective was to determine the relationships between what he calls the extra-individual pattern of behaviour, that is, the behaviour that all people en masse reveal in a behavioural setting and the structural properties of that setting. Any institutionalised setting such as a residential school is of concern to the educational psychologist. The residential school is of concern for example in the sense that its physical properties (arrangement of chairs, small tables, blackboards and beds in dormitories and so on) as well as its implicit purpose (study, relaxation, conversation, education, sleeping, playing games) impose on those entering it an explicit mode of behaviour. The use of all behavioural settings and their objects are to a large extent socially defined.

Barker's environment has a reality of its own. He stresses the idea that "behaviour episodes" are imbedded in a physical framework, the tough, highly visible features of the ecological environment but far more important is the fact that the physical setting itself has a social and cultural definition resulting from the intended purposes of the setting, the kind of people who

will use it and what activities and immediate outcomes will occur. A behaviour setting is not simply a space with any set of boundaries and a random, array of objects. On the contrary its physical dimensions, the nature of its objects, where and how they are placed are all defined by the socially defined character of the situation. Therefore, we may see in the residential school all manner of expressions of deliberate placement of objects for specific purposes. The rows of work areas, where work is undertaken in evening preparation times, divided into sections to give functional efficiency with ease of management and control. Indeed the role of authority in managing, disciplining and controlling the movement and actions of pupils is clearly manifested in the historic buildings of so many residential schools.

Barker's approach moves away from the behaviourists view of the individual and prefers to aggregate people's responses to physical settings and he hopes to show how non psychological factors of environment have consequences for typical behaviours in typical behaviour settings. At the core of Barker's definition of behaviour setting is a social purpose or meaning involving a set of social rules which unify or integrate into an orderly system, what people do, how they do it and with whom they do it and when and for what intervals of time. What emerges is not the strict solid geographical environment of Koffka, (1935) but rather one where the reality is not physical so much as socially defined.

In order to understand behaviour Barker argues that techniques are needed which allow us to capture behaviour as it is lived

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rather than confine ourselves to that which is observable in the laboratory. We know that human behaviour is extremely sensitive to the conditions under which it is investigated. There is no guarantee that the regularities of behaviour observed in laboratory settings will at all approximate to the regularities observed in everyday life. For Barker the investigator should act as a "Transducer", passing on his observations of behaviour without in any way intervening in it. His job is primarily to evaluate what he sees. However, one cannot observe all people in action at once. In fact most of our activities occur in well defined physical settings; a classroom, a playing field, a boarding house in the residential school. Each of these could be the context for a social setting that imposes a specific type of behaviour (studying, playing, relaxing, eating) on those who enter it. That is to say that the setting is defined by its social as well as its physical properties.

Two researchers, much taken with the opportunity that Lewin reported, were Hunt and Sullivan, (1974). Writing forty years after Lewin's work was first published they took his BPE idea and expressed it as a way of thinking, as a paradigm. To them BPE stood not only for Behaviour, Person and Environment but also "Between Psychology and Education". To them BPE provided a systematic way of considering what goes on in schools and in particular the classroom. In the classroom they translate it as Learning (B) results from both the student (P) and the educational approach (E). This was not proposed as an answer to why events occur but as a framework by which a potential answer may be found.

They state the B-P-E formula from the viewpoint of the teacher as E:P - B (or an Environment radiated towards a person produces a Behaviour. Thus the E:P - B formulation emphasises the central nature of the environment. As they said "since the environment is the major component over which the teacher has some control, a language for describing the environment would provide a basis for describing what it is that a teacher does". (Hunt and Sullivan,1974).

They did not deny that the physical environment is important, however they believed that those elements in the "immediately present inter-personal environment," are the ones most likely to be educationally relevant. They then recognised the difficulties that exist in trying to conceptualise the environment. How do you describe it? How much? What units? Whose interpretation to use? Having identified these difficulties they drew a very useful analogue between what may be called the climate vs the weather as the means to describing environments. The climate of an educational environment usually refers to a large spatial unit such as the school climate. The 'weather' in an educational environment refers to the specific minute by minute events that occur. In this thesis I am concerned much more with the broader climatic view of residential education within whose framework the day to day events occur.

They go on to suggest that teachers provide an educational environment for some five to six hours every day and as a rule are not "self-reflective" about their teaching. On a personal level I doubt this as in my experience every Common Room I have ever entered is filled with talk of incidents, experiences

I have ever entered is filled with talk of incidents, experiences and anecdotes of past and present events within schools. Within a professional context teachers exchange views about their methods and then carry that information away to change or emphasise the environment they have created. However this thesis is not classroom based or indeed centred on any one aspect of the residential environment but on the collective overview of the total environment.

The issue of how large a unit to study was very interestingly covered by Hunt and Sullivan, (1974). They referred to the useful model proposed by Hoffman and Lippitt, (1975) who suggested a system for considering parental environments. This model is described as a "causal sequence schema" in that the closer the environmental elements the more likely the causal relation.

A Causal Sequence Schema for Parent Child Interaction

Environmental Unit	Size of Unit	Distance
1. Parental Background	Large	Remote
2. Current Family Setting		
3. Family Composition		
4. Relation Between Parents		
5. Personal Characteristics of Parents		
6. Child-orientate parental Attitudes		
7. Parental Behaviour	Small	Immediate

(Hoffman & Lippitt, 1975).

Therefore the most immediate environmental effect on a child at a given moment is the parents' behaviour, even though the family composition affects the child as well. The present behaviour of

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Therefore the most immediate environmental effect on a child at a given moment is the parents' behaviour, even though the family composition affects the child as well. The present behaviour of

the teacher also can be said to be the most immediate environmental effect on the student. Hunt and Sullivan, (1974) adapted Hoffman and Lippitt's model to describe the educational environment as follows:

1. Cultural Setting: includes national and community elements and values
2. Current School Setting: includes culture of the school, class values, rural-suburban, urban locale
3. School Characteristics: including size of school, number, age, and sex of students, number, age and sex of teachers: physical characteristics, for example, open architecture.
4. School Organisation: includes power relations, decision making patterns, division of labour, communication patterns, relations among school staff, peer influence.
5. Personal characteristics of teacher
6. Student orientated teacher attitudes
7. Teacher behaviour.

If this model is followed it does allow a more systematic consideration of the variables. This thesis takes the first four points in the model for detailed consideration although of course this does not mean that the influence of points 5 to 7 are excluded. Once again this can be summarised into tabular form to provide an analytical model for viewing variables in the education environment.

Levels of Educational Environment

	Environmental Unit	Size of Unit	Distance
1.	Cultural Setting	Large	Remote
2.	School Setting		
3.	School Characteristics		
4.	School Organisation		
5.	Teacher Personality		

6. Teacher Attitude

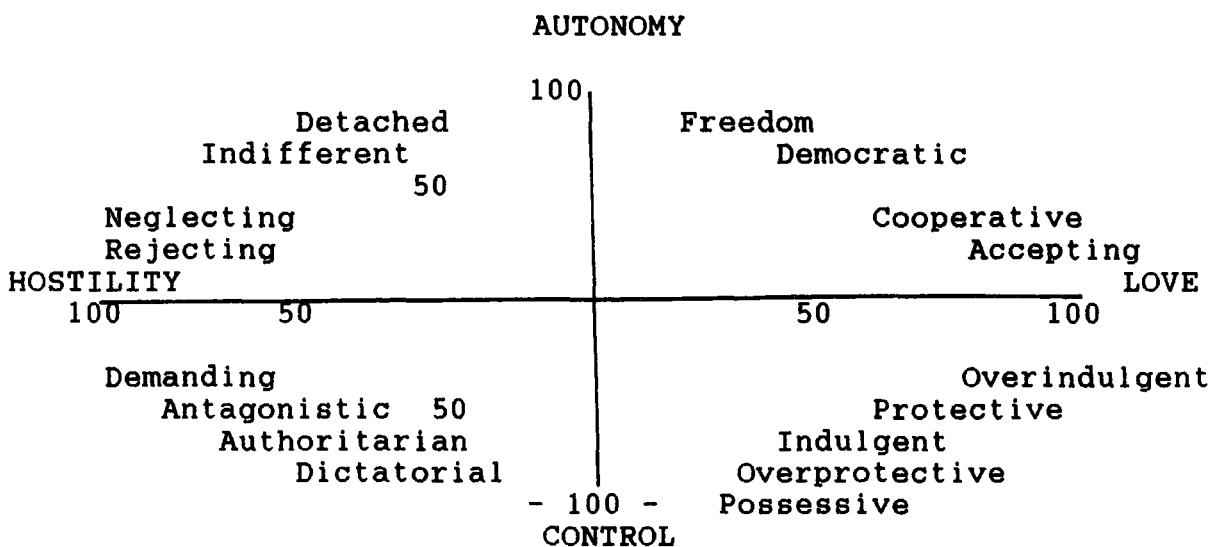
7. Teacher Behaviour

Small

Immediate

(Hunt & Sullivan, 1974).

The question of how long should the study be is indeed a vexed one. Clearly the 'weather' will change from day to day and therefore one visit can hardly expect to capture the climatic characteristics. However if enough individuals from any given school are sampled then a range of personal weather conditions may be sampled under the umbrella of that particular days weather. The question of sampling will be returned to at a later stage. The question of what units to use to describe the educational environment also came under consideration. Hunt and Sullivan drew reference to the work that has been done on the parental environment and in particular the work of Becker, (1964) who concluded that two dimensions of the parental environment had been identified by most investigators. These were the degree of acceptance and the degree of control. These two dimensions can be understood by considering this diagram as produced by Schaefer, (1959) and quoted in Hunt and Sullivan, (1974):



This might well be adapted to a school environment with the observer placing a classroom, boarding house or school in one or other of the quadrants. The problem is to avoid value judgements for to some "freedom" may be regarded highly but to others a authoritarian approach may be seen as much more attractive. Finding language that is without value judgements is very difficult. When commenting on the environment one must remember that different people would have different interpretations of the environment. A teacher, a pupil or a researcher may have entirely different viewpoints on the same event. Most systems that have been used to describe the environment have been produced by researchers and as such are biased perhaps in favour of the observer. Really the question has to be addressed as to whose viewpoint does one want in any given piece of work and quite clearly in this thesis it is the pupil whose opinions, perceptions and model of his or her world is sought.

Problems may abound but in summary one can do no better than to quote Lowenthal and Prince, (1965) " The universe of geographical study may be divided into three realms: the nature of the environment; what we think about the environment; and how we behave in and alter that environment".

Lowenthal cuts through the traditional content divisions of geography into human, physical, economic etc. and suggests in detailing the areas that the three realms embrace are:

1. The first realm: the physical world of natural and manmade phenomena and patterns.
2. The second realm; human belief and values about the environment.

3. The third realm; how people behave in the interact with the environment

This approach gives a view of conceptual unity happily expressed in part in the National Curriculum for Geography;1991. In most cases the focus for geographers has been the first realm but considerable work has been done on the fields of human perception and decision making in the explanation of spacial patterns. Behavioural geography has grown up from the 1960s founded on the belief that in daily life we subordinate reality (the first realm) to the world that we perceive and act in. In Lowental's, (1961) words "we respond to and affect the environment, not directly but through the medium of a personally apprehended milieu". Obviously the geography in people's minds does not conform to the realities of the physical world. Our filtered perceptions, cognitions and beliefs about the environment are a powerful determinant of what we do in that environment.

In 1961 Lowental called each person's personalised collection of environmental knowledge and values his "private geography". He said that each private geography is unique but he also saw a shared perceptual experience based on our common capacity to perceive the physical realities of the earth through a variety of shared perceptual senses as the common foundation of all private geographies. For example, all of us apart from the very young and those with mental disabilities are able to perceive and retain images of such things as the distinctive spatial arrangement of objects, the partition and space by individuals and groups and the distinctive appearance and texture of buildings, land and water. However, Lowental believed that

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beyond the shared perceptual experience building a communality into our views of our world, Lowenthal, (1961) believed that our "separate personal worlds of experience learning and imagination" have created individual mental geographies that diverge markedly among people of different backgrounds and for the same person at different stages of life. Private geographies comprise in part a world, cultural and personal view of spatial and environmental relationships. Behavioural geography attempts to go beyond the shared world view to the more individual dimensions of private geographies in order to explain the environmental decisions and behaviour and the spacial pattern they produce.

Perception is the key to unlocking Lowenthal's third and second realms of beliefs, decisions and behaviour. Yi-Fu Tuan, (1974) defined perception, a term largely borrowed from psychologists, for geographers as "both the response of the senses to external stimuli and purposeful activity in which certain phenomena are clearly registered while others recede or are blocked out". Thus in the act of perception the mind receives spatio-environmental information and then transforms the messages into an image of the environment that satisfied one's immediate needs and accords with ones previous experiences and value system. Piaget used the term "adaption" to describe this information filtering process.

Psychologists may define perception as a two stage process but for them both the reception and filtering of the environmental information are performed by the senses before reaching the brain. Therefore for psychologists adaption is not one of the filtering processes. It is a physical not a mental process in which the multitude of sense data provided by the environment are

reduced or otherwise transformed into a shape or volume capable of being absorbed by the human mind. The inability of the mind to absorb the details of multi-sensory images of the environment necessitates such pre-conceptual filtering.

Cognition is the term used by psychologists to describe the act of cognitive processing that geographers include as the second stage in their definition. All this may seem a question of semantics but it is important that we are aware of it. For example researchers have found when studying maps produced by individuals from memory that there are omissions of what would appear to be obvious landmarks in the landscape of their city or local neighbourhood. Are such omissions the results of faulty perception in the psychological sense; the subjects have not seen the landmarks, or due to partial cognition; the landmarks are only minor features in the subjects perception of the area? In studying the images of children in Harwich two researchers, Bishop and Foulsham, (1973), seemed to establish clearly that children do see their town differently from adults and that landmarks significant to them differ in scale from landmarks significant to adults.

Architectural elements are less important than elements personally used or experienced; a finding well in accordance with Piaget's concept of egocentricity. It was Downs and Stea, (1973) that postulated that our environmental cognitions are stored in our minds as environmental images or cognitive maps. In everyday life cognitive or mental maps can be seen to serve the dual roles of solving spatial problems and guiding environmental behaviour. In these two ways cognitive maps

constitute the functional base for each person's private geography. These are made up of personalised collections of environmental knowledge and values.

Spatial problems are those that require decisions about the location of desired objects and places and the most efficient and pleasant routes for reaching them. Such problems occur at all scales from finding the way from one room to the next in a boarding house, to trips to and from school and extend as far as cross-country journeys, trips abroad or international migratory movements. In this way spatial problems are an intrinsic, ever present aspect of our daily life. Our cognitive maps are the means by which they are solved.

The second function of perception and cognition is that of guiding environmental decisions and behaviour. The interaction between perception, cognition and consequent spatial behaviour is controlled by our value systems. The starting point for any decisions or act can be located in the real world which provides information that enters the mind via the senses. In the mind the perceptions are filtered through cultural and personal variables and one's value system to produce an environmental image. The mediating factor between the images in a private geography and essential spatial behaviour is one's value system and the filters associated with it. The importance of values and such filters in the decision making process has been illustrated in many studies eg., territorial behaviour of Protestants and Catholics in the Shankhill Falls area of Belfast.

The influential book Mental Maps (Gould and White, 1974), recognised that how men perceive their physical and social

environment is a crucial questions for the contemporary geographers. Herbert Simon, (1957) noted that it may be useful to think of human behaviour as being quite simple, but that most people live in very complex physical man made and social environments so their actual behaviour appears extremely complicated. He draws the analogy with an ant moving over a beach ribbed with waves of sand: a map of the ant's path might appear very complex, although the ant's behaviour was directed at achieving her simple goal of getting back to her nest. The crooked path we see reflects the complicated wavy surface or environment in which her simple task is carried out, rather than truly complex behaviour on her part. Of course, men are not simple ants and the human behaviour they must follow, will be far more complex. However this approach of Simon's is the reverse of generally received wisdom. It is a useful idea for our purposes as it places the emphasis for purposes of explaining the way in which behaviour occurs on the environment.

Again Gould said that we cannot as humans absorb and retain an almost infinite amount of information that affects us in everyday life. He refers to the "filters", the perceptual filters that screen out most information in a most selective fashion. It may well be that our senses only retain a very small proportion of the stimuli emitted from the environment. The filtered impressions affect our view of the world and filter control can be crucial on a personal level but through a whole variety of scales to that of governmental control. Good education we are told may go to help the opening up of a child's filter on the world. The residential school pupil then must have

a mental image, or cognitive map, of his school environment. That image will be filtered it seems but if there are different types of residential school this will be reflected in different images and maps as a result of different filters common to that school.

This raises the question; What is a cognitive map?

Within the field of behavioural geography the idea is generally held that the collection of information about the environment and the use of that information in the taking of decisions is as it were a prelude to the act of behaviour. It is thought that the processing and evaluation of the environmental does not always influence behaviour directly but instead contributes to the manner in which the mind construes the environment in a fashion proposed by the transactional constructivist approach to environmental awareness. This point of view has developed from the study of man and environment through the work of environmental psychologists. It refutes any existential distinction between man and environment and views things as if the two are linked in an unbreakable relationship and in doing this it draws on the thoughts proposed by Gestalt psychologists.

The main train of thought has been summarised by Moore and Gollidge, (1976), as "experience and behaviour are assumed to be influenced by intraorganic and extraorganic factors operating in the context of ongoing transactions of the organism-in-environment. Transactions between the organism and the environment are viewed as mediated by knowledge or cognitive representations of the environment but these representations are

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treated as constructed by an active organism through an interaction between inner organismic factors and external situational factors in the context or particular organism-in-environment transactions".

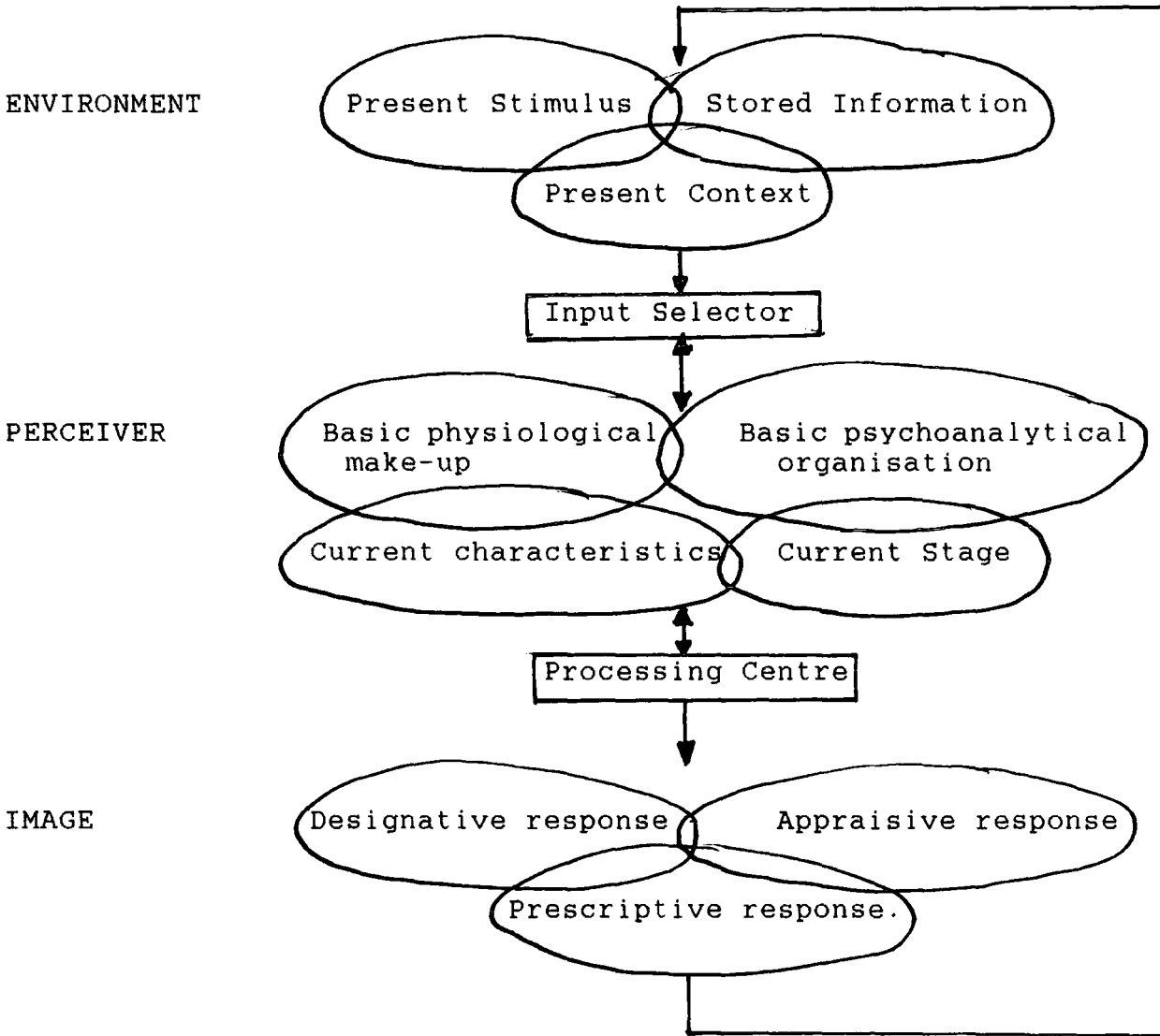
More generally man is seen as taking actions with a social and historical context and with the benefit of past environmental experience. Environmental information is gained through all the senses and must be stored in some way in the memory as is demonstrated by man's ability to recall knowledge of environments that are not immediate to the present. How man comes to know his environment is a fundamental problem for which there are few facts available. Information about the environment is sought. Environments are defined by and experienced by action. That is to say that environmental cognition can never be totally passive because the individual is always part of the situation about which he is gathering information.

Environments have symbolic meanings with particular environments being imbued with social meaning and behavioural expectations.

How the perceiver interacts with his environment to create a mental image of that environment was presented by Pocock, (1973). Although variations exist on this plan many pieces of research follow the same premise as set out in this model. The image is something which is learned and summarises an individual's environmental knowledge, evaluation and preferences (Pocock & Hudson, 1978) collected in a sometime subjective purposeful way that reflects the needs and values of the individual concerned. All this means that how an individual approaches the environment

determines what he finds.

A conceptual Model of Man-environment Interaction. (Pocock, 1973)



Walmsley, (1973) developed a classification of four interrelated elements that can be considered in any examination of how man uses environmental information.

1. The nature of the individual, and in particular the psychological processes that are use to cope with information

drawn.

3. The manner in which the individual seeks out the information in the environment.

4. The way in which the environment provides an arena within which overt behaviour is acted out. A summary of their conclusions are that;

1. The environment has no fixed or given boundaries in space or time. The boundary at any one point in time is the product of the information generated through the interactions of the individual with his surroundings..

2. Environments provide information through all the senses; though sight is probably dominant (Pocock,1981).

This discussion throws out a whole galaxy of ideas for consideration but it is to Downs and Stea, (1977) that we can turn for so much of the clearest discussion of the ideas underpinning and supporting the concept of cognitive mapping. The act of cognitive mapping is a process: " it is an activity that we engage in rather than in object that we have". It is the cognitive map that is the product ; "a person's organised representation of some part of the spacial environment". The cognitive map is a "cross section representing the world at one instant in time". It reflects the world as some person perceives it to be; it need not be correct.It will be the individual's world perhaps very different from other individuals but nonetheless no less real to that individual. Distortions are to be found as it is not reality that one sees represented on paper but something that stands for or symbolises that reality. It is a "likeness and a simplified model, something that is, above all,

a mental image of the person's brain". In most cases the cognitive map is one of everyday setting with places and objects with which we have a familiarity if not an intimacy. The world as we believe it to be helps us to have a basis on which to act out our daily performance. We have a need to possess our cognitive map as a means to allow us to find people and places that are part of our routine. More than this it is a means by which with the crude experience of trial and error but perhaps with the shortcut of instruction we learn to find our way (navigate), through our own world. There is therefore a clear spatial dimension to the cognitive map.

But why investigate the cognitive maps of senior pupils in residential schools? Cognitive mapping in the context of this thesis is a directed activity. I made the request for the map to be produced as result of a brief that I directed towards the pupil. The hope is that the spatial behaviour of individuals can be revealed within particular schools and then by aggradation of results the common elements of the perception of senior pupils will be revealed or the uniqueness of a particular setting will be revealed. In effect a frame of reference or model may emerge for understanding the spatial environment of the residential school.

The pupils are generally surprised by the strength and detail of their cognitive maps. It is not so surprising perhaps as it rarely fails us in practice. We soon learn to find our way around any school and the immediately unfathomable becomes common place as, "Little Hell", the "Wilderness, the San and the "Rec", take on an identity and a location that is as clear as those

places with their original and specialised names suggest. No matter how many modernisations of buildings have taken place to provide us with devious corridor routes and tortuous stairs we can recall our route from classroom to classroom.

It also seems that our cognitive mapping ability is engaged in a parallel up-dating activity. It is flexible and powerful but rarely are we conscious of its initiation or activity.

Downs and Stea, (1977) answer the question of how can it be that this skill exists if we are not conscious of it? They give the evidence of;

- a. behaviour as if you are "blindfolded".
- b. there is the habit of sleepwalking. People have the ability to move around our house in the dark when they are completely asleep, and without bumping into things, operating as if by "feel".

When considering what one selects as objects to identify in the mapping process one does so in order to cope with the innumerable quantity of sensory information that is available to us about our spatial environment. It seems that we may select in two ways firstly by choosing the information we need to store for future reference and secondly we need to select which information we will recall. Downs and Stea identified two major criteria as of greatest importance in this context. The functional importance and the distinctiveness. Functional importance simply means that we recall what is important to us; we do not expect that the pupil will know everywhere or recall every location in his or her school. However we expect the pupil to identify places of importance about the school and in particular where locations

involve decisions to be made by that individual. They will reflect as well familiarity and places of regular activity and perhaps loyalty. Will one pupil identify his or her boarding house but deliberately not identify the location of another rival?

Distinctiveness reflects contrasts in use and appearance and perhaps the imposition of value systems. As discussed at an earlier stage this may include such things as religious affiliation, discipline, class and general social climate of the school.

Similarity is another question that Downs and Stea addressed. If the objective is to see if a common character map of senior pupils exists is this a reasonable exercise? If two people are asked to produce a cognitive map relating to the same environment then age will be one factor that must be considered as likely to produce differing results. Experience must be another; the newly arrived pupils will have a far more limited base from which to recall than the old hand with many years experience at least in the early stages of the new boys arrival. Styles of training, for example, arts orientated pupils and science orientated ones might produce in the former case a more descriptive map and in the latter a "formula like structure".

The thesis aims to control most of these factors but it is not practical to produce uniformity in character and indeed nor would one want to impose it. However, by selecting only pupils of senior age it is hoped that they will have been through similar experiences within the context of the school of which they are a part. Their level of skill is unimportant as it is not the

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quality of the map but the content and within the context of their map of their world during term time. Pupils at the senior end of the school it is hoped will have reached an advanced level of education and so should have little difficulty in understanding my instructions. That they may be developing an arts or science viewpoint cannot be denied but with a large enough total sample from individual schools any bias should be countered. It appears likely that the cognitive map of the senior pupils of any one school will show common features of group recognition and in part sub-groups. There may well however, be unique features despite their common location and one would think largely common source of information.

Research (Gould and White, 1974) has clearly shown in the past the similarity in content within the cognitive map of people when looking at a large scale environment such as a country or a region. Stereotypes are cited of the English carrying an umbrella and wearing a bowler hat! The Frenchman with his bicycle, Breton shirt and a string of onions. If one mentions Venice one thinks of gondolas and waterways. If one thinks of Rome it is the Coliseum, the Vatican and the Pope.

Our map is a collection of prejudices, truths, facts and fiction. The media has an undoubted role in shaping our image of places and people on a broad scale and even within a small unit they can raise expectations of not just physical characteristics but social atmosphere as well. Again the image from the Introduction can be invoked.

One must not forget that the cognitive map has the individual dimension. The fine detail will reflect the persons own, rather

than group prejudices. The environment is the raw material from which we assemble our representations of our world. The individual is not a rubber stamp of another member of his or her group but a person who selects, constructs and organises in the unique manner.

The cognitive map then shows similarity through its ability to allow us to share and communicate our understanding of the spatial environment. It is individual enough to assimilate and reveal our unique experiences. The similarity of the representations of senior pupils from varied backgrounds is the central subject of part of this thesis but the uniqueness of an individual school is the really fascinating area that one wants to look for if it actually exists.

As Downs and Stea, (1977) express it, cognitive mapping can be at a most basic level as a means of solving spatial problems. At the other level it reflects "its highly personal role as a coat hanger for our memories and as a basis for our personal sense of place in the world".

This approach has been criticised and indeed Yi-Fu Tuan, (1974) in reviewing Gould and White's book Mental Maps, (1974) expressed a feeling of disappointment with exercises that he saw as games and that he saw mental maps as being of little use as "any aspiring behavioural geographer now regards the ability to do a Gouldian map as an essential part of his training"! However by no means is the world populated by behavioural geographers and the pupils who leant their hands and their minds had in no instance had the opportunity to practice either the art or to consider the substance of the cognitive maps they were asked to

draw. I am interested in revealing the "world in their head". In their heads they possess the understanding of fundamental spatial relations that is, the capacity to think spatially, to understand space in the abstract and to use space as a means to structure knowledge and solve problems. There is a second understanding concerning environmental cognition that is the comprehension of the arrangement and properties of the phenomena on the earth's surface. This second understanding is a more literal translation of the phrase "world in their head". The cognitive map is said to explain such things as how behaviour arranges phenomena over space.

It is expressed however as though people have maps in their brains and that these maps are stored away in the brain (or mind) and that what one is attempting to do is to extract them. References talk of "extracting" maps or "unpacking" the contents of the mind" of performing a form of exploratory surgery to get at them. But perhaps people do not "have anything" stored: perhaps they just respond to demand and simply generated something for me. Perhaps they do not have a map as a geographer conceives it but they do have something.

All such discussion boils down to the use or misuse, more kindly perhaps misunderstanding, of language. If one goes in search of the earliest expression of the term "mental map" the origins are somewhat clouded. One convenient starting point is the classic paper in psychology of Edward Tolman, (1948) in which he quite clearly saw the cognitive map as a metaphor and a statement that if the process works "as if" rather than as a model "of how" a process works is an analogy. A metaphor being

a figure of speech, a means to avoid rigid constraint of everyday language and invoke an image that gives "a feel" for an idea and leads to a strong fresh expression of an idea with corresponding related impact. Tolman, (1948) said "we believe that in the course of learning, something LIKE a field map of the environment gets established in the rat's brain...Secondly we assert that the central office is far more LIKE a map control room than it is like an old fashioned telephone exchangethe incoming impulses are usually worked over and elaborated in the central control room into a tentative, cognitive LIKE map of the environment."

The cognitive map then should be viewed as a metaphor with appeal and logic for geographers. Whether or not the cognitive map has a physiological existence is still a matter of debate but what is clear is that it has the following points implicit in the use of the term

1. That its use implies a concern for the form of knowledge
2. That knowledge is acquired over time and space through experience
3. An understanding of the form and genesis of knowledge is necessary for a satisfactory understanding of spatial behaviour.

If the cognitive map is a metaphor then care must be taken not to claim too much for the technique. If one assumes that the term cognitive map means something akin to a cartographic map then this determines ways of gathering, analyzing and interpreting the data. There is not necessarily anything wrong in this approach but care should nevertheless be taken to ask appropriate questions of ourselves and of others. If this can be remembered then there is the clear picture of widespread

acceptance of the idea within the discipline of geography., It is still an approach that is evolving and as such this thesis may help in a small way.

SUMMARY

Chapter 4 begins by following the evolution of the branch of Geography known as behaviourism. The nature of the contribution made by key individuals including Piaget, Freud, Koffla, Lewin and Barker is discussed in detail. Behaviourism is then given full consideration in its own right with the important contributions of Lowental and centrally, Gould and White being discussed. The latter leads to discussion on the characteristics and worth of the cognitive map.

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CHAPTER 5

FIELD APPLICATIONS

Under this heading the two component parts of the environment are to be considered with a view to the creation of a field programme. Initially, the physical world of the residential school will come under scrutiny and then the social climate. The two view points will be recognised as both the objective and ,uniquely, the perceived environment are evaluated. Prior to this some consideration of the role and performance affecting factors of the researcher will be made.

Preliminary considerations

Advice designed to assist researchers (Walker, 1985), seem to confirm the view that experience has shown me, that fieldwork roles in ethnography are not fixed but gradually change and develop as a result of the interchange of ideas between researcher and those who are the subjects of the research. During the period of my work there has been the need to adopt different roles depending on the individuals with whom I had to interact. There have been various people who have attempted to analyze the development of research through field work. James, (1967) describes the five stages through which he perceives roles may pass: newcomer, provisional acceptance, categorical acceptance, personal acceptance and imminent migrant. This is all very well but in practice I found there to be a continuing process of role definition, negotiation and re-negotiation. Entering any area of research the researcher is only accepted on the terms he can negotiate with the researched.

I was greatly aided by my position as Housemaster within an HMC school. As such and with the ready support of the Headmaster I was able to approach other schools. In the vast majority of cases as soon as I was recognised as working within the independent sector of education and as such might be sympathetic to the institution I was entering then I was made very welcome. In a few cases a short telephone conversation between Headteachers to reassure and confirm my bona fide qualification soon eased the path. However, although wherever I went I received a universally warm welcome, there was one occasion where a Headmistress declined to give me an invitation to visit her all girls boarding school. She was at least honest saying that she saw me as a representative of a rival school who might gain "inside" information. This was at a time when a similar school had closed and there was an obvious sensitivity about my request.

Walford, (1987) made reference to the "ghost of Royston Lambert" as being responsible for restricting his welcome at some schools he visited. Royston Lambert, (1968, 1970) started research on boarding education while a Fellow of King's College, Cambridge where he founded and directed the government financed Research Unit into boarding education between 1964 and 1968. When Lambert moved to Devon in 1968 to become headmaster of the progressive Dartington Hall School some of the research team moved with him to form the Dartington Research Unit. The original study was very wide ranging, covering 66 boarding schools in England and Wales. One in three HMC boarding schools was included. A sub-sample of seven schools (5 of them HMC)

was studied minutely during a period of a term or more. In those schools a welcome was extended and they gave "unremitting help information, material and guidance". Many publications followed from the research.

In 1968 Lambert and Millham published The Hothouse Society, which was described as a by-product of the main research study. It was based on the written comments by girls and boys at boarding schools who provided answers to questionnaires in diaries and other writings. The pupils' own words are used to describe the boredom and pettiness of life at the schools, their own cynicism and what they see as masters' hypocrisy. An underworld of bullying, drink, drugs and gambling is uncovered followed by a chapter on "problems" and a chapter on "sex in single sex schools" where a flourishing homosexual life is described in some schools. The schools were not surprisingly horrified. It appeared that he who seemed a supporter had become a traitor.

Occasionally I found mention of Lambert and his research although of course there is now quite a time period since his research team was operating. As such many of the senior staff and in particular house staff are now from a different generation and are not always familiar with his work. The negative effects of past research are encompassed in the HMC official Manual of Guidance which says "experience shows that headmasters can be too trusting in regard to enquiries made by researchersevidence obtained in so-called confidence may be used several years later in ways totally different from those intimated at the time of the original approach". I am sure that without my background I would

not have been allowed such access as I was and more polite but firm rejections would have had to be suffered.

The pupils were variously a captive audience or curious volunteers. In all cases they were sixth form pupils. This age group was selected as it was hoped that they would reflect a group with as wide a range of experiences as possible and one that might approach the exercises with a more open mind. I never ceased to be delighted and surprised by the ready acceptance that pupils had towards me. Many were curious and wanted to know more about my purpose and intentions. In all cases I told them that I was grateful for their help and that I would provide their school with a summary of my findings and perhaps they would be passed on to them at a later date.

Many of the staff were very open and helpful. Some relished the involvement with a "researcher" and were prepared to open themselves giving freely of their views and experiences. I mostly met the pupils during the day in a formal classroom setting during the period when I carried out my questionnaire. However I also had ample opportunity to meet with and discuss issues in all forms of settings from the informal dinner table at local restaurants in the company of housemasters to a round the table seminar type approach with a session chaired by me in the company of the senior staff of the school. Frequently housemasters asked me to draw comparisons between the way that they conducted their House and the way others conducted theirs, for they simply did not know what was happening elsewhere in their own school let alone what was happening at other schools. It remains largely true that Boarding Houses at the heart of the

boarding environmental system are often very isolated from one another. Housemasters will only very rarely enter the House of a colleague. By the end of my stay at a school I often found myself in a unique position where I knew more about the internal workings of the boarding system and of course the perceived view of the school and its individual units than many of the individual House staff working in those schools.

Research of the kind I was embarked upon has to be a compromise. A practical approach had to be adopted and this manifested itself in the geographical distribution of the schools I visited. They were those where I had ready access from my own school as the research had to be fitted into my other responsibilities. I was also afforded opportunities by my membership of the Holbrook Group.

When I was accepted there was always an element of taking what I was given. However, I also made requests and I was always accommodated to a degree that I felt would allow me to draw general conclusions and make key generalisations. Apart from my own school the time I was at the schools varied, from a few hours to a three day period. I was able to record on paper, having obtained permission of individuals to do so, opinions or views relating to the work I was doing. However for the central questionnaire and exercises that I asked the pupils to perform I opted for a more formal approach. In every case we met in an "exam" style setting. Pupils were requested to attend at an appointed time and to bring with them a pen or pencil. They may have known what I was engaged in but I introduced myself with a short account of my background and purpose. I explained that

they were part of a larger research project and that the information they gave would be added to that from other similar pupils in other boarding schools and compared with those other schools. They were in all cases assured that the information that they gave was in the strictest confidence and indeed they were not asked to put their names on the paper. Pupils were placed as far apart as possible in "exam" like conditions and asked not to discuss any of their views with any of the other pupils. I stressed that I wanted their honest opinions and that those views would be collected and summarised and I did not want a collective consensus answer. After the questionnaire was completed and collected I declared myself free to answer any questions they might have. Usually there was considerable curiosity which sometimes I did not have the time to fully satisfy.

I did feel at times there was an ethical problem of carrying out this type of research with regard to the pupils role in this work. Their role was central and indeed essential, but there was not always full consent to their part in my study. As far as I was able I stressed the voluntary nature of their answers and in a few cases they registered their opposition to inclusion by not answering the questions. This was very rare, in fact only two pupils out of the 353 did not co-operate.

The role of an "outsider" as a researcher was an interesting one in its own right. Should I appear as a complete outsider but as a "researcher" and risk the possibility of heightened suspicion. Should I reveal that I was a Housemaster and therefore familiar with their style of life and experiences. In

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doing so I would of course also be likely to be seen as a person representing authority and perhaps be seen as a "spy" from the other "side". In the end I announced that I was from part of their system and hoped that this might have the effect of freeing them to write and draw to the fullest of detail in the belief that I would understand what they were trying to convey to me.

Evaluation of the Design Environment

The first element of the first aim 'to identify the characteristicsof the physical environment..'is now considered.

In an ideal situation those responsible for commissioning, designing and building residential schools would be able to predict the environmental consequences of proposed developments. If the purpose is known then ideally one should design in the knowledge of the impact that design will have. Prediction of that impact can only follow from a substantive empirical base and as yet there is no such base. In order to progress therefore evaluation is the first stage. If we could predict how well buildings are "known" those responsible for promoting, designing and modifying them would have a powerful design tool. To do this it is necessary to assess peoples perceptions of the built environment and discover those elements that capture attention and hold a place in the inhabitants mental representation of his residential environment.

Appleyard, (1969) discussed these issues in relation to the planning of the new city of Ciudad Guayana, Venezuela. Three

hundred interviews were carried out relating to the inhabitants perceptions of the city. They set out to discover how the people viewed the city? Was it seen in terms of its land uses, as physical forms and spaces or did they see it as an economic or political structure? Did they picture the city as a social pattern, a kind of mental layout of the census data or as a setting for personal activities, or was it to them a sensuous environment of sights sounds, colours and textures?

His evidence suggests that unless a building is seen it cannot project an image. Visibility is a necessary component for recall. If a building is distinct in form it may be little known apart from those who use it regularly. A building's importance can be measured by three component attributes:

(1) its viewpoint intensity, an estimate of the numbers of people who might regularly see it.

(2) its viewpoint significance, its position at important decision points or points of transition for pedestrians or traffic.

(3) its immediacy; a measure of its distance from obvious viewpoints.

This final point emerged as significant when it was realised that physically and functionally insignificant buildings at major decision points such as entrances were frequently recalled.

Attributes of the physical form that influenced recall most seemed to be movement, contour, size, shape and surface. Movement of people seems to be the main factor here with such things as recreation areas or areas where queues occur being noted. Contour, the relative surface expression of the building concerning such things as the sharpness of a building's boundary from its surroundings is especially important with individual buildings.

Size of a building was of only moderate importance as was shape though this factor took on a greater significance when buildings possessed a complexity that gave them a uniqueness.

Surface colour though noted was of slight significance because it seems that buildings in any one area tend to be of similar colour. Signs and notices also and perhaps surprisingly have little impact. Important buildings often have only modest signs and places of importance to the individual are only rarely identified from signs. Such perceptual work gives us strong clues to how people without any formal evaluation procedure may view the built environment in which they live and work. But to rely on recall for effective assessment of the built environment would it seems only provide a very selective picture of the total environment.

How can we move to a more effective, objective evaluation of the built environment? Who is likely to initiate or benefit from such an exercise?

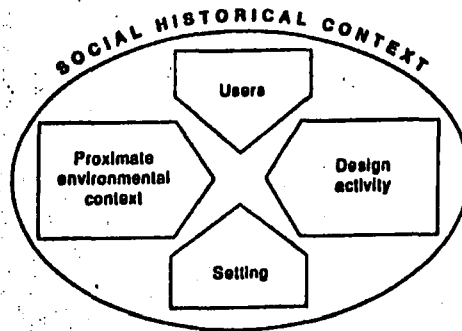
The latter question is far easier to answer as the groups are easily identified in the first instance. The school Bursar, the Headteacher and Governors, Social Service Departments clearly have a need for this information for planning purposes and for routine identification of areas in need of attention. From this list it follows that if the evaluation is successful the pupils, teaching and support staff will all gain through a potentially enhanced environment.

Evaluation should involve consideration of at least four factors according to Friedmann Zimring and Zube, (1978). The following section draws heavily upon their proposals. Their ideas

concerning what should be evaluated are illustrated in the following summary diagram all in the social, historical context.

Fig.1.5

Factors' determining evaluation



From Friedman, A., Zimring, C., Zube, Environmental Design Evaluation, New York, Plenum. 1978.

The Setting

The physical environment in which people operate is crucial to evaluation. The physical environment must be after all what the designer works with and produces. The setting where relevant should include the following.

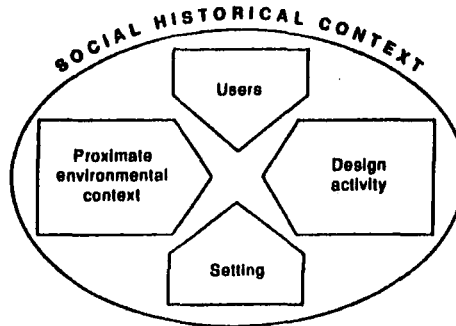
Organisational goals and needs such as: Which factors such as satisfaction, results, finance are most highly valued and by whom? Organisational functioning such as: Which groups affect others? Which group needs to communicate? Which groups have priority in affecting the goals and values of the institution. House staff one would expect to have close, even immediate contact with the pupils in their charge. Are the founders' principles followed today as on the establishment of the school? Is it the case that he who "pays the piper calls the tune" with parents or generous benefactors having considerable influence on school policy?

Relevant materials, structural developments, spaces, design solutions. As mentioned previously many residential schools are

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guardians of historically valued buildings which must be maintained and preserved. The setting may determine the materials used, "Cotswold" stone in Gloucestershire for example. Ambient qualities such as noise, light and temperature. Elements which have symbolic value such as signs or study size and position according to authority in the boarding house. The condition of the setting as reflected in the quality of maintenance or changes and decorations provided by the users. This can be formal in the sense of paint colours and state of plaster on the walls. It can be informal in the sense of posters, cards and graffiti added by pupils.

Aims promoted by the school as reflected in response to a research questionnaire sent to Headteachers and senior House staff. The five most frequently mentioned goals were; to sustain the happiness of the pupils in their charge, to help the pupil to achieve the best academic results in relation to the individuals potential, to develop leadership, to foster the physical development of the individual and to care for the spiritual development of the individual. Clearly this list might well differ if school bursars are interviewed or parents or governors?

The Users

The ultimate test of the success of a design setting is its ability to support explicit and implicit human needs and values. To do this we must understand who the users are. This is a major undertaking as many are greatly removed from the traditional client-architect relationship. A typical list might be the governors, the headteacher, the teaching staff, the administrative staff, the parents, the maintenance staff and

neighbours who are affected by the building. The Children Act, (1989) charges us to have regard in particular to "the ascertainable wishes and feelings of the child concerned (considered in the light of his age and understanding)". There is an added problem here though of how do you find out what the users "do" and "want". Questionnaires frequently face the problem that the answers provided are given to be socially acceptable. Methods that observe behaviour but do not affect behaviour may not always be practised or morally justifiable. However, some knowledge is essential of the users; their perspectives, preferences, needs and values. Their group activity patterns largely determined by the school routine of course but also individual characteristics such as age, sex, income and home background.

The Proximate Environmental Context

Each setting exists in a neighbourhood and is affected by local conditions of climate, air quality, water quality, transportation, cultural/social facilities and safety. Schools that are located in a predominantly urban setting might be thought to be more likely to have an inferior neighbourhood environment compared to a school set in a rural area. However the extent of the school grounds may create a situation where the immediate and the mid distant environment is controlled by the school and maintained at a high standard. Many mainstream schools have extensive grounds providing impressive landscapes and a high quality of environment. Some however, that had their foundation in the Victorian period and experienced the growth of the smokestack industries of that time in close proximity to its

buildings may now find itself in a somewhat rundown and depressed location.

The Design Process

It has been stated by professionals that this is the weakest area of the whole evaluation process. The many personalities involved in the design process listed earlier, bring to the design process their own values, preferences, attitudes, which influence the design setting. In addition there are the numerous directives, limitations and criteria which influence the designed environment. These include directives of the Department of Education and Science as well as Acts of Parliament which may cover everything from building practice to curriculum content. Local Government and in particular the planning authorities with related bodies and their officers such as the Fire Prevention Officer exert a form of design evaluation which is intended to produce a more supportive and effective environment. Such controls may be liable to change and clearly politically related influences may be susceptible to sudden dramatic fluctuations in direction and emphasis.

Financial constraints have an obvious influence on any project. This truism has perhaps had the biggest single influence on residential school buildings.

Social-Historical Context

No building was ever constructed without the influence of the society in which time period it fell. A common situation felt by many residential schools is where a project judged as a success at its completion takes on a new light when reviewed at a later date. Social and political trends affect the building

including the prevailing economic climate and social attitudes. A truly successful design is one which learns from the past to accurately predict the future.

There will be as many sets of priorities by which the standards will be set for the design exercise as there are schools considering them. Wealth to match such priorities as set may or may not be sufficient to see those priorities brought to fruition. Evaluation schemes if they are to be of value must be capable of application to buildings of possibly considerable age. Of course in time all buildings do need replacement but what is the cycle of replacement? One hundred years is too short a time span for buildings built to any standard, are unlikely to actually collapse in such a period. Treatment of a building can however, considerably lengthen or shorten the life of a building.

Many of our residential schools find themselves in possession of a double edged sword. That sword is the glorious(?) ancient and often Listed buildings of which many a prospectus boasts. Listed Building status means restrictions, and with Grade 1 classification severe limitations, on what can be done to the building. The possibility, even given the unlikely wish of demolishing and starting anew, is nil. Why should that desire be present? The fact of the new in no way guarantees the creation of excellence. Another reason for the value of an evaluation scheme is revealed.

Fig 1.5 gives a hint as to who should be consulted, namely the "users" but what questions are they to be asked? Ideas may be found in the existing schemes proposed for evaluating buildings generally and most frequently those of a domestic nature.

Potential indicators of Housing Quality and their assessed value

1. Age of building

The age has sometimes been used as an indicator of the state of the national housing stock. Whilst this information may be practical to collect at least for post 1914 dwellings there must be serious doubt as to the value of collecting such data. An "average" age of building would seem to be of at best passing relevance as it is clear that it is often not the age of an individual dwelling that is important as the extent to which it has been modernised during its lifetime and the standard of maintenance it has enjoyed.

2. A Survey of Housing Conditions in the Urban Areas of England and Wales:1960, (Burnett, 1962). This survey was concerned to identify on a national scale where housing conditions were worst. The technique adopted was "From the Census the data on small dwellings with three rooms or less, households without a fixed bath and households without the exclusive use of a WC have been extracted. To these 3 items was added information on domestic hereditaments of low rateable value".

The method applied was to map the urban areas where the proportion of houses was above a qualifying percentage for one, two, three or four of the factors. The qualifying level was in each case the upper quartile value. The picture that emerged was essentially a relative one.

The author's work here was specifically for housing conditions and not related to residential schools. A national survey of our residential schools is to say the least unlikely. However if the application is of dubious value the method has

some merit for use in individual schools. If say, four significant criteria can be established as of prime importance then a building or school can be surveyed. For example, if the factors of light, warmth, cleanliness and physical state of repair were identified and then building scored by floor or area a picture of deprived areas could be identified and a priority list for action compiled.

The technique should identify the most gross areas but may well miss the micro area.

3. Work from the American public health Association in 1941 in "Housing for Health".

Two papers were published and in the first two new ideas were expounded. These were that an index method would be reasonable for use ie., that a limited number of relatively fixed facts could be assumed to stand for a whole complex of housing conditions and would differentiate between good and bad housing. Secondly, scoring was envisaged for the physical structure as a whole but significantly a separate schedule for the "areal or neighbourhood" was considered important.

These ideas were not specifically put to trial but they are significant in that the whole environment is proposed as being of value and that a building and its setting should not be viewed in isolation.

4. The American Public Health Association Appraisal Method.

This method is based on a penalty point score which was initially awarded from discussion amongst a panel of consultants. Appraisal was carried out separately on Facilities, Maintenance and Occupancy. A separate appraisal of the physical environment

is made. The system was flexible, items can be added or eliminated according to needs. It does also by its subdivisions highlight areas where action is more urgently required. Here is a technique with far greater potential. It is a comprehensive, comparatively objective and it can be applied at several scales from individual or parts of individual buildings to the whole school. It may appear ponderous to collect such data but in trials it has been shown that pruning of the data limited the confidence the collectors and users felt for that data.

5. British Examples

The Housing Defects Index, (1967), based its ideas on the ALPHA work. It ignored the environmental factors and though very comprehensive in nature might be regarded as a retrogressive step for us in a search for a suitable appraisal scheme for residential schools. A far simpler idea, carried out with limited resources and quickly applied was proposed by Medhurst and Parry Lewis, (1969), The survey was applied to a 2K grid and points were derived from an interdisciplinary team of consultants.

The technique is simple, involving eight physical factors and six environmental factors. Evaluation occurred under the headings of "much", "some", "little" (eg "much damage")but this leaves considerable room for variation in interpretation. The survey can be carried out quickly and the results are readily understood but in this there may be the danger of that assumptions about the particular based only on knowledge about the general may be liable to wide margins of error. Simplicity

and practicability are its hallmarks but it has therefore the limitation of a broad brush approach.

The survey of housing and environmental deficiency (SHED). This technique developed on Tees-side, (1969), attempts to equate penalty points with money values. This is done for both the natural environment and the built environment, therefore reflecting the influence of ALPHA but related each penalty point a standard value; at 1969 prices it was £39 per penalty point. It significantly departed from the previous techniques based in a public health background in that environmental defects could very significantly affect the scoring. The distinction of individual components of the environment or dwelling was not easily identified as an element of the final total score but it emphasised the principle of "basic deficiency" ie., Priority group 1 SHED score have a penalty point score of 38 or more. The penalty point values were arrived at from trial and error which by consensus gave the best results.

As with all techniques appraised this method is rooted in a particular time with a specific purpose behind it. The large penalty point score for "Air pollution" is only understood if one knows that this was a particular problem of exceptional proportions on Tees-side. That apart however, there are a number of plus and minus points to be noted for our purposes. One important merit in the schedules is that the small number of classes under which individual items may be marked. In SHED the classes are tightly controlled leading to less variability in interpretation and therefore reduced subjectivity.

This "user friendly" attraction is also a problem in that for

instance the heading or dwelling condition is dealt with briefly if conveniently under the headings "maintenance good" or "maintenance poor". This does not seem sufficient to allow discrimination of particular problems and may be to gloss over what in other schemes has been the highlighted area of the assessment. Further the balance of 56 points for environmental deficiencies compared to 44 for the dwelling represents a major shift in emphasis and perhaps one might argue that the emphasis should at least be reversed, eg., why is Age an environmental rather than dwelling factor?

6. Techniques related to the Environment

In the discussion we have seen the historic shift in emphasis towards the environment. A number of schedules have been drawn up which specifically have taken the environment at their central subject. Schedules such as the Barnsbury Environmental Survey (Report of a joint study group, 1968). All such schedules have been drawn up with a specific local issue in mind and have no pretensions to universal application. As such they are noted as stepping stones on the path to our objective but given their context have little specific to add to our knowledge

Towards Design Evaluation

This review provides many pointers as to pitfalls to be avoided and plus points that should be included but as interesting and as valuable as this is the techniques are rooted in essentially the world of domestic dwellings. However workers have undertaken research in areas closer to our intended objective area. In particular the University Residence Environment Scale (URES) as

developed by R H Moos of Stamford University and M S Gerst of the University of California, (1974).

This method of evaluating the environment grew out of a recognition by Moos that there are both environmental and personal systems. Most environments admit new members selectively. Certainly there is a large element of selection to most residential schools. People may also select the environment they wish to enter and senior pupils may either positively select a new school or by inertia make the choice to stay put when a change might be available. Moos said that the environmental and personal systems affect each other through "mediating" processes of cognition appraisal and activation or motivation which in turn are affected by the former systems. The pupil on entering an environment will adapt to it using a set of "coping" skills but at the same time he may have the effect of changing the system stability or change may be the outcome. In Moos' own example he cites the college setting orientated towards traditional religious values and academic accomplishment which may help students to maintain their religious beliefs and to increase their aspirations and achievement levels.

To Moos there are an infinite number of environmental variables but they can be conceptualised into four major domains; the physical setting, organisational factors, the human aggregate and social climate. Each of these domains can influence educational outcomes directly or indirectly. Moos was most concerned with how the social climate is determined by and mediates the influence of the other three domains. Together with Gerst, Moos set out to develop a way to measure the social

environments of student living groups and to obtain information about the usual pattern of behaviour that occur within them. They were interested to consider the perceptions of the living group as it was by that means only that they could discover the "reality" of that setting. They developed what they called the (URES) to measure the social environments of campus living groups, such as dormitories, fraternities and sororities (it is based on work in the USA) they developed three basic forms of the URES: (1) a 100 item Form R (real form) to assess the actual living unit (2) a 100 item Form I (ideal form) to assess the conception of the ideal living unit and (3) a 100 item Form E (expectations form) to assess incoming students' or staff members expectations of a living group. The underlying concept is that the objective consensus of individuals characterises their environment by defining the social, or normative climate which exerts an influence on students attitudes and behaviours.

The URES is a lengthy document in its own right but is broken down into ten major headings or subscales. These sub-scales are; involvement, emotional support, independence, traditional social orientation, competition academic achievement, intellectuality, order and organisation, student influence and innovation. The various Forms were applied to a wide variety of different units throughout the U.S.A. From a very large sample it was possible to identify some common factors to most (70% was the working figure) of the student living groups. Out of this developed an "average" student living group but he recognised that there was considerable variation among units on one campus and among campuses.

In concluding his work he remarked that people are not "passively moulded" by their environments but that neither are their environments passively moulded by them. Pupils at residential schools might perhaps have only limited power to select or change the environment and therefore they must have an impact which goes beyond and is independent of the processes of environmental selection and creation. There is "mutual interaction" between people and their environments but in general, individual students are influenced more by educational settings than those settings are influenced by them. Moos makes clear his belief that educational settings can and do make a difference in students' lives. This difference it seems can be for better or for worse. Students, teachers and parents and head teachers should be clear that their choices in selecting educational establishments or in making policy decisions matters and that the educational settings they select and create have varied impacts.

Another example of evaluation is quoted by Friedman, (1974) concerning Butterfield Hall at the University of Rhode Island (USA), and gives more clues as to procedure. Butterfield Hall and an identical dormitory, Bressler Hall, were considered poor places in which to live by students and the administration staff. REDE, the Research and Design Institute, was commissioned to remodel both buildings but funds were limited and only one was renovated; Butterfield Hall.

The evaluation consisted of a fivefold programme containing the following elements

1. A questionnaire sent to all residents

2. A semantic-differential scale was administered to a random sample
3. The URES was administered to the same sample
4. Observations
5. Interview with individuals

The report highlighted 20 specific recommendations, 11 successful features and 70 pages of appendices.

The report was largely critical of the changes in terms of its tone but was nevertheless perceived as a positive exercise.

An approach to evaluating the built/physical environment of residential schools.

Using the principles established from the discussion and in the spirit of the Children Act (1989), an attempt has been made to design a scheme for the evaluation of the design environment. In doing this the means by which the physical environment can be assessed is identified as required in the first part of the first 'aim' of this thesis.

The questionnaire has been trialed but only to a limited extent. However its flexibility and potential for adaptation it is hoped will be seen as a strength by individuals or groups contemplating its use. The use of the 'comment' column is intended to allow elaboration beyond the simple scoring system. It is suggested that for full value to be gained from such an evaluation all users including the pupils should act as respondents. The Design Evaluation Questionnaire can be found in the Appendix A.

The residential environment perceived.

Each of the remaining aims will now be considered in turn and a



discussion outlines the data collection method that was followed. Aim 1: To identify the characteristics of residential schools that combine to create the physical and social climatic environment of residential schools, as revealed by the perceptions and associated cognitive maps of senior pupils. It is now that I consider how to investigate the environment from the behaviourist viewpoint.

In total 353 pupils participated in the field programme. These were drawn from a variety of residential schools but in all cases sixth formers were interviewed. All pupils were provided with a sheet of graph paper and a pen or pencil. The pupils were asked not to confer and they had been told nothing of the purpose and intentions beforehand. By this means no extra training could have occurred to improve technique or increase the content of the maps. Age was held constant within the band of late sixteen year olds to late eighteen year. Sex was identified on the returns so that any specific sex related spatial components could be identified. Not all pupils had the same experience of their school as some, particularly girls, had only joined in the sixth form.

The pupils were given fifteen minutes for the task with the instruction; "imagine you wish to explain to a new pen friend unfamiliar with your lifestyle what a typical day is like during term time. Draw a map to help you explain what your day is like". The time element restricted detail perhaps but in practice pupils found no problem in depicting their day in "map" form. The interest was in content, relative position and in the annotations, seen very much as part of their "world in their

head". The quality of the map was not of significance and indeed varied from the artistic to the purely symbolic. They were asked to note their sex but not name as they were assured of complete confidentiality. They were also required to note their A level subjects, to allow identification of their subject classrooms as distinct from other areas of the school.

Following the completion of the cognitive maps a detailed questionnaire was presented to the pupils, (Appendix B). A number of different approaches have been employed within the framework of the questionnaire with the aim of illuminating the perceptual world of the sixth former.

The technique known as bi-polar analysis asked for views on the following subjects: pleasantness, attractiveness, light, cleanliness, noise, space, age and accessibility. In each case the line between the extreme points of the scale was ten centimetres in length with the mid-point (5cm) representing neutrality or ambivalence on the part of the questioned party. A further eight questions asked for marks to be awarded for elements of the pupils action-space as demarcated by the residential school. The mark was out of ten with ten being equal to excellence and nil equated with the worst possible situation. By marking in this fashion a measure could be obtained to allow some collective scale to be identified as representative of the perception of a group of senior pupils within a particular school. Three further questions were asked which involved a "brainstorming" exercise whereby they were asked to record the first five words that came into their heads concerning the school environment in total, their classrooms and their boarding houses. The danger with such

an approach is that one may end up with an enormous number of responses which would defy analysis. In the event this was not the case and analysis by collectively allocating comments as either negative or positive permitted a picture of those three elements to be constructed.

There is secondly the social climatic factor which may on first consideration appear to be the more difficult to quantify. The decision was taken to attempt to draw some continuity in research by looking to the work of Lambert, (1975) who identified the goals most frequently noted by headmasters and housestaff. The research also made reference to the categories by which the goals could be grouped. These goals can be placed in the category of being instrumental, expressive or organisational. Further these goals may be said to be collective or individual in orientation. By following a similar path to Lambert the opportunity to compare in a temporal context the data collected now with that of the past might be taken. The central idea is that the social atmosphere arises in part out of the goal that a school sets itself. For example if the idea of promoting Christian values is seen as of prime importance then one might reasonably expect that the social atmosphere might reflect this through the medium of its teaching, its religious services, noticeboards and general ambience. Again if the prime objective is to achieve the best exam results, the routine, orientation and direction would be likely to be turned towards the classroom rather than say the Church or sports field. Total scores under each individual question were calculated and the sum under groupings of associated factors under the headings instrumental, expressive

and organisational and collective or individualistic orientation. It is important at this stage that the meaning of each of these terms is made clear.

Expressive goals (E) are those concerned with values.

Instrumental goals (I) are concerned with skills.

Organisational goals (O) are centred on the institution rather than the pupil.

Collective goals (C) are those directed towards the group.

Individual goals (In) are those where each pupil is most valued

Further at the data collection stage three approaches to the nature of the residential school were researched, namely, what are the goals, what is the school aiming to do and what it should be aiming to do? In a separate questionnaire the senior staff of the school were asked to list their most important goals as they perceived them.

This allowed analysis of the type of social climate the senior staff felt they were working towards and whether or not the senior pupils recognised that the school was striving to achieve those same goals and by association the same social climate. By taking broadly the categories of Lambert some attempt has been made to see if there is a temporal component to the goals and thus whether the social climate is an evolving or stable feature of boarding schools. Clearly in this context it is only in the present that this element can be considered as we have no information on past individual schools to draw upon. One obvious criticism of the use of Lambert's questionnaire headings is that, whilst it is true that he drew those headings from the responses that headteachers and housemasters most frequently

revealed as their goals, it does not necessarily mean that the same goals are considered as being paramount today. However this criticism is in part mitigated by the fact that differences can be highlighted by the headteacher/housestaff responses to the direct question what are your goals today. Further if pupils perceive that there are different goals setting the social climate these might well be revealed in the responses to the brainstorming questions where five words are requested as best reflecting their school environment.

The important feature of the aim of this thesis is that it is based on the perceptions of the senior pupils. The answers as far as possible were given as raw data unembellished by the researcher or by the staff of the school being visited.

Behaviour as we have seen springs out of peoples perception of what their world is like and if the pupils have not had prior warning of my exercise then they will not have trained for the exercises nor will they have had the chance to discuss with their peers. This is an important point because the "does try, should try and does succeed in doing "responses were requested in the form of a mark out of five. Statisticians might be happier with the request for a mark out of seven as with the smaller range there can be a tendency towards the middle value. However, by excluding the possibility of preparation and by encouragement to honesty a clear pattern to the relative importance of the perceived goals should emerge.

Aim 2: To assess the effects of organisational change within the residential environment upon senior pupils' cognitive maps and interactions.

Residential education seems in a constant state of flux when it comes to its physical environment. "Build, build, build!" is the cry engraved on prestigious buildings in the last decade. I had the opportunity to be part of a development committee that met for two years at one school considering major changes in the organisation of the school. This was to involve not only the construction of new buildings for the boarding and classroom setting but of course a related interwoven alteration to the organisation. Indeed the wheel went full circle in that the need for organisation change was increasingly evident from the difficulties that the then existing structure was posing and therefore a scheme was devised which it was hoped would remove those problems. In initiating and completing those changes, namely by building the buildings, there is a change in perspective and a need to reappraise and perhaps change again. There is no denying that a physical change has come about in the school but is it a case of "plus ca change, plus la meme? Do the pupils feel, perceive any change, does it create hostility, resistance does it turn their world upside down?

This aim has only investigated at one school although over a considerable time period with the advantage of continuity in that the same pupils could be questioned and changes with evolution could be monitored. No generalities already proposed for universal application but the uniqueness of the situation described might provide a marker against which others could measure themselves. The uniqueness of the situation makes for an interesting investigation in its own right and the temporal element adds to that interest. The methods employed were that

of the cognitive mapping exercise explained in the description of Aim 1.

Aim 3. The final aim was "to formulate recommendations to improve the effectiveness of residential education from an environmental viewpoint".

Here again it has to be remembered that the environment in this context is a dual - faceted phenomena. Answers to the questionnaire (Appendix B) provide direct and indirect clues as to the possible improvements to the environment. Firstly in question 10 the pupils were asked a very direct question about whether there were any specific facilities that they felt could be provided by their school to improve the physical environment. The scoring in their answers to questions 2 to 10 would provide general areas of the school's physical which might be of a high or low standard in the view of the pupils.

On the social climatic viewpoint the scoring under the headings of "should try to do" may reveal disparities between what they believe is happening in the school and what they feel should be the function of the school. This may be difficult to generalise on when it comes to identifying the way in which the social climatic atmosphere can be affected but it will give the opportunity to highlight elements of that atmosphere that might be at variance within the perceived views of the pupils. Any obvious disparity between the views of the goals of headteachers and senior staff in setting the goals that determine the atmosphere of their school may again reveal conflict in direction and purpose.

This final aim is more likely to have a specific rather than

general relevance to all residential schools though if any areas were consistently highlighted as strong or weak amongst the sample schools it would be worth their identification..

SUMMARY

Chapter 5 initially mentions some of the preliminary considerations necessary before any research is undertaken. The impact and scale of the work of Lambert is discussed and some of his team's field ideas are adopted.

The evolution of a questionnaire to investigate the physical environment is detailed. This questionnaire draws upon ideas developed in the design of other questionnaires that have enquired into aspects of the built or physical environment. In particular the work of Moos is given full weight.

Finally each of the three main aims is taken in turn and the methods of field investigation relevant to that aim are detailed.

CHAPTER 6

RESULTS

The results are presented in the form of detailed case studies of eight of the fifteen schools visited. The eight selected apparently demonstrated a distinctiveness as revealed by their foundation origins and/or their stated aims that allows a particular aspect of the fivefold aims to be elaborated. The schools are compared with the "mean" residential school as a way of identifying their distinctive traits.

The graphical representations relevant to each school are illustrated in Appendix C and D.

SCHOOL A

An example of a Co-education school situated on the fringe of a town in the West of England.

Sample size: Boys 25. Girls 15.

School A, was founded in the late nineteenth century and occupies 60 acres of land on the edge of a small town. The school is co-educational and has about 350 pupils in the senior school with pupils throughout the age range from 13- 18. The school is a Christian interdenominational school but with about 80% of its pupils being brought up in the Church of England.

Environmental Setting as Stated by the School

"The quality and attractiveness of their surroundings is an important factor in helping them (the pupils) to live and work happily together", states the school prospectus but makes no

other allusion to the physical environment in written form. The social climatic atmosphere receives far more comment. "By nature of its size School A is a very real community, and there is a natural friendliness built on a foundation of sensible discipline. Co- education enables both sexes to develop natural and relaxed friendships in a structured environment" is a quote from early in the prospectus but this is followed later by "... partly because of its size, the school's atmosphere is intimate and friendly".

The chapel gets special mention along with the role of religion. "The building of character on firm religious foundations and the development of a stable moral outlook are central considerations in the whole of our educational philosophy.....our chapel.....has an atmosphere of peace and worship which is deeply appreciated."

The stated goals as found in school A's publications and as verbally given to me suggested an equal emphasis on the Individual and collective goals and also a strong and equal emphasis on instrumental and expressive objectives. The school declares firmly that it aims to "develop the talents of each individual" and to give the individual " the best possible academic training" and again to " train and develop the body". It also stresses the aim to " hold fast to traditional qualities and values", to be " aware of how to live and work with others" and to foster an "awareness of the spiritual dimension" and to instill "loyalty".

The Physical Environment

The school was perceived by all the pupils to be more pleasant,

attractive, light and clean than the opposing bipolar prefix. The school was seen as more spacious than cramped and as being accessible. In all cases the scores given fell in the range midway between a point equal to complete agreement and the non-committed halfway score. The school was rated at the mid-point for its noise characteristics and did poorly in the pupils perception of the suitability of the buildings for the 1990s. In all cases the boys marked lower than the girls by up to half a mark but in general there was a close correlation in the pattern of scoring.

The arrangement of classrooms was perceived positively by both sexes as were the position of footpaths about the school. It was found easy to move about from building to building and within them and that generally the classrooms were suited to their use. The grounds and setting of the school was perceived very highly with a mean score of 8.8 out of 10. In answer to the question, are the boarding Houses suited to their use? the girls scored positively at a mean score of 7.3 out of 10 but the boys scored significantly lower yet non-committed at 5 out of 10. This result it should be stated was not perhaps surprising as the school was poised for significant reorganisation and refurbishment of the boys' Houses. A similar pattern emerges in answer to the question evaluating the sporting facilities. The girls scored them very highly at 8.5 out of 10 but the boys scored them at a mean rating of 6.6 out of 10.

The two facilities requested by the few who chose to comment, were an indoor swimming pool with 25% of all respondents mentioning and at the same percentage response level a new sports

hall was requested.

The Social Climate.

The total school environment received a high score for its general character. 77% of all boy and 86% of all girl comments were positive with 50% of all boys describing the atmosphere as friendly and a huge 96% of the girls responding in like manner. The boarding Houses again were perceived poorly by the boys with only 29% of comments being positive and 36% specifically citing them as being "cramped". In contrast 92% of the girl's comments were positive and the same percentage described the Houses as "friendly" or "fun". A significant number added that they were "homely", "warm", or "relaxed". Classrooms scored at a low level for both sexes with only 22% of boys and 20% of girls making any form of positive comment. 56% of all boys said they were "dull", and one comment may be taken as the classic summary of what may be many sixth formers' view of such room; "They're boring; well they're classrooms aren't they? What do you expect?" 38% of girls thought they were either "cold" or "boring".

The school stated through written responses to me that its goals as determinants of the Social Climate are:

The pupils felt that school A tried to a considerable degree to:

Keep up a good reputation	C	O
Get good GCSE/A levels	C	In/E
Keep the school running efficiently	C	O
Put into practice Christian values	C	E
Keep us occupied most of the time	C	O

Where C= Collective aim and I = Individual; O= Organisational; In = Instrumental and E=Expressive.

However the pupils felt that the school succeeded to more than

a "moderate degree" but not to a "considerable degree" to achieve all these goals apart from "to put into practice Christian values" which was felt to be achieved only to a small degree.

Comparison of Goals.

The school declares a balance between collective and individual goals, though it clearly states in its prospectus that "our major objective must be academic". The atmosphere that the goals of the school suggest is based on the individual but with the orientation towards community values. Again there is a stress on instrumental and expressive goal in equal measure. No organisational goals are stressed, however the pupils felt that the school tried to create an atmosphere which was wholly collective in emphasis. Organisational goals were seen as the most important single goal with expressive goals also receiving considerable emphasis. This compares with what the pupils think is actually achieved by the school. No goal is seen to fall into the category of being achieved "to a considerable degree". However of the first four goals cited as most important from the viewpoint of what the school tried to do, each appeared in the first five goals that pupils mentioned that the school achieved with more than moderate success. In other words, from the pupils point of view the school is achieving what it is setting out to do. The school itself stresses the skills and values it expounds; the pupils see the mechanism by which this is achieved as representing the goal on which greater stress is placed.

Cognitive maps.

The world of the pupils in school A during term time is a small one. It is centred on the area near the main assembly hall which geographically takes a central position. Pupil's maps invariably detailed the central core area of the school and broadly identified fringe areas. 100% of all pupils identified their boarding House but very unusually only one pupil identified an area within the house as of significance to the pupils. There was little recognition of other boarding Houses by the boys though not surprisingly, as girls are linked specifically with a boys House, most girls identified their "twin" House. All boys located the classrooms that related to their A level subjects but strangely only 39% of the girls did the same. 70% of boys identified the dining room giving it a priority score equal to the sports fields and their boarding House, whereas only 54% of girls included it as a feature, giving it a priority score of 7. The same percentage number of girls identified the chapel but those who did gave it a high priority score of 8. Only 30% of boys drew the chapel on their maps giving it a mean priority score of 0!. The sports fields rated a priority score of 9 for 70 % of the boys and 6 for the 46% of the girls. The only other location to be mentioned frequently was the sixth form "Club" with 85% of girls identifying it but only 15 5 of the boys with both sexes scoring it with a priority score of 6. No other location was mentioned by a majority of respondents. However for minorities a few places were clearly very important given their priority scores but all such places identified were outside the strict bounds of the school. The local cafe and village with the

nearby canal and the British Rail Station fell in this category. A very structured day is revealed from the annotations and an ordered arrangement of buildings is identified in the context of their A level classrooms. The impression is of a structured environment but the pupils perceive the organisational priorities as paramount in governing the social climate of the school.

SCHOOL B

An example of Co-education in a (13-18) small rural school in the south west of England.

Sample size: Boys 15. Girls 5.

School B, was founded sometime about the start of the sixteenth century though it remained small in numbers until the late nineteenth century. It moved to its present site in 1938 and occupies some 350 acres of land not far from a small town.

Environmental Setting as Stated by the School

The "unique" nature of the adjacent coastline and cliffs that form part of the school grounds clearly is of considerable influence on the school. This environmental characteristic is exploited by the school in many positive ways , not least through its teaching of A level Geology and "pupils have ample opportunities to make use of such an environment".

The social climatic atmosphere receives far more comment.

"Intangible qualities such as atmosphere and sense of purpose have to be experienced" we are told and it would seem that this must be the case for at no other occasion does the prospectus make any claim as to what that atmosphere might be. The prospectus is full of facts but short of claims or superlatives.

The Physical Environment.

The school was perceived by all the pupils to be very pleasant, attractive, and spacious. It was seen as more dark than light and more dirty than clean. The score for accessibility was particularly low. The school was rated at the mid-point for its

noise characteristics and in the pupils perception of the suitability of the buildings for the 1990s.

The arrangement of classrooms was perceived to be satisfactory with a score of 5 out of ten. The position of footpaths and routeways about the school were highly rated and not surprisingly it was found easy to move about from building to building. The score for ease of movement within buildings was particularly low at a mean of 3 out of 10. Generally the classrooms were thought to be suited to their use. The grounds and setting of the school was perceived very highly with a mean score of 8.8 out of 10. In answer to the question, are the boarding Houses suited to their use? the girls scored positively at a mean score of 7.3 out of 10 but the boys scored significantly lower at 4 out of 10. The pattern reverses somewhat when the responses to the question how would you evaluate the sporting facilities at your school? The boys regarded the facilities highly with a score of 8.2 out of 10 but the girls scored them lower at 7.

The boys responded with a wide range of improvements they would like to see in the fabric and facilities of the boarding Houses but no consensus view could be identified. The only facility mentioned by more than 20% of the respondents was an indoor swimming pool.

The Social Climate.

The total school environment received a high score for its general character. 70% of all boy and 86% of all girl comments were positive with 50% of all boys describing the atmosphere as friendly and a over 80% of the girls responding in like manner. The boarding Houses again were perceived positively for

the social climate although the fabric was poorly regarded by the boys. Three quarters of all comments were positive and 36% specifically citing them as being "friendly". In comparison a slightly higher percentage of the girl's comments were positive and the same percentage described the Houses as "friendly" or "fun". A significant number added that they were "homely", "warm", or "relaxed". Classrooms scored at a low level for both sexes with only 20% of either sex making any form of positive comment. 45% of all boys said they were "bare".

30% of girls thought they were either "cold" or "boring".

The school states in its published material its goals as determinants of the Social Climate are:

- | | | |
|--|---|------|
| 1. to provide a happy, friendly environment | C | E |
| 2. to develop a sense of responsibility | I | E |
| 3. to prepare each pupil for his\her career | I | In |
| 4. to bring out the best in each pupil | I | In/E |
| 5. to achieve good academic results according to the potential of the pupil. | I | In/E |
| 6. to produce caring, considerate respectful individuals. | I | E |

Where C= Collective aim and I = Individual; O= Organisational; In = Instrumental and E=Expressive.

The pupils felt that school B tried to a great degree to:

Keep a good reputation outside	C	O
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The pupils felt that school B tried to a considerable degree to:

Keep up a good reputation	C	O
Get good GCSE/A levels	C	In/E
Keep the school running efficiently	C	O
Foster a sense of sportsmanship	C	E/In
Prepare us for a suitable job or career	I	In
Enable them to recognise right from wrong	C	E

The pupils felt that the school succeeded to a "considerable degree" to achieve four of these goals. These were:

Keep up a good reputation	C	O
Get good GCSE/A levels	C	In/E

Foster a sense of sportsmanship	C	E/In
Keep a good reputation outside	C	O

Comparison of Goals.

The school declares a strong bias towards goals centred on the individual and on expressive or instrumental aims. No organisational goals are stressed, however the pupils felt that the school tried to create an atmosphere which was almost wholly collective in emphasis. Organisational goals were seen as the most important set of goals with expressive goals also receiving considerable emphasis. This compares with what the pupils think is actually achieved by the school. No goal is seen to fall into the category of being achieved "to a considerable degree".

However of the four goals cited as most important from the viewpoint of what the school tried to do, appeared in the first list of goals that pupils mentioned that the school achieved with more than moderate success. In other words, from the pupils point of view the school is achieving what it is setting out to do. The school itself stresses the skills and values it expounds; the pupils see the mechanism by which this is achieved as representing the goal on which greater stress is placed.

One interesting and unique comment was made by a member of the school pastoral staff in outlining his thoughts on what should be the objectives of the school. This was the idea that the school should: "provide a satisfying and challenging career structure for the staff at the school". On no other occasion did any member of staff express a similar view no matter what his or her position of responsibility.

Cognitive maps.

The world of the pupils in school B during term time is a small but interesting one. In reality the school has a linear form as it stretches out along a cliff top running east to west. It is centred on the area near the Main Building which was the original manor house which the school took over on its move to the area. All pupils invariably detailed the central core area of the school and broadly identified fringe areas, however the Main Building did not appear on the maps in a central position. The Main Building rather took up in the pupil's maps a position either to the extreme east or west. The girls House is at the far eastern edge of the school and the girls all drew this House and the buildings immediately about the Main Building. The Boys drew their respective Houses but excluded any recognition of the girls House. It clearly is not significant to them. 100% of all pupils identified their boarding House and usually only one area within the house as of significance to the pupils. There was some recognition of other boarding Houses by the boys but rather less by the girls. All pupils located the classrooms that related to their A level subjects and the dining room giving it a priority score equal to the sports fields and their boarding House. The priority score given to the dining room by the girls was slightly lower. The sports fields rated a priority score of 9 for 70 % of the boys and 6 for the 46% of the girls. The only other location to be mentioned frequently was the sixth form "bar" with all pupils mentioning it though surprisingly perhaps it only scored a priority rating of 7.5.

No other location was mentioned by a majority of respondents.

However for minorities a few places were clearly very important given their priority scores but all such places identified were outside the strict bounds of the school. The local shop and the cliffs\beach area fell into this category.

A very structured day is revealed from the annotations and an ordered arrangement of buildings is identified in the context of their A level classrooms. The impression is of a structured environment but the pupils perceive the organisational priorities as paramount in governing the social climate of the school.

SCHOOL C.

An example of a predominantly boarding school in a rural setting in the North Midlands of England with Co - education in the sixth form.

Sample size: Boys 25, Girls 11.

This school was founded in the late nineteenth century with a particular religious philosophy underpinning its approach to education. The school is co-educational in the sixth form with about 400 pupils in total of which 50 are girls. The school is predominantly boarding but with a small number of day girls and one day boy House. It stands in 70 acres of its own grounds.

Environmental Setting as Stated by the School

The school prospectus states that " the school grounds, compact yet spacious give School C one of the most spectacular settings in Britain". This theme and proud claim is expanded on further in the statement "...recent and continuing road and rail improvements mean that School C has the best of both worlds - a glorious rural location in North _____shire which is at the same time readily accessible from all directions. The school buildings are given special mention as well with "our new Art School, fully redesigned and refurbished, offers superb conditions and equipment..."and "there is a modern, light and airy well stocked Library, with plenty of space for private study...". The school claims "recently constructed classroom blocks provide spacious, well- lit teaching areas, pleasantly furnished and equipped with Departmental libraries and modern teaching aids" and "the school has a magnificent Chapel".

I was able to spend several days at this school and in conversation with House Staff the strongly held view was put to me that they perceived 'Southern' schools as relatively 'soft' with their comfortable furnishings and fittings whereas the 'North', within which they felt they fell, retained a traditional 'ruggedness'. The staff were anxious to hear if I confirmed this view and there does seem to be something of a self-fulfilling philosophy in this instance.

The school state either in its published material or through written response to me that its goals as determinants of the Social Climate are:

- | | | |
|--|---|------|
| 1. To produce an environment from which comes well balanced and well qualified young people. | I | In/E |
| 2. Continued Existence. | C | O |
| 3. To enable pupils to recognise their own abilities. | I | In/E |
| 4. To keep parents involved. | C | O |
| 5. Academic success for all pupils according to their need and ability. | I | E/In |
| 6. To create a supportive , mutual caring community. | C | E/In |
| 7. To develop competitive determination. | C | In/E |
| 8. To ensure a high quality education on a firm Christian foundation. | C | E |
| 9. To develop the Pupils physically. | I | In |
| 10. To equip pupils with the skills to manage their lives | I | In/E |

The school therefore states a balance between Collective and Individual centred goals (C or I in the first column) The school stresses in about equal measure the Expressive (E), and Instrumental (In), goals but does admit to two Organisational (O) goals.

The Physical Environment.

In general the school environment was perceived very positively by the pupils at the school. In the bi-polar exercise the school

environment was seen to be very pleasant and very attractive by the girls but the mean score was significantly lower for the boys. It was seen as light, spacious and accessible by the girls with scores in the range 5.0 to 6.5 but the only other bi-polar element to score over the mid value with the boys was that of the degree of space. The environment was rated more "dirty" than "clean" and more "outdated" than "modern" by both girls and boys. The girls gave a very strong opinion that the environment was "noisy" whereas the boys were very strong in their view that the total environment was "outdated". These attitudes clearly reflected a group feeling expressed strongly by individuals during my visit. The girls boarding House, although modern and attractive clearly has a problem of privacy brought about by the transfer of sound from room to room. The Housemistress has to take private telephone calls at a discreet corner of her private accommodation to avoid being overheard in the boarding House. The boys meanwhile largely occupied dormitory rooms which though modified were not modernised and bore the unmistakable imprint of their original function and appearance. Since the construction of the rooms dated from the latter part of the nineteenth century the assessment of their being "outdated" was not surprising. A major modernisation programme was about to be initiated. The classrooms were seen as being better than satisfactory in their location and logically arranged in relation to one another with the footpaths and routeways about the school receiving a similar rating for their convenience in relative location. The grounds and setting of the school were rated very highly as was the provision of sporting facilities. Both sexes scored these

aspects of the environment at a similar level but in each case the boys scored the environmental elements marginally lower. Where there was considerable difference of opinion was in answer to the question "are the Boarding Houses suited to their use?" The girls gave a most positive response with a mean score of 9 out of 10, whereas the boys only gave a mean score of 5.8. The interesting paradox here is the generally expressed view of the school physical environment as being largely outdated yet still being regarded positively as a functioning unit particularly from the girls viewpoint.

Fifty percent of the sample saw an increase in the range of sporting facilities and twenty-five percent specifically mentioned an indoor swimming pool as the main improvement to the facilities at the school.

The Social Climate.

The pupils felt that school C tried to a considerable degree to:

Keep up a good reputation	C	O
Get good GCSE/A levels	C	In/E
Keep the school running efficiently	C	O
Put into practice Christian values	C	E
Foster a sense of sportsmanship	C	E/In
Develop each of them physically	I	In/E
Maintain firm discipline	C	E
Enable them to recognise right from wrong	C	E

Where C= Collective aim and I = Individual; O= Organisational; In = Instrumental and E=Expressive.

The pupils felt that the school succeeded to a considerable degree to ;

Foster a sense of sportsmanship	C	E/In
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However the pupils felt that the school succeeded to more than a "moderate degree" but not to a "considerable degree" to ;

Develop each of them physically	I	In/E
Keep the school running efficiently	C	O

Enable them to recognise right from wrong	C	E
Achieve good GCSE and A level results	C	In/E
Keep up a good reputation outside	C	O

The total school environment received a high score for its general character with 76% of all comments being positive in manner. 43% of all comments stated the view that the school was "friendly" and that the setting was "beautiful". The boarding houses were described positively in 56% of instances and as being "friendly" by 43% of respondents although half of those contributing views said that it was either "dark" or "cold". The distinction here is clear between the social-climatic attraction despite or perhaps because of the physical shortcomings. The classrooms scored particularly badly with only 2% of comments being of a positive nature. Nearly three quarters of respondents said they were "cold" perhaps in recognition of the prevailing climatic conditions of that day but half of all respondents said they were "cramped".

Comparison of Goals.

The school declares a balance between collective and individual goals from a lengthy list of goals. The school puts about equal weight to expressive and instrumental goals, often in close association. Two organisational goals are acknowledged. The pupils generally recognised that the school was aiming to achieve a similar set of goals and that considerable effort went to their attainment. The main goal was seen as an organisational one by the pupils but not by the school. The list of goals that the pupils perceived as being achieved by more than a 'moderate degree' was shorter than the list of target goals and tended to suggest a bias towards the collective and organisational. Unusually one goal

Enable them to recognise right from wrong	C	E
Achieve good GCSE and A level results	C	In/E
Keep up a good reputation outside	C	O

The total school environment received a high score for its general character with 76% of all comments being positive in manner. 43% of all comments stated the view that the school was "friendly" and that the setting was "beautiful". The boarding houses were described positively in 56% of instances and as being "friendly" by 43% of respondents although half of those contributing views said that it was either "dark" or "cold". The distinction here is clear between the social-climatic attraction despite or perhaps because? of the physical shortcomings. The classrooms scored particularly badly with only (% of comments being of a positive nature. Nearly three quarters of respondents said they were "cold" perhaps in recognition of the prevailing climatic conditions of that day but half of all respondents said they were "cramped".

Comparison of Goals.

The school declares a balance between collective and individual goals from a lengthy list of goals. The school puts about equal weight to expressive and instrumental goals, often in close association. Two organisational goal are acknowledged. The pupils generally recognised that the school was aiming to achieve a similar set of goals and that considerable effort went to their attainment. The main goal was seen as an organisational one by the pupils but not by the school. The list of goals that the pupils perceived as being achieved by more than a 'moderate degree' was shorter than the list of target goals and tended to suggest a bias towards the collective and organisational. Unusually one goal

was seen as being achieved to a considerable degree, being that the school aimed to "foster a sense of sportsmanship".

Cognitive maps.

The cognitive maps revealed a picture that demonstrated areas that were universal to either sex and then again some locations that had a clearly greater importance according to the individual's sex.

All pupils identified their own boarding house, the dining room and their study. Most attributed a very high preference score to the dining room which took a central and pivotal position on most pupil's maps. All pupils identified the location of the classrooms relevant to their A level subjects.

Most boys clearly located the playing fields and frequently the grounds were detailed with areas for particular sports and activities mentioned. The girls rarely acknowledged the grounds or the playing fields and if they did it was in a manner of an aside. The boys attached considerable importance to the sports fields. more than half the boys identified the girls' house whereas only a small number of girls mentioned the boys houses. this is not surprising given the relative restrictions on access to other houses. The girls tended to detail the interior of their houses in a manner not followed by the boys.

Neither sex identified the chapel in any significant number even though the school was founded on strong christian principles. Those who did draw it gave it a low priority score apart from a few girls who scored it with near maximum marks. few individuals noted the library or anywhere outside the school bounds.

SCHOOL D.

School D is a small (100) 10-18 girls boarding school in a rural setting in the West of England. The school is largely housed in a large Manor House which dates from Tudor times. The school was founded in 1926 and stands in 30 acres of its own grounds. The school is predominantly Church of England but pupils of all faiths are made welcome. The sixth form is particularly small and I had the opportunity to meet the majority of the pupils in those years.

Sample size 13 girls.

Environmental Setting as Stated by the School

No specific mention beyond the factual, is made regarding the nature of the grounds or buildings. No claims are made for the physical environment in which the school stands, though it is indeed a fine rural location.

Some stress is placed on the social climatic atmosphere. The sixth form "..... are encouraged to organise their own interests and hobbies. Although their working programme is a strenuous one they are largely free from the conventional school atmosphere.... "The characteristics of a "conventional school atmosphere" are not specified but the implication is that such an atmosphere is rather constraining as School D girls are "...may organise their own entertainment in their free time. With permission they may visit or be visited by friends." The main claim is that "...the structure outlined here is aimed at creating a friendly hard working community in which each person can feel safe and at ease".

The fascinating statement is made that "each girl is her own world with her own specific potentialities, problems and needs" putting the emphasis clearly on the individual.

The school aims to:

1. achieve the happiness of the pupil	I	E
2. Achieve academic success.	I	In/E
3. Maximise potential	I	E/In
4. provide a disciplined situation based on trust	C	E/In
5. The provision of a stimulating environment	I	In/E
6. Provide a caring environment	C	E
7. Provide a continuum of education across the age span 2- 18	C	In/E/O
8. To ensure a positive inter- relationship between school and parents	C	O
9. to develop a reasoning independent mind	I	In/E
10. To develop a sense of self discipline	I	In/E

Where C= Collective aim and I = Individual; O= Organisational; In = Instrumental and E=Expressive.

The school puts the emphasis on the individual with about a balance in the instrumental and expressive goals One organisational goal is acknowledged.

The Physical Environment.

In general the school environment was perceived very positively by the pupils at the school. In the bi-polar exercise the school environment was seen to be very pleasant and attractive. It was seen as light, quiet, spacious and accessible with scores mid way between a point equal to complete agreement and the mid point of the scale range. It was also rated as clean but it was seen as more "outdated" than "modern", but as one pupil expressed it that is not necessarily a bad thing in the context of the built environment. The classrooms were seen as well located and logically arranged in relation to one another with the footpaths and routeways about the school scoring highly for their convenience in relative location. The grounds and setting of the

school were rated very highly. The classrooms and boarding houses were perceived as being suited to their use though the scores out of ten, of 5.5 and 5.3 respectively in the questionnaire did not suggest strong support for this view. The provision of sporting facilities was not perceived as a strong point.

Fifty percent of the sample saw an increase in the range of sporting facilities and twenty-five percent specifically mentioned an indoor swimming pool as the main improvement to the facilities at the school.

The Social Climate.

The total school environment received a high score for its general character with 76% of all comments being positive in manner. 43% of all comments stated the view that the school was "friendly" and that the setting was "beautiful". The boarding houses were described positively in 56% of instances and as being "friendly" by 43% of respondents although half of those contributing views said that it was either "dark" or "cold". The distinction here is clear between the social-climatic attraction despite or perhaps because? of the physical shortcomings. The classrooms scored particularly badly with only (% of comments being of a positive nature. Nearly three quarters of respondents said they were "cold" perhaps in recognition of the prevailing climatic conditions of that day but half of all respondents said they were "cramped".

The pupils felt that school D tried to less than considerable degree but more than moderate degree to:

Keep up a good reputation	C	O
Put into practice Christian values	C	E
Keep the school running efficiently	C	O

Maintain firm discipline	C	E
Enable them to recognise right from wrong	C	E
Cultivate each persons individuality	I	In/E
To give each person an education best suited to her ability	I	In/E

The pupils felt that the school succeeded to a considerable degree to ;

Give everyone the education best suited to her ability	I	In/E
Enable them to recognise right from wrong	C	E

However the pupils felt that the school succeeded to more than a "moderate degree" but not to a "considerable degree" to ;

Develop their creative talents	I	In/E
Keep the school running efficiently	C	O
Maintain firm discipline	C	O
Achieve good GCSE and A level results	C	In/E
Keep up a good reputation outside	C	O

Comparison of Goals.

The school declares a balance between collective and individual goals, although in its prospectus it tends to stress the importance of the individual and her development towards maximisation of potential. Expressive goals are stressed highly though instrumental goals are evident in support of the expressive.

The pupils when identifying what they thought the school was aiming to do saw the collective goals as paramount though they acknowledged that the school recognised that the individual was important. In support of, the school's declared policy, expressive goals were seen as being to the fore though organisational goals were noted as significant. Interestingly they identified the same goals as being achieved as they thought were being aimed at. Three goals were seen as being achieved to a considerable degree, one biased towards the individual being "to give everyone the

education best suited to her ability". This is also the goal stressed by the school. The other two were collective in character being to "enable the girls to recognise right from wrong" and to "provide experience in managing people". The first of these is expressive and the second instrumental with expressive undertones

. In general terms then it seems that the school is accomplishing what it sets out to achieve. The school apparently stresses the individual and the values associated with the individual's development. The pupils recognise this but see it being achieved through the framework of organisational goals.

Cognitive maps.

The cognitive maps were universally simple, small yet informative. All pupils identified the boarding house where the sixth formers have their studies. However, unusually only one pupil mentioned her own study. All but one pupil identified the classrooms where her academic subjects were taught. A third of all pupils mentioned the dining room. Because these maps were simple few areas were given priority scores. Those that were given saw a mean score of 9 out of ten attributed to the main boarding house and to the grounds even though it was mentioned by only 35% of all pupils.

SCHOOL E.

School E is a 500 pupil school with 60 day pupils and 50 girls in the sixth form. It is situated in the West of England close to the centre of a large town. It was founded in the late nineteenth century and has a particular religious affiliation and the "principles of Christianity inform not only (their) acts of worship but also life outside the Chapel."

Sample size : Boys 15 Girls 10

Environmental Setting as Stated by the School

"School E does have an central tower but not an ivory one" quips the prospectus. Indeed it does, forming a centre piece to the original school. The school makes almost no claims for the physical environment beyond the purely factual. The most extravagant claim is that the new swimming pool and CDT centre are of the "highest quality". This is a remarkable degree of modesty compared to other schools. The school is in fact set in 100 hundred acres of grounds half of which are playing fields. The social climate receives a much more detailed exposition. A very large number of comments are made in the prospectus that detail the type of school E sets out to be many of the statements refer to the principle of discipline. Phrases such as "there is a formal discipline structure", "discipline is firm and reasonable", and again "boys and girls at _____ are expected to follow the reasonable lifestyle of the school, which is founded on a firm disciplinary framework" and the all embracing statement that "we offer an education for life , and believe that good discipline is essential to the happiness of the individual".

However the full range of climate forming factors are cited as of significance. Apparently " great emphasis is placed on the acquisition of academic qualifications" and "we try to ensure that each boy attains the best results possible".

School E devotes a whole page of its prospectus to the subject of "values". Discipline features again as a value but mention is specifically made of the individual pupil taking "responsibility", attaining "self-reliance" and "leadership" but to also be "aware of the world around them".

The collective objective of the school is given emphasis with the statement "we aim to create a happy, friendly and caring community, where each individual can develop his or her personality to the full and learn the values and standard which we expect from boys and girls at school E." They are it is claimed a "caring community" but one where the individual has "a full part to play".

The school aims to:

- | | | |
|---|---|------|
| 1. be a happy community | C | E/In |
| 2. keep a firm discipline framework. | C | O |
| 3. to prepare pupils to take their place in the world | I | In |
| 4. To foster the talents of the individual | I | In/E |
| 5. achieve high academic standards | C | In/E |
| 6. to ensure the less able reach their full potential | I | In/E |
| 7. achieve excellence in all activities eg. sporting | C | E/In |
| 8. offer a wide range of activities | C | O |
| 9. encourage responsibility and awareness | C | E/In |

Where C= Collective aim and I = Individual; O= Organisational; In = Instrumental and E=Expressive.

This school unusually put the emphasis publicly on the Collective role of the school. Some organisational goals are acknowledged and the Instrumental objective is to the fore. The emphasis is on efficiency, achievement and discipline.

The Physical Environment.

In general the school environment was perceived very positively by the pupils at the school. In the bi-polar exercise the school environment was seen to be very pleasant and attractive. It was seen as light, clean, spacious and accessible with scores mid way between a point equal to complete agreement and the mid point of the scale range. It was also rated as quiet by the boys but the girls saw it as more noisy than not. The two sexes had strongly differing views as to the arrangement of the classrooms. The boys scored the logic of their location at 7.8 but the girls scored it at 4.5 in both cases out of 10. The footpaths and routeways about the school scored in a similar manner for their convenience in relative location with the boys finding their location very suitable with a mean score of 8.7 but the girls having reservations with a mean score of 6.3. The grounds and setting of the school were rated very highly by both sexes with a score of 9.4. The classrooms and boarding houses were perceived as being suited to their use by the girls but the boys were far less happy about their Houses with a mean score of 4.4 out of 10. The provision of sporting facilities was perceived as a strong point at the school with a mean score for both sexes of 9.5 out of 10. The main call by both sexes was for a shop to provide everyday "provisions" and stationary. This was commented upon by nearly 60% of the sample. A significant number of the female respondents appealed for "more girl's loos"!

The Social Climate.

The total school environment received a high score for its general character with 76% of all comments being positive in

manner. 43% of all comments stated the view that the school was "friendly" and that the setting was "beautiful". An unusually high percentage, 36%, remarked that they found the school environment "hard". When it came more specifically to the boarding Houses the views of the sexes divided. The boarding houses were described positively by the girls in 56% of instances and as being "friendly" by 43% of respondents although half of those contributing views said that it was "cold". The distinction once again, is clear between the social-climatic attraction despite or perhaps because? of the physical shortcomings. The boys were more scathing in their comments with 47% describing them as "old" and high percentages stating them as being "cold or "cramped". No positive comments were made regarding the physical appearance of the Houses but nevertheless 62% said they were "friendly". The classrooms scored particularly badly with only 5% of comments being of a positive nature. Nearly three quarters of respondents said they were "drab", "dull" or "boring" all of which may be taken as either a reflection of the physical appearance or the atmosphere of those rooms.

The pupils felt that school E tried to a great degree to:

Keep up a good reputation	C	O
Keep the school running efficiently	C	O
Maintain firm discipline	C	E
get good GCSE and A level results	C	In/E

and that the school tried to a considerable degree to:

give everyone an education best suited to his/her ability	I	In/E
develop each of them physically	I	In/E
Foster a sense of sportsmanship	C	E/In

The pupils felt that the school succeeded to a considerable degree to ;

Keep the school running efficiently	C	O
Maintain firm discipline	C	O
Achieve good GCSE and A level results	C	In/E
Keep up a good reputation outside	C	O
Foster a sense of sportsmanship	C	E/In

Comparison of Goals.

This suggests that the pupils see the school succeeding in the aims that it perceives it setting out to achieve in five out of the seven cases.

The school declares collective goals as of considerable importance although the individual is recognised. Expressive goals are stressed highly though instrumental goals are evident in support of the expressive. However the school is unusual in declaring the value of organisational goals.

The pupils when identifying what they thought the school was aiming to do saw the collective goals as paramount though they acknowledged that the school recognised that the individual was of some importance. Instrumental and expressive goal played their part in about equal measure but organisational goal were seen as of like importance. Interestingly they identified the same goals as being achieved as they thought were being aimed at and most unusually there seemed to be a close link with the stated goals of the school. All this strongly suggests a school focused in its direction, with a clear route ahead and a unity of purpose. Five goals were seen as being achieved to a considerable degree, all of which are collective in character. In general terms then it seems that the school is accomplishing what it sets out to achieve. The pupils recognise this and see it being achieved through the framework of organisational goals.

Cognitive maps.

The cognitive maps revealed a by now familiar picture. The maps were unusually clear and detailed with all pupils of both sexes drawing and emphasising the dining room, their boarding House and the classrooms relevant to their sixth form courses. As one girl expressed it; " the day seems to revolve around food and arranging to meet friends". To this point there was nothing unusual and indeed the chapel, as ever, was only noted by a small percentage of either sex and those who did note it gave it a low preference score (mean score 4.5). Curiously the sixth form bar only received a mention by 65% of the pupils though this rated much higher on the preference scoring with a mean mark of 8.8 out of 10.

The new swimming pool, apparent pride and joy of the school was only noted by one pupil who gave it a preference score of 6 out of 10. A considerable surprise this as the one facility most often mentioned by pupils as desirable is a swimming pool.

The grounds and sports fields received almost unanimous acclaim and mention and is most certainly a characteristic feature of life at school E

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SCHOOL F

School F is a large comprehensive boarding school within the maintained sector which has just been given Grant Maintained status. It is located in southern England and was founded in 1932 but has undergone several significant changes since that time. The addition of the boarding houses came in the 1952 when strong links with Service parents was a feature. The second was the reorganisation into an 11- 18 mixed comprehensive serving an area some 200 miles about the school. The move to Grant Maintained status in 1991 was just another milestone.

Sample size; boys 10 girls 8 boarders 7.

Environmental Setting as Stated by the School

The school lays considerable stress on the setting of the school. On the second page of the school prospectus we read that the founder, "...in 1932, supervised the construction of the original buildings on our magnificent hill side site overlooking the harbour of Town F". And then on the same page School F we are told is "...Unequaled in the splendour of its location". Specifically the boarding house setting receives more superlatives. "The outstanding coastal and countryside location adds a richness to the pupils' environment and provides an unparalleled setting for individual and group activities". One of the boarding houses is simply described as " a large and magnificent estate house which stands in twenty acres of its own picturesque grounds."

The social climatic atmosphere is by no means underplayed. The headmaster states that " you will see our concern for young people means providing them with a stable, secure and disciplined

environment where academic, personal and social potential may be achieved in preparation for the journey into the adult world". This would seem to lay the stress on the individual as central to the schools thoughts. In the boarding houses the school aims to ".....provide a well balanced, secure and caring atmosphere". The girls boarding house for the sixth former is seen as being where as the girls get older there is a " fairly independent, though still supervised, environment..". In the boys house the sixth form are seen as subject to a House policy that ".....is designed to encourage maturity and self discipline, and to stimulate a high personal standard, while at the same time trying to maintain a family atmosphere."

With refreshing clarity the school makes very clear it's aims. They are:

- | | | |
|--|---|-----|
| to promote an atmosphere which encourages the pursuit of excellence. | C | O |
| to enable each pupil to develop his/her skills..... | I | In |
| to assist pupils in overcoming learning difficulties when and where these occur. | I | In |
| to encourage the pupils in a sense of self responsibility, | I | E |
| and also a sense of responsibility to the school and outside community. | I | O/E |
| to give pupils an awareness of their own worth, a sense of achievement and enjoyment in their own development | I | E |
| to provide a caring atmosphere in the school in which stable relationships can be formed. | C | O |
| to encourage a sense of tolerance, justice and respect for others and a respect for the environment in which we live. | C | E |
| to develop an awareness of the spiritual interpretations of life, respect for the cultural and moral achievements of mankind and to awaken a vital response to the arts. | C | E |
| to develop a growing partnership between home, school and the community. | C | O/E |
| to help the school become a focus for community development. | C | O |
| to prepare young people fully for the world of | | |

environment where academic, personal and social potential may be achieved in preparation for the journey into the adult world".this would seem to lay the stress on the individual as central to the schools thoughts.In the boarding houses the school aims to ".....provide a well balanced, secure and caring atmosphere".The girls boarding house for the sixth former is seen as being where as the girls get older there is a " fairly independent, though still supervised, environment..". In the boys house the sixth form are seen as subject to a House policy that "....is designed to encourage maturity and self discipline, and to stimulate a high personal standard, while at the same time trying to maintain a family atmosphere."

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- | | | |
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| to assist pupils in overcoming learning difficulties when and where these occur. | I | In |
| to encourage the pupils in a sense of self responsibility, | I | E |
| and also a sense of responsibility to the school and outside community. | I | O/E |
| to give pupils an awareness of their own worth, a sense of achievement and enjoyment in their own development | I | E |
| to provide a caring atmosphere in the school in which stable relationships can be formed. | C | O |
| to encourage a sense of tolerance, justice and respect for others and a respect for the environment in which we live. | C | E |
| to develop an awareness of the spiritual interpretations of life, respect for the cultural and moral achievements of mankind and to awaken a vital response to the arts. | C | E |
| to develop a growing partnership between home, school and the community. | C | O/E |
| to help the school become a focus for community development. | C | O |
| to prepare young people fully for the world of | | |

work, or further study on leaving school.

C In/E

The school claims in its general statements to have a very collective attitude to education. The creation of the right framework or environment is seen as the main function of the school. If this is achieved then it is likely that the specifics of individual academic success for example will be achieved. The tone that is set in the general text of the prospectus is only partly supported by the specifically stated aims of the school. The stated aims show a balance between the collective and individually orientated goals. Expressive goals are seen as of considerable importance as are the organisational but instrumental goals are seen as of lesser significance.

The Physical Environment.

In general the school environment was perceived positively by the pupils at the school. In the bi-polar exercise the school environment was seen to be pleasant, attractive and light but the grading was at a point only slightly above the non committal. It was not however seen as clean, spacious or quiet. Views were exactly evenly split though, with little deviation about the mid point score, when it came to grading the accessibility and age of the buildings. The arrangement of the classrooms was seen as satisfactory and the footpaths were seen as conveniently placed. It was seen as relatively easy to move about between buildings but as difficult to move about within school premises. The classrooms were poorly perceived with a mean score of 4.6 out of 10 and the provision of sporting facilities was scored at only 3.4 out of 10. The grounds and setting of the

school were rated highly by both sexes with a score of 7.6. The boarding houses were perceived positively as being suited to their use by the girls and boys with a mean score of 7.5 out of 10.

The main call by both sexes was for a better range of sporting equipment rather than facilities although there was some call for an all weather pitch. The main wish expressed by 60% of the pupils was for better study areas. A large proportion, some 45% called for a smoking room.

The Social Climate.

The total school environment received a high score for its general character with 67% of all comments being positive in manner. 43% of all comments stated the view that the school was "pleasant", but by far the most frequent comment was that the environment was "relaxed". Few negative comments were made and indeed there was a high proportion of non committal statements such as the school is "OK" and one pupil simply described it as being "there". Curiously and very much in contrast to the school's stated goals was that only one person made any comment about the view or the location. When it came more specifically to the boarding Houses the views were largely ambivalent in nature with comments such as "normal" or "average" noted but as so often the most common phrase was " fun/friendly". The classrooms scored particularly badly with only 5% of comments being of a positive nature. Nearly three quarters of respondents said they were "drab", "dull" or "boring" all of which may be taken as either a reflection of the physical appearance or the atmosphere of those rooms.

The pupils felt that school F tried to a considerable degree to:

Keep up a good reputation	C	O
Keep the school running efficiently	C	O
get good GCSE and A level results	C	In/E
keep us occupied most of the time	C	O

Where C= Collective aim and I = Individual; O= Organisational; In = Instrumental and E=Expressive.

The pupils felt that the school succeeded to a considerable degree to ;

Keep the school running efficiently	C	O
Maintain firm discipline	C	O
Achieve good GCSE and A level results	C	In/E
Keep up a good reputation outside	C	O

Comparison of Goals.

This suggests that the pupils see the school succeeding in the aims that it perceives it setting out to achieve in three out of the four cases.

The pupils when identifying what they thought the school was aiming to do saw the collective goals as of paramount importance. Organisational goals were seen as of by far the greatest importance. Interestingly they identified the same goals as being achieved as they thought were being aimed at by the school. The penultimate aim of the school namely "to help the school become a focus for community development" would seem to indicate the school does underpin much of its thinking with reference to the community outside of the school boundaries.

Cognitive maps.

The cognitive maps were unlike any maps produced by sixth formers at any other school visited. Their uniqueness lies in the obvious importance of locations outside of the school. All pupils of both sexes drew their boarding House and as such demonstrated the only

similarity in cognition found to be the usual picture revealed in other boarding schools. Less than half detailed the position of the classrooms relating to their A level subjects. Only one person identified the sports fields. No internal element to any building was noted, such as possibly a dining room, study area, library or office.

What was most striking about the maps was the prominence either by scale or by detail of the road system about the school. All roads it would seem lead to two locations; either a public house or a financial institution. The Banks found within walking distance of the school in the nearby town were located precisely and noted. The public houses revealed an added dimension for though given obvious prominence beyond that which was perhaps intended as the pupils would not have appreciated the contrast with other schools the preference scores were low. It seems almost as though they were saying we are bold enough to go in to public houses but its not the main thing in our lives(?). In any event the fact that the boarding houses are located in two cases at more than a mile from the main school must mean that the horizons of the pupils are stretched beyond the more self contained establishments discussed previously.

SCHOOL G.

This is a small south Midlands school founded in 1920 originally to provide a boarding school education without the need to charge fees for boys from the County Primary Schools. From very small beginnings it has grown to be a school of 260 pupils and to date it remains all boarding. Study in depth of this school has been made over a transitional period when extensive building was undertaken by the school and major reorganisation of both the fabric and its organisation was completed over an eighteen month period. Two new boarding houses were constructed to accommodate boys from the age of 14. The most senior boys left the formerly co-educational sixth form boarding house and in doing so an all girl sixth form house was created. The former senior boys house was significantly changed and modernised to create in effect a "new" house but at the same time freed much of the former residential accommodation for use as classrooms and administration. The effect of this almost cataclysmic change on the perceptions of the pupils is traced prior to revelations about the plans and subsequently during the building work and then again at some period after completion and when the new arrangements had been in operation for some time.

Sample Size; 35+, Boys 22, Girls 13

Environmental Setting as Stated by the School

The school is unusual that it uses in its prospectus an extract from a best selling guide book to the Cotswolds by Susan Hill using as it were an independent view to provide a tribute to the setting of the school. The author of the book says, "On that sunny June afternoon, we strolled about, watching

a vigorous tennis match and being amused by these (school) buildings, set down in the middle of a lush, green, utterly Cotswold valley. And then we walked through the wide stable yard, part of the school, towards an archway. Beyond it, at our feet, lay the most glorious English sight.

The Cotswold hills, meadows full of buttercups, and grassy green slopes surrounding us in a beautiful bowl under the sky, and there in the middle of it all, was the cricket field with a match in progress. We sat on a step and watched, and I could have stayed for ever and been utterly content, since one version of paradise for me is a cricket match on a perfectly situated ground on a June day of glorious sunshine in the heart of England" (Hill, 1988).

Beyond this glowing testimonial the prospectus contents itself with one superlative, stating that the school "...stands in a magnificent setting on a hillside overlooking the River __, 600 feet above sea level."

More stress it would seem is placed on the "atmosphere". The Founder of the school set out we are told, in 1920, to create a boarding school and in doing so he aimed at "creating a comfortable, cultured and friendly atmosphere for boys leaving home for the first time". Again we are told that the "aim is to create an atmosphere which is socially relaxed and friendly, while intellectually stimulating".

Thereafter the school gives little indication of its philosophy or policies towards the pupils making it difficult to gauge the intentions and goals of the school. Published material contents itself with a factual appraisal of the state of the school in

terms of its facilities and pupil achievements.

The school claims to

to promote an atmosphere which encourages success	C	O
to enable each pupil to develop his/her particular talents.	I	In
to encourage the pupils in a sense of self discipline.	I	E
to provide a caring/responsive environment in which children may mature.	C	O
to encourage a sense of tolerance and respect for others.	I	E
to achieve good results in public examinations.	C	In/E

Where C= Collective aim and I = Individual; O= Organisational; In = Instrumental and E=Expressive.

The school claims in its general statements to have a balance of individual and collective attitudes to education. The creation of the right social climatic environment is seen as a central theme of the school. If this is achieved then it is likely that the specifics of individual academic success for example will be achieved. The stated goals are very broad and as such hides a whole spectrum of implied sub-goals.

In the case of school G assessment of the pupils perceptions were made prior to during and following reorganisation. Therefore three figures are sometimes mentioned in the context of a particular question where collective views, as expressed by the mean scores showed a significant change over a period of time.

The Physical Environment.

The pupils views of the school's physical environment over time reveals a very clear pattern. In all but two of the bi-polar co-ordinates the pupils immediately on the opening of the reorganised school buildings took a marginally more enthusiastic

attitude to the their environment. However , two years on and in every case opinions had been upgraded from that initial somewhat non-committed reaction and in all cases scores exceeded those held prior to reorganisation. Interestingly the same general relative pattern of scores was retained no matter at what stage the questionnaire was applied. The pupils perceived the school to be at only a moderate level for each of the parameters and rather poorly rated as more "outdated" than "modern" and particularly "inaccessible". However, two years on and the school is perceived much more positively and in particular as far "lighter", "cleaner" and "quiet". Interestingly the school is only just perceived as more "modern" than "outdated" and still the school is seen as somewhat "inaccessible".

In three areas there has been very little shift in perception of the school environment. The grounds and setting of the school is consistently scored at a high level. Views change little about the classroom arrangement and convenience of footpaths which are rated at between 6.0 and 6.7 out of 10 at all three stages. In all other assessed areas there is a consistent pattern revealed whereby the perceptions of pupils immediately after reorganisation showed a very significant drop in ratings to in several cases poor levels but then a recovery to encouragingly high levels in most cases significantly above the mean scores of all schools.

The Social Climate.

The perception of the social climate of the school appears to have varied little throughout the period of change that was studied. There was a general drop in the scores attributed to the

scores immediately post reorganisation but there was a recovery two years on. The scores prior to and two years on were generally either above or at the mean score levels of all sample schools. The overall pattern of importance of goals did not show any significant change over the time period. The position quoted is therefore for the most recent data.

The pupils felt that school G tried to a considerable degree to:

Keep up a good reputation	C	O
Get good GCSE/A levels	C	In/E
Keep the school running efficiently	C	O
give an education suited to ability	I	In/E
Develop each of them physically	I	In

The pupils felt that the school succeeded to a "considerable degree" to ;

Keep the school running efficiently	C	O
To give an education best suited to their ability	I	In/E
Achieve good GCSE and A level results	C	In/E
Keep up a good reputation outside	C	O

Comparison of Goals.

The school is therefore achieving in those areas that it is aiming to succeed from the pupils viewpoint. There is also noticeable parallels with the declared goals of the school. The total school environment received a balance in its comments for its general character. 30% of all comments stated the view that the school was "friendly" and that the setting was "attractive." The boarding houses were described positively in most instances and as being "friendly" by 25% of respondents although about 25% irrespective of stage of development, saw the Houses as either "dark" or "cold".

Cognitive maps.

The cognitive maps demonstrated a number of common features

irrespective of the stage of development of the school. All pupils of both sexes drew their Boarding House, and the position of the classrooms relevant to their particular A levels. More than three quarters of the pupils identified the Dining Room, the Main Building where the main assembly hall and administrative areas are to be found and their own study Bedrooms. (all sixth formers have their own Study bedrooms). Some internal elements to buildings were noted, such as study areas, library or offices but again there was no discernable pattern identified as a result of the passage of time.

To this point there is nothing to suggest individuality. However, there were a number of sex specific points which characterised all three time periods. The sports fields and in particular the sports hall was seen as considerable importance by the boys (72% and 67% scored with priority ratings greater than 7) but the girls saw both areas as of only peripheral significance with only 43 and 18 percent mentioning them respectively. The majority of boys (59%) mentioned the girls' boarding house but here a change with time is perceived. Prior to reorganisation the sixth form House was co educational and the girls never had the opportunity to visit other boy Houses. With the creation of three new boy houses initially there was no desire for girls to alter the long established pattern and to visit other Houses. Two years on and given that girls are only taken in the sixth form there was nobody to recall the old ways and no sense of tradition to be continued. As a result very few girls mentioned a boy's House prior to reorganisation. Today as many girls identify boys houses and indicate them as being of

importance as do the boys for the girls Houses.

The maps as drawn similarly show a change over time. The boys' maps tended to be fuller with a total picture of the School. The girls' maps prior to reorganisation showed a marked orientation to a central point of the Girls' House which in reality is positioned well to the west of the school. This meant that areas in fact of significance to the school as a whole were ignored in many cases if they are found to the east of the Main Building. The Church attended by all pupils on at least three occasions every week was only mentioned by about half the pupils and the priority score was low for most pupils although for a small minority it clearly has a very great significance. The village shop scored consistently higher for both number of mentions and for its importance.

The pupils, especially the boys showed almost instant adaptation of their mental maps to the creation of the new Houses. However, even though the first questionnaire was only applied a few weeks from the end of the term prior to the opening of the New Houses only 5% of the pupils acknowledged their existence in their maps.

Finally, the emergence of recognition of one House is identified. One of the new Houses was located in an area of the school previously not on an established route of the pupils. As such it was seen as "remote" and isolated even in comparison to the other new building. In reality, the Houses were in effect equidistant from say, the dining room but this fact has taken two years to be established. Recognition is one thing, even crude positioning but appreciation of relative distance in a

functioning context takes much longer to learn.

SUMMARY

Eight case studies are developed with the intention of illuminating specific characteristics and generalities. It appears that where a school claims a strong affiliation to a force that shapes its goals this does gain recognition in the minds' of the pupils. The overwhelming picture is revealed, however, that the school is seen as most concerned with organisational and collective goals.

CHAPTER 7

CONCLUSIONS

In total 15 boarding schools were researched in detail through the medium of the questionnaire responses. Three hundred and fifty three pupils took part. This, of course, represents only a small percentage of the total number of boarders but selective sampling of the schools produced a spread of boarding school "types". From this spread, and as a yardstick against which it is possible to measure the individual schools the "typical" school has been identified from the statistical mean of the scores given by the pupils.

THE 'TYPICAL' BOARDING SCHOOL AS PERCEIVED BY THE PUPILS

Diagrammatically the results are illustrated in the Appendix C Appendix C shows the position of the mean bi-polar score on a standard diagram. This diagram is derived from all 353 responses from pupils of both sexes. The remainder of Appendix C shows the values achieved by individual schools.

Appendix D shows by means of bar graphs the scores achieved by each of the sample schools under each of the headings relating to the subject matter under discussion. Also shown on the graphs using a line graph, is the mean value achieved by all schools visited during the survey. The raw data for these graphs is shown in Appendix F.

Appendix E shows by means of scatter graphs the visual representation of the pupils perceptions of their schools. Three graphs are drawn with the parameters of "does try", "succeeds", and "should try to" in turn graphed against each other and the

values derived from the mean of all responses of pupils for individual. The category "does try", indicates the scale to which the pupils feel the school is attempting to achieve a particular goal. "Succeeds", is the term used to indicate the level of success achieved in fulfilling the goals the pupil sees the school trying to achieve. Finally the category "should try to" is the assessment of where the pupil feels the priorities for the school should be placed.

The overall mean is then calculated and plotted. The axes allow a visual representation to be made of, say, how the school matches what it sets out to achieve with what it actually achieves. The scatter graph is divided into four quarters each with its distinctive character determined largely on the boundary value of 2.5. Points above 2.5 are perceived positively. The Character Categories are stated at the start of the appendix. Boarding schools are seen as "accurately focusing", "positively achieving and well directed", "highly effective and energetically focusing".

When asked the direct question about what if any facilities the boarder would like to have in their school, two consistent features are mentioned. The first falls into the broad heading of improvements to the physical structure of the boarding house where particular deficiencies are noted. The second is the widespread desire amongst pupils for an indoor swimming pool!

The physical environment.

The boarding school is "pleasant" and "attractive". The school is seen to be moderately well placed in terms of the scores for how "light", "clean" and "spacious". It is seen as "quiet",

"modern" and "accessible" but the scores are only just in the positive. In the last three bi-polar prefixes there is in reality considerable variation from school to school.

The setting and grounds are seen as of considerable merit in most schools the mean score is 8.2 out of 10. There is very little deviation about this mean. The way in which schools arrange their buildings internally and externally is generally perceived positively though with some significant deviation from that mean in individual schools. The scores for, classroom location, footpath convenience, movement between and within buildings lies between 6.0 and 7.0. The suitability of the classrooms is poorly rated with a mean of 6.0 and generally little deviation about the mean. The suitability of the Boarding houses shows considerable deviation about the mean but generally they are seen positively with a score of 6.7. The quality of the sporting facilities shows considerable variation from school to school. Some schools clearly have very satisfactory sporting facilities but the mean of 6.5 is actually representative of few schools in the sample. Girl schools seem to score poorly here.

The social climate

The general picture is revealed in the graphical representative in the Appendix E of the goals of Boarding schools. Boarding schools are seen as "accurately focusing", "positively achieving and well directed", "highly effective and energetically focusing". The raw data is derived from Table 1.7

In particular schools are seen as trying to a considerable degree to;

keep the school running efficiently

keep up a good reputation
achieve good GCSE/A level results

all these aims are collective in character and in the case of the first two in the list are organisational in nature. Although the individual is often described as the main concern of the school by the school itself this is not recognised as being the case from the pupils viewpoint. The school as they see it is largely run for its own greater glory and not as often claimed to maximise the potential of the individual.

As an aside almost the boarding school clearly does not see its role as training or as aiding the career development of teachers

The cognitive map

The similarities revealed in the maps drawn by the sixth form pupils, no matter what their school location, are far more striking than the differences. The stated ethos of individual schools was not apparent in the cognitive maps or in the perceptual values of pupils. The over riding determining factor was the common denominator of all the pupils being resident in a boarding school. The perspective of the 'outside world' is marginal even though it may be sought after. Pupils who live in schools located in rural settings bemoan what they see as their isolated existence. Pupils attending boarding schools complain that their opportunities to move in the 'outside world' are too limited and restrictive: a case of so near and yet so far.

In all situations the world of the boarder is a small one. It is characterised by a few key areas but without doubt the daily

movement of the pupil orbits about the dining room. This room is perhaps the most important place for social interaction. Meeting room, debating house and refectory are all rolled into one. This fact is often overlooked in the need for administrative convenience to clear and clean the room. In his daily orbit the pupil 'lands' at a number of other significant places. The classrooms relating to the subjects under study feature prominently as one might expect. The boarding house has a strong gravitational pull of its own. This is emphasised if the pupil has his own study bedroom which is clearly seen as somewhere to call his own. The opportunity to personalise the room and express his own personality allows him to claim his own piece of territory. The sports hall and for a significant minority the sportsfields represent another place or area of importance. However it clearly does not have quite the universal draw that one might expect given the emphasis placed upon games in the extra curricular activities of such schools. Females, for example attach much less importance to such areas. The sporting attraction ebbs and flows as a force in a seasonal fashion as rugby, for example, gives way to hockey and in turn gives way to cricket or tennis if it is a boys school.

Beyond this very limited list, which if there is any common denominator to it has the feature of involving communal activity, largely in a social or pleasurable context, there is very little else that is mentioned often enough to be identified as of general significance. Not surprisingly, individuals identify places of importance to them: a musician may mention the music school, the artist the art school; a forgone conclusion perhaps?

What is of more interest is perhaps what is not mentioned. Most prominent on the list of 'omissions' is the chapel or place of worship. Often heralded as the heart of the school it is barely recognised and if it is then it is only in order to emphasise how unimportant this part of school life is to the pupils.

Continuing this theme of omissions, the headteachers study or school office hardly exists in the pupils' mind, and neither does the library, and most striking of all the outside world! Roads, shops or cinemas largely are not features of the boarding school pupil's mental map. Perhaps, if a local cafe or shop exists to supply everyday needs it may take on part of the function of the dining room: the common denominator here being again food. Despite the apparent desire to broaden horizons the reality is that it is nearer to the school than further away.

The mental map, as reported in the early days of my research (King, 1990) reveals clearly defined, egocentrically orientated features. 'My study' is a prominent feature of the school 'world' of both sexes; 'my 'A' level classroom(s) was another. However, more ethnocentric elements are also to be identified, for example the sports fields and the school grounds where friends can meet and enjoy each others ' company.

One feature that does appear to vary considerably in terms of its impact on the child's mental map is the presence or otherwise of other boarding houses. In schools where effectively a total exclusion policy operates from houses apart from one's own the world of the pupil is noticeable simpler and more limited in its points of focus. Where a more open house system exists one or two, though very rarely more no matter what the size of the

school, more houses may be identified. The role of the girl's house is often of great significance. In cases where boys are admitted the girl's house often takes on the role of a (unofficial) sixth form centre. The boys often attach great importance to the girls house though rarely is this reciprocated, even if the girls are 'attached' to a boys house for purposes of administration and inter-house competition.

The effects of organisational change

A number of points can be made regarding the impact of organisational change in the light of the experience at Rendcomb College. The research period extended over the period prior to and up to two years beyond the major changes in the built environment and organisation of the school. Two new boarding houses were built and one modernised along with the move from a horizontal house structure to a vertical system where boys enter their senior houses at 14 and stay until they leave the school, usually at 18.

Cognitive maps.

Prior to reorganisation but during an advanced stage of the building process of the new boarding houses pupils had not adapted their mental maps at all to acknowledge the impending existence of the new houses. This was despite the fact that one was sited alongside a major footpath linking the sportshall with the boarding houses as they then were. When boys were allocated to their new houses a degree of recognition took place amongst some of the pupils, but the majority still failed to draw the new houses on their maps. On their opening in September 1989 all pupils acknowledged their new house and most recognised the other

senior houses. Interestingly the girls who had remained in their previous house also noted the new houses. However, one of the new houses was constructed on a site separate from any previous thoroughfare in the school, grounds and not at such a visible location as the other house. This house was perceived as being more cut off, and at a far greater distance from all school facilities. In reality it is sited slightly closer to all facilities in the school, except the sportshall, than the other new house. It took a full academic year before prejudices were broken down and the relative distances became appreciated. It seems that familiarity of site is linked very closely to familiarity with pre-existing routeways.

In all other respects the cognitive maps conformed to the familiar pattern described in the section on the 'typical' school.

Perceptual Change.

Perception of the physical environment was measured in the same way as outlined in previous chapters. The questionnaire was administered again prior to and post re-organisation. The results are shown in Appendix G. What they reveal is the marked deterioration in the pupils' perception of their school environment immediately on the introduction of the new system of buildings and administration. However, this negative effect had evaporated two years on from that date. Further when it came to the assessment of pupils' perceptions of the goals of the school and how well they were being met there was a distinct loss in confidence in the school. The same rank order of the goals

remained, but the level of success achieved as perceived by the pupils showed a marked deterioration. Once again, two years on and the school had apparently bounced back to a point where it was doing at least as well as it had been doing before re-organisation.

The conclusion must be that any school contemplating major reorganisation must expect there to be a period when there is a negative reaction to the reforms. Pupils in boarding schools appear conservative in nature, but with familiarity with the new reforms will come to be accepted. Of course the school is aided in this by the fact that over a period of five to seven years the whole school population changes and soon there will be no one to remember the old system. There may be surprising areas of resistance and perhaps undervaluing of areas that were previously 'remote, in the sense that people rarely passed by the site of a new building, are chosen for the location of new facilities. If a building can be incorporated into the existing immediate built environment there is greater chance of its widespread adoption.

The final aim is to formulate recommendations to improve the effectiveness of residential education from an environmental viewpoint. From the research the following points are made:

1. In meeting the standards likely to be required under the Children Act, (1989) schools will satisfy the minimum needs of the pupil as a boarder at this time and in doing so ensure his welfare. In commissioning and designing new buildings the school should have the greater regard for the inside qualities of the infrastructure rather than the external aesthetics. Buildings

should not be just organised from the point of view of authority and administrative convenience but clear recognition should be made of the fact that such buildings as boarding houses represent the pupils' effective 'home' for a majority of the year.

2. Assessment of the built environment should be made with clear recognition of the views of the "Users" of the buildings. In particular there should be considerable care to guard against the transference of noise through buildings.

3. Privacy, and variety of types of space are vital in the boarding environment. Those commissioning and running boarding houses should be aware of the needs of the pupils in respect of privacy and space and take steps where needed to ensure its availability.

4. That Headteachers should move positively to raise the standing of the classroom as a setting where an effective, stimulating and pleasurable learning experience can be undertaken.

5. That the Dining Room be recognised as a central focus for school life. The meal, surroundings and organisation of such a room and its attendant experience should be made a very high priority.

6. Schools that have a clear statement of their aims seem to be perceived most positively by the pupils. Schools should set out plainly and positively they see as their aims and as required in law and as stated in The Children Act 1989, Guidance and Regulations, Volume 5 Independent Schools, (1991). (paragraph 3.1.1.) as " the school must have a clear statement of principles

on which the life of the school is based."

Guidance on how to formulate a clear statement of aims is given by Anderson, (1992).

6. In setting the aims of a school the individual is often cited as central to the school's life. In reality, most pupils see the school as first and foremost interested in itself. The school should take positive steps to raise the status and self esteem of the individual. There appears to be a poor match between the stated goals of a school and how pupils perceive reality when the position of the individual pupil is considered. It is not good enough for schools to pay lip service to what they think parents want to hear.

7. That the uniqueness of individual schools is not obvious, or indeed often apparent to the pupils. Rather boarding schools are seen first and foremost as just that, given their internal organisation and associated rules, and as such uniform characteristics are primarily evident representing the genus known as "boarding Schools".

8. That the perception of the Church and attendance at services is at a level of low esteem. This is just as true of schools claiming particular denominational affiliation as for others that might be said to follow a less rigorous approach in fulfilling the requirements of Government legislation.

CHAPTER 8

PROSPECT

This whole work was conceived in advance of but to a large extent was taken over by the Children Act, (1989). For the future the whole of the school environment will come under closer scrutiny and already Social Service Departments have begun to draw up recommendations for acceptable standards in the built environment. This thesis has covered only a small number of the total boarding population but soon there is the prospect of a complete survey of the total population of boarders.

There would appear to be a need for a considerable amount of training within the world of mainstream boarding schools to raise the awareness of what is now not just an academic side show but an important and central part of government legislation. It is hoped that with this work as a background, a training scheme can be formulated to achieve this aim through the authors continued membership of the Holbrook Group.

APPENDIX A.

DESIGN EVALUATION QUESTIONNAIRE

DATE.....

BUILDING NAME.....

THE SETTING

State the function, historic usage and ownership of the building

The group/individual initiating the evaluation should answer the following questions:

Respondents Name

1. What are the five most important goals to be achieved by the evaluation of this building?

(i)

(ii)

(iii)

(iv)

(v)

2. Which groups will use this building?

GROUP	PRIORITY RATING (1-10)	COMMUNICATES WITH?
.....
.....
.....
.....
.....

Priority rating based on assessment of which groups have priority in affecting the goals mentioned above.1=low.10=high
 Assessment to be made by the respondent.

3. Materials and Ambient Qualities

(i)

FACTOR	EXISTING	PLANNED
Building Materials		
Building Colour		
Roofing Materials		
Roofing Colour		

(ii)For the following components of the built environment score the building out of 10 firstly in terms of existing quality of provision and secondly for state of repair.Where appropriate the degree of privacy afforded should be taken into consideration and commented upon.

FACTOR	Provision	State	Comment
Windows			
Doors			
Walls			
Natural Light			
Lighting External			
Lighting Internal			
Decoration			
Electrics			
Plumbing			
Heating			
Showers			
Baths			
Toilets			
Ventilation			
Drainage			
Kitchens			

Reference to be made to the Statutory Instrument 909 for specific requirements

- Fittings
- Car Parking
- Access roads
- Paths/Steps
- Waste Disposal
- Fire Exits
- Fire Alarms
- Staircases
- Telephone
- Laundry
- Store rooms
- Hot drink facilities

(iii)

Room Assessment

Each room type to be identified within the building. This will vary, of course with the function of the building. Each room to be scored out of 10 under the headings (1=Bad, 10=Excellent)

Room	Width	Height	Light	Colour	Decor	Notes
.....

(iv)

Space assessment

Each type of space is to be assessed for its quality of provision in terms of size of space and relative location. Both are to be scored out of 10 where 1=bad and 10 =excellent

Space	Size	location
Personal		
Semi-personal		
Activity		
Common Room		
T.V. Room		
Games rooms		
Library/Resources		
Quiet		
Kitchens		

(v)Assess the impact of noise (1=low impact)

Noise

Inside Building

Outside Building

Signs Comment on clarity,number and location

Fire

Others.

THE PROXIMATE ENVIRONMENT

This element of the questionnaire attempts to assess the environment in which the building is or will be located.Again mark the factors out of 10 (1=lowest)

Factor	Mark	Comment
--------	------	---------

Climate

Air Quality

Topography

Drainage

Soil

Gardens

Natural landscape

General Aesthetics

Building Density

THE USERS

The Users can contribute by filling in the previous sections of the Questionnaire. However the perceptions of the Users is of particular value. Please mark with a cross in the spaces provided how you assess the building being evaluated.

How would you describe the building

impressive	()	()	()	()	()	unimpressive
beautiful	()	()	()	()	()	ugly
warm	()	()	()	()	()	cold
lively	()	()	()	()	()	static
inviting	()	()	()	()	()	uninviting
functional	()	()	()	()	()	not functional
like	()	()	()	()	()	dislike
light	()	()	()	()	()	dark
safe	()	()	()	()	()	unsafe
effective	()	()	()	()	()	ineffective
	5	4	3	2	1	

APPENDIX B

This is the questionnaire as applied in the schools visited during the period of th field programme.

RESEARCH QUESTIONNAIRE

Please answer the following questions as honestly as possible. No name is asked for and therefore all answers are in confidence.

THE PHYSICAL ENVIRONMENT

1. Look at the following diagrams. Mark the position which best reflects your school as you perceive it.

eg. good _____ X I _____ bad

If you thought your school to be just better than acceptable you would put a mark at the point X

Please complete the following:

- | | | |
|------------|-------|--------------|
| Pleasant | _____ | Unpleasant |
| Attractive | _____ | Ugly |
| Light | _____ | Dark |
| Clean | _____ | Dirty |
| Quiet | _____ | Noisy |
| Spacious | _____ | Cramped |
| Modern | _____ | Outdated |
| Accessible | _____ | Inaccessible |

2. How do you find the arrangement of classrooms for the subjects you take. ie. how logical are their organisation and location?
3. Are the footpaths and routeways about the school convenient?
4. How easy is it to move about the school from building to building?
5. How easy is it to move about within school buildings?
6. Are the classrooms suited to their use?
7. Are the boarding houses suited to their use?
8. How would you evaluate the provision of sporting facilities at your school?
9. How would you rate the grounds and setting in which your school is located?
10. Can you think of anything you would like the school to provide to improve its facilities? Please list in the space provided:

.....
.....
.....

11. Write down five words that best describe your school environment:

.....

12. Write down five words that best describe the school classrooms:

.....

13. Write down five words that best describe your boarding house:

.....

GOALS THAT A SCHOOL SHOULD PROMOTE

14. See attached sheet.

RELATIONSHIPS

15. Which of the following would describe your reaction when in the company of a girl? (Or boy if you are a girl).

- I'm quite at ease
- I look self-confident but don't feel it
- I tend to put on a bit of a show
- I feel a bit embarrassed
- I feel uneasy

16. How long are you alone during a typical weekday?

- 5 minutes or less
- 5 - 15 minutes
- 16 - 30 minutes
- 31 - 60 minutes
- 61 - 120 minutes
- More than 120 minutes

17. Do you have a girlfriend (boyfriend if a girl)? Please state if from your own school.

.....

18. Would you like more time alone?

This school	Does try to	Should try to	Does Succeed in
cultivate each person's individuality			
Make life here something like home			
give everyone the education best suited to his ability			
train leaders for the future			
keep the school running efficiently			
develop each of us physically			
put into practice Christian values			
prepare us for a democratic society			
Get good GCSE/A level results			
maintain firm discipline			
develop our critical faculties			
Prepare us for a suitable career			
teach people to respect each other			
keep us occupied most of the time			
develop our cultural interests			
provide experience in managing people			
enable us to recognise right from wrong			
develop our creative talents			
foster a sense of sportsmanship			
keep a good reputation outside			

Aims of the boarding school

Score this way 0 - 5

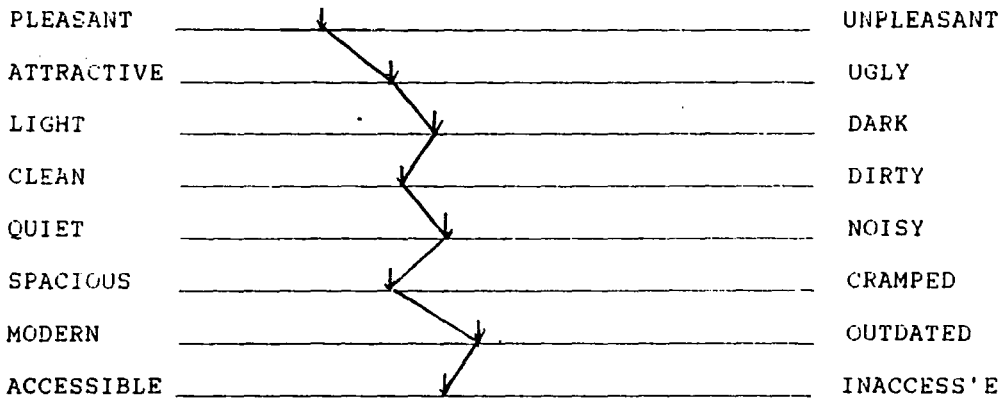
- 0 the school doesn't try, shouldn't try, doesn't succeed
- 1 the school tries to a very small degree, should try to a very small degree, succeeds to a small degree
- 2 the school tries to a small degree, succeeds to a small degree
- 3 the school tries to a moderate degree, should try to a moderate degree, succeeds to a moderate degree
- 4 the school tries to a considerable degree, should try to a considerable degree, succeeds to a considerable degree
- 5 the school tries to a great degree, should try to a great degree, succeeds to a great degree.

APPENDIX C

This shows in summary form the position as indicated by the arrow heads, where the mean score of all pupils' is located in response to the bi-polar questions. See Appendix B for questionnaire.

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

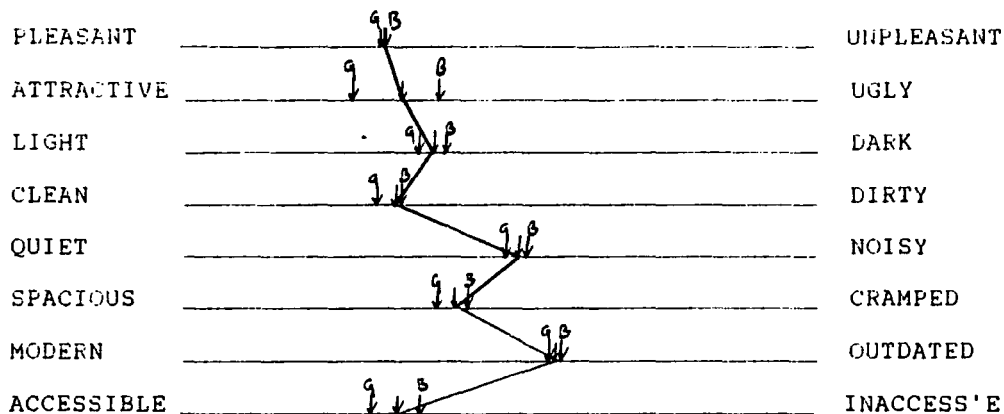
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



ALL SCHOOLS

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

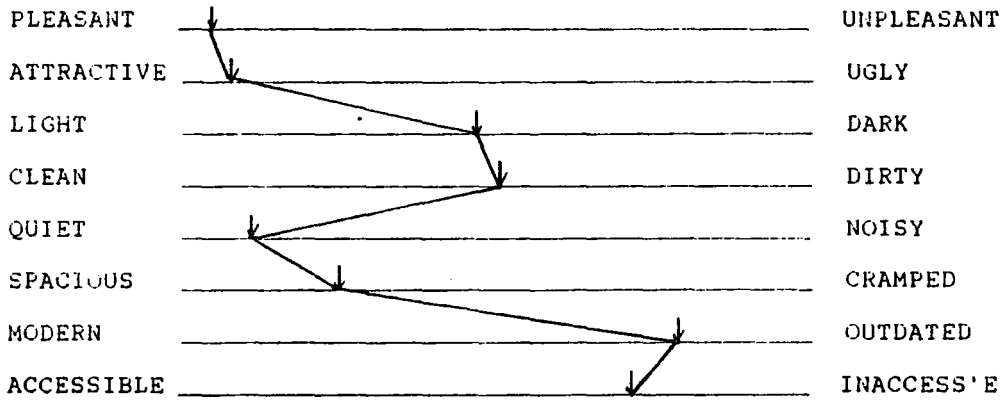
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



SCHOOL A

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

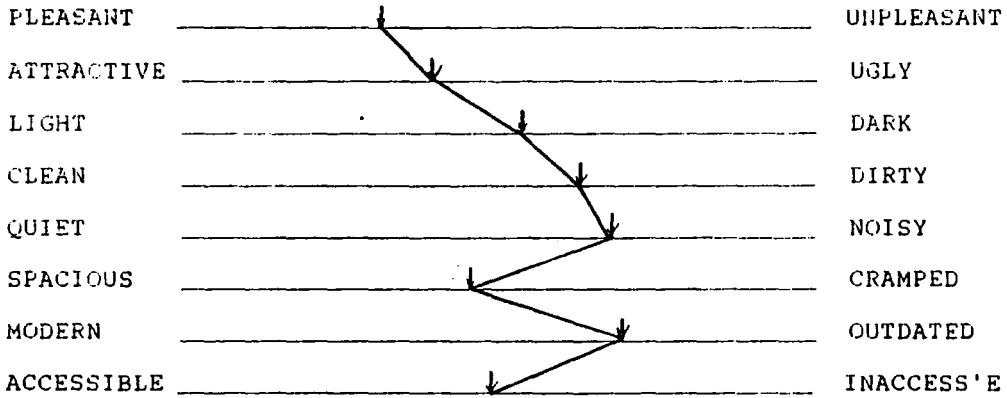
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



School B

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

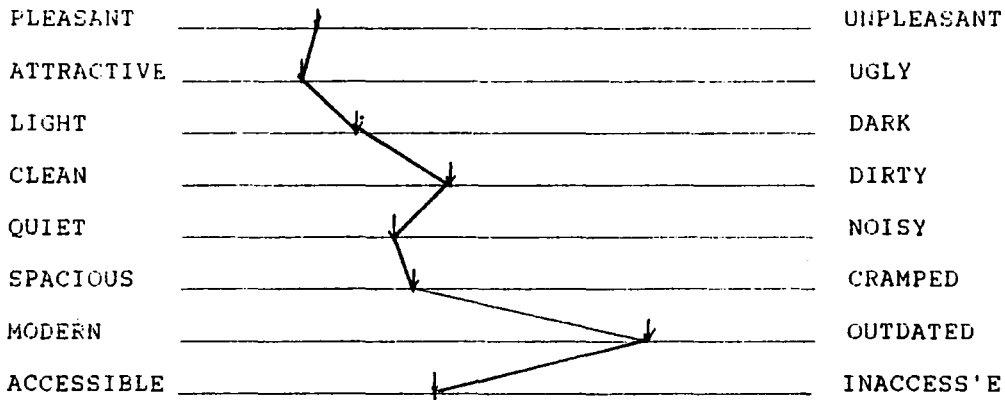
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



School C

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

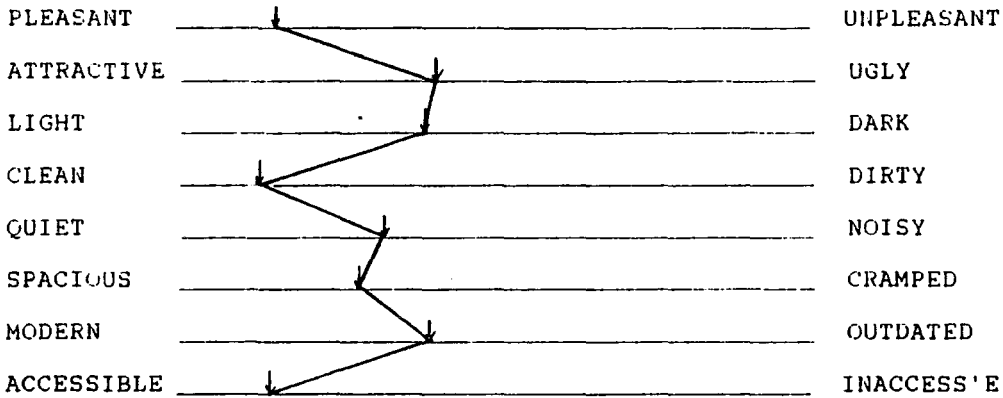
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



SCHOOL D

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

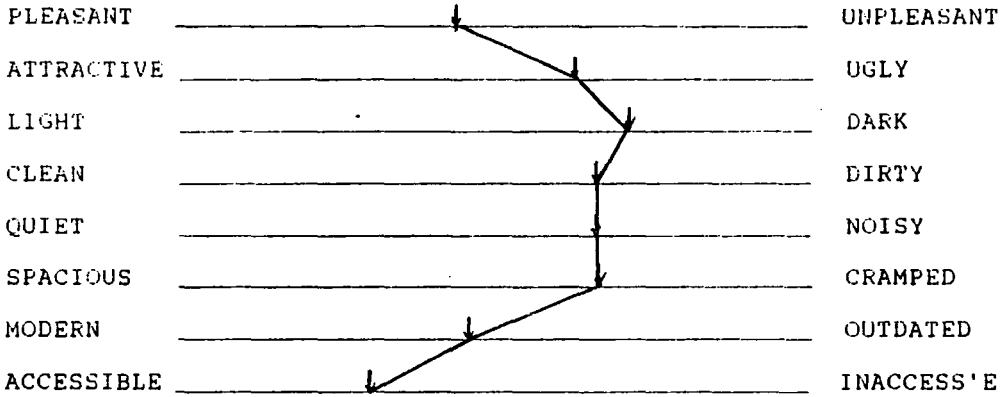
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



SCHOOL E.

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

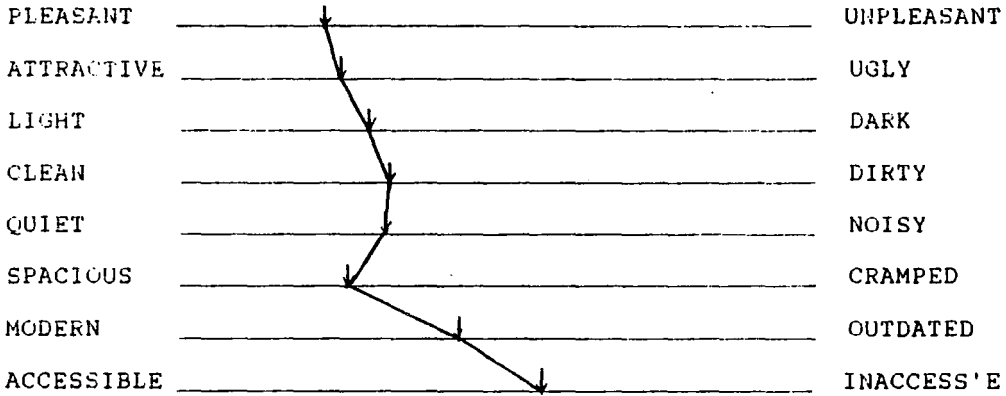
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



SCHOOL.

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.

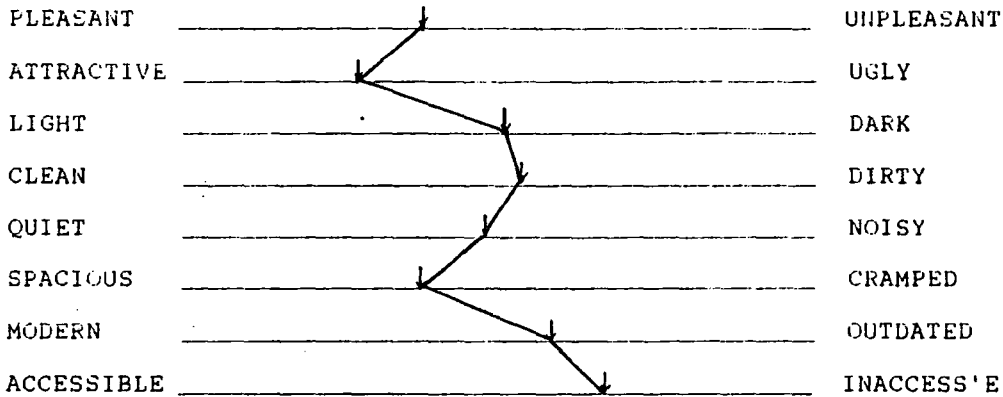


SCHOOL G. TWO YEARS AFTER

RE-ORGANISATION

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

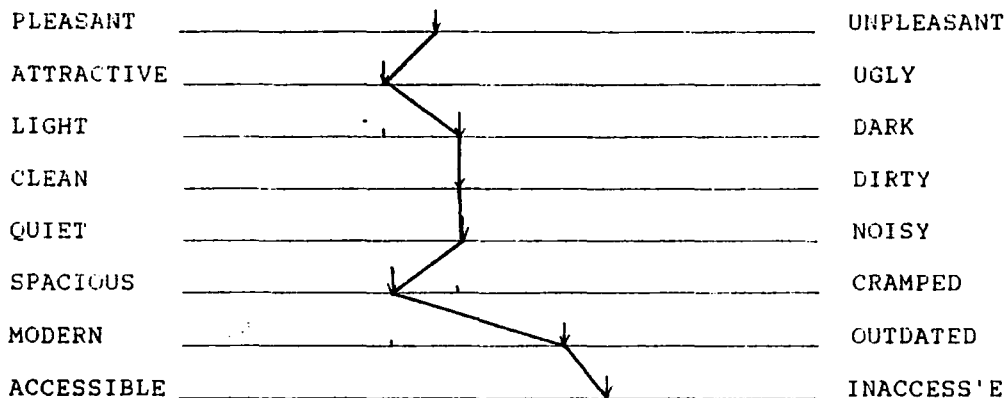
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



SCHOOL G PRIOR TO REORGANISATION

BI-POLAR ANALYSIS OF PUPILS PERCEPTIONS

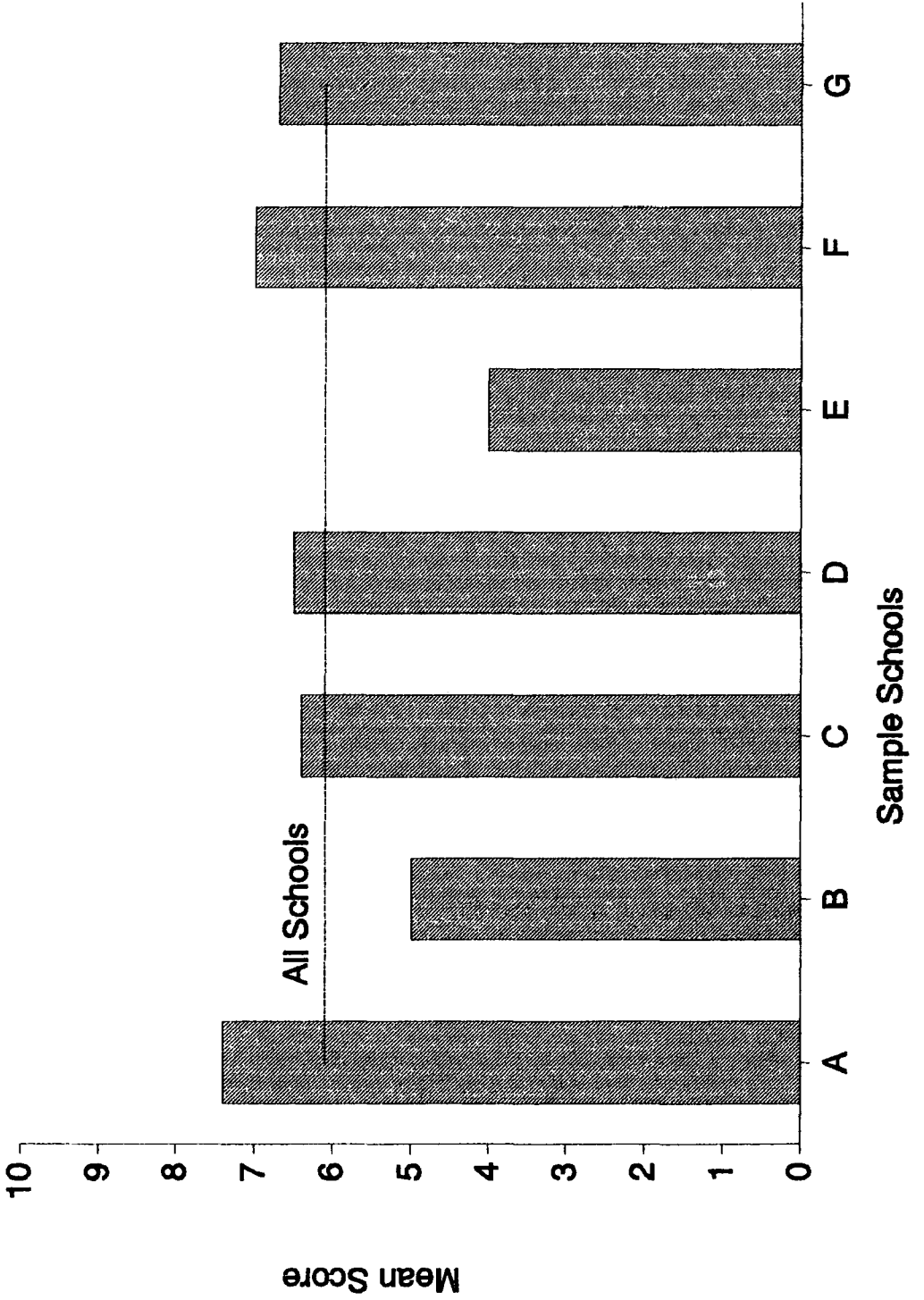
This diagram presents in summary form the perception of the pupils at this school have of their physical environment. This diagram was compiled by taking the mean of all the scores recorded by the sample completing the questionnaire.



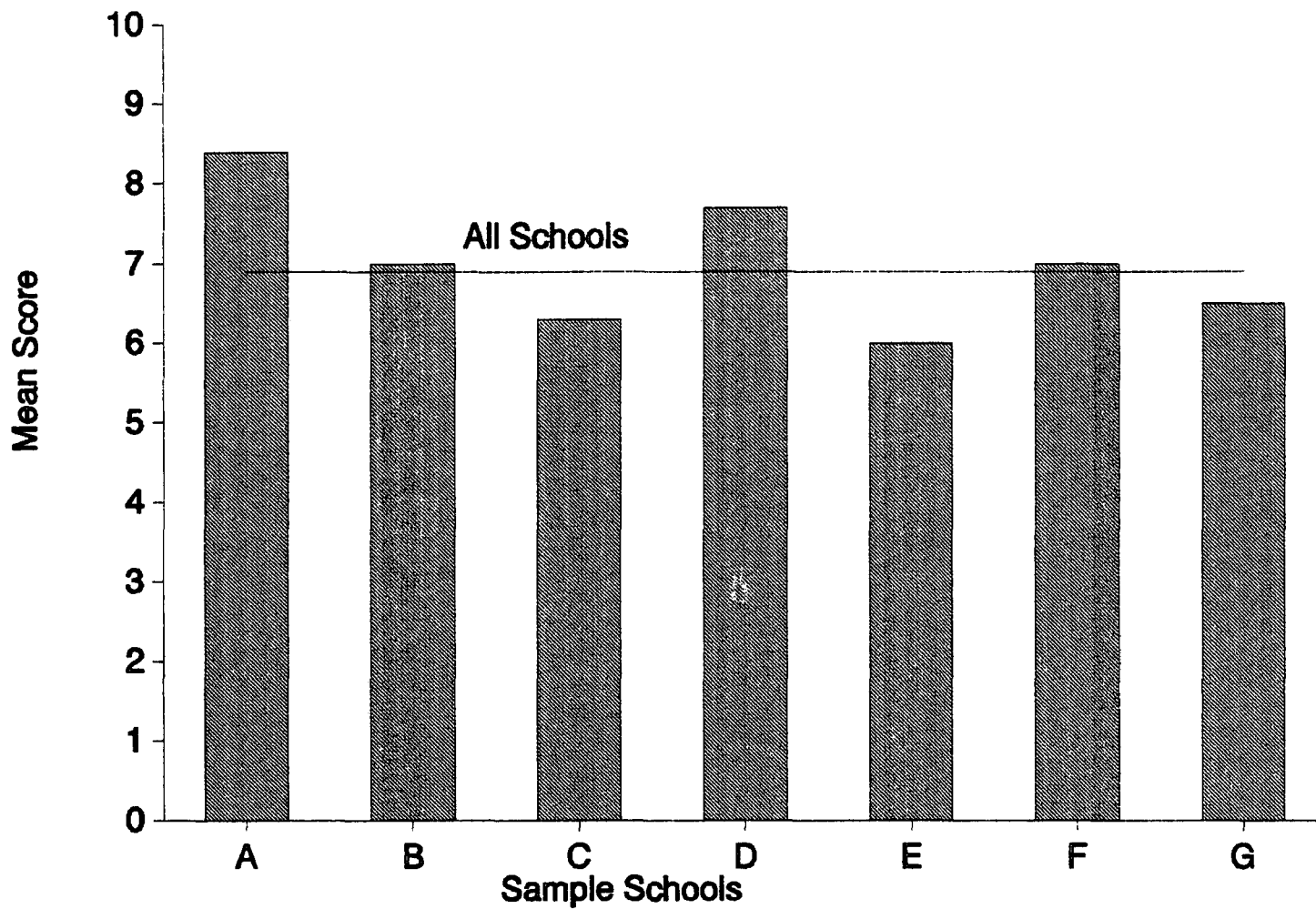
SCHOOL G JUST AFTER REORGANISATION

Classroom Location: Pupil's Perception

APPENDIX D



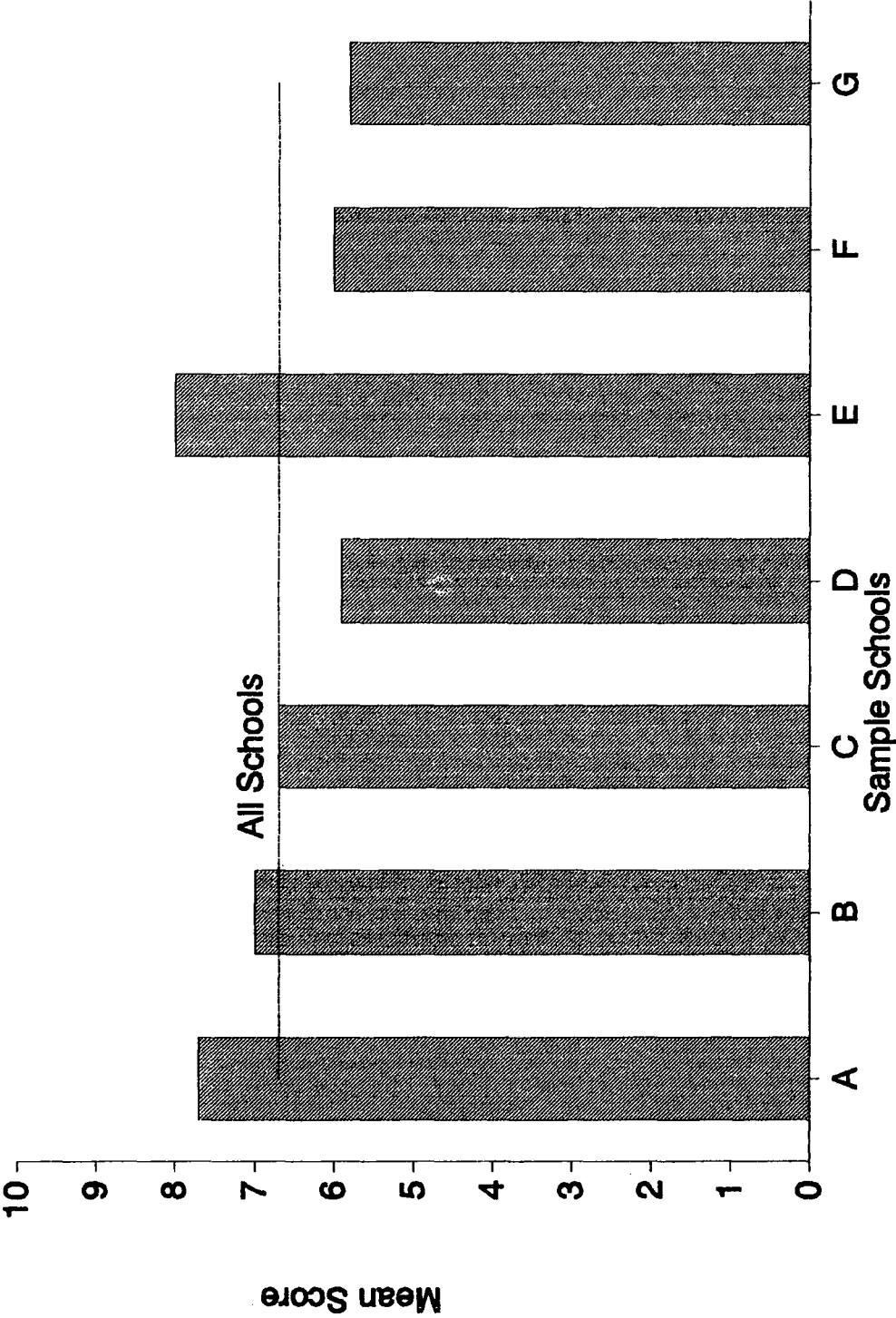
Footpath Convenience:Pupil's Perception



APPENDIX D

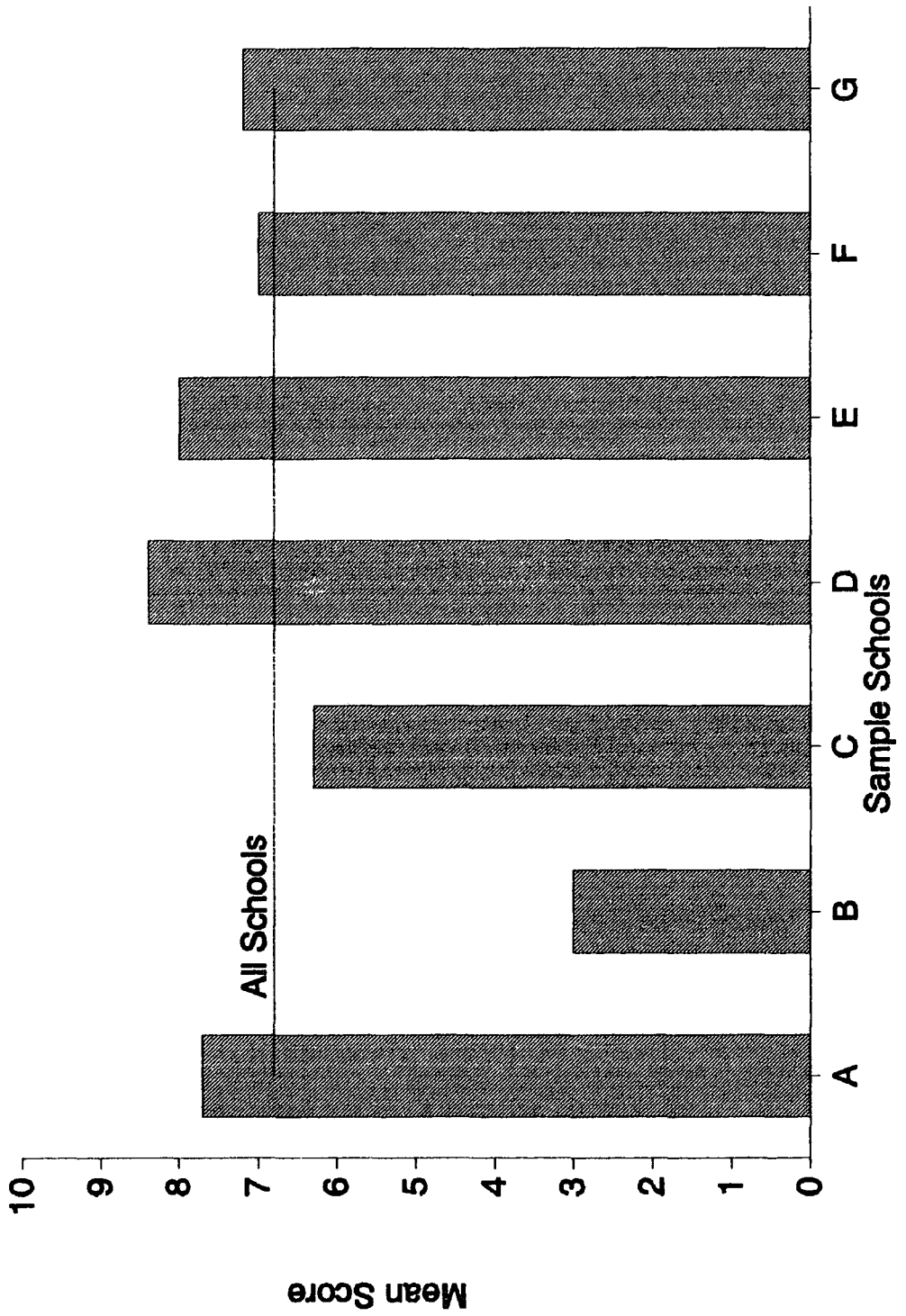
Movement between Buildings: Pupil's Perception

APPENDIX D



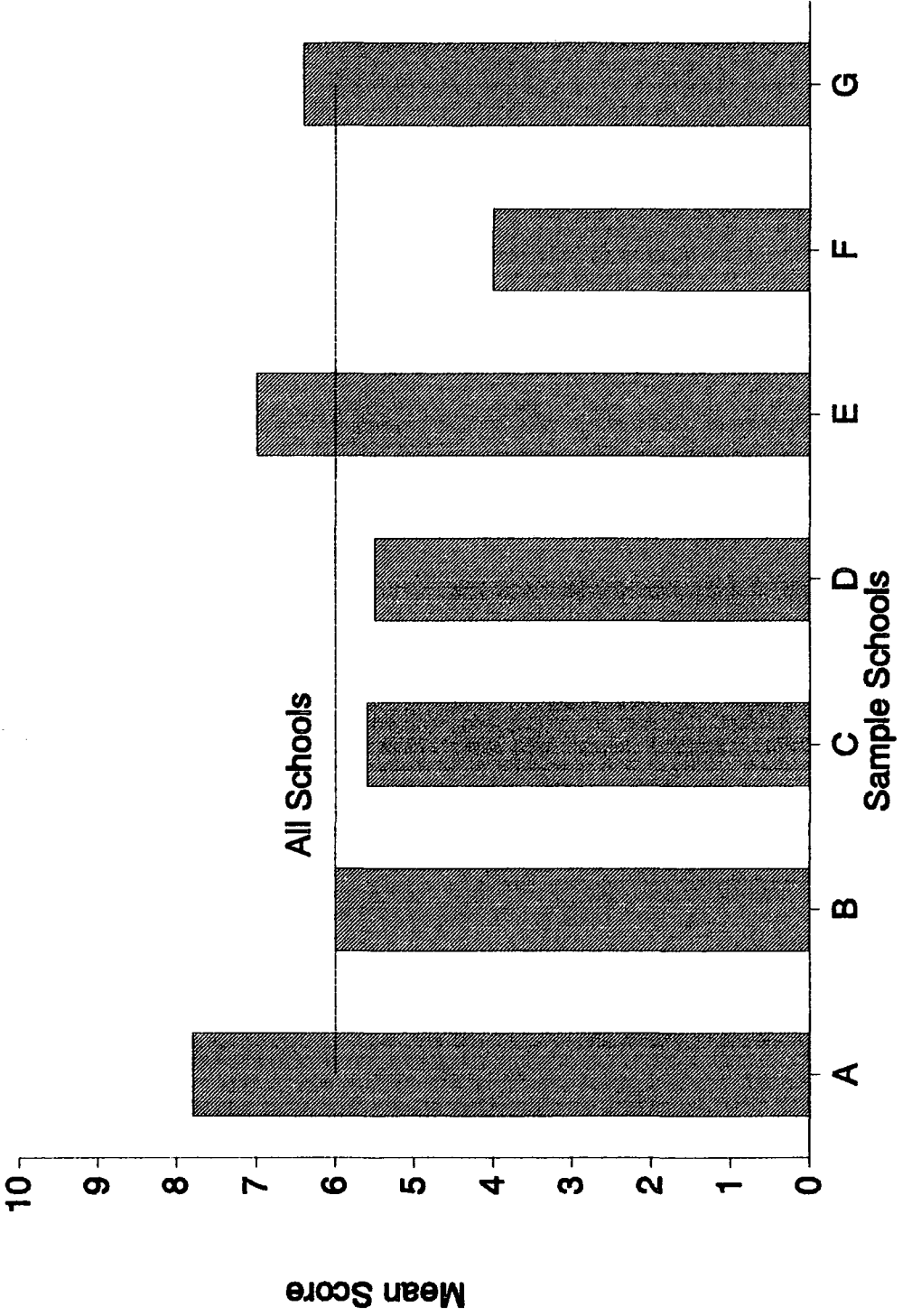
Movement within Buildings: Pupil's Perception

APPENDIX D



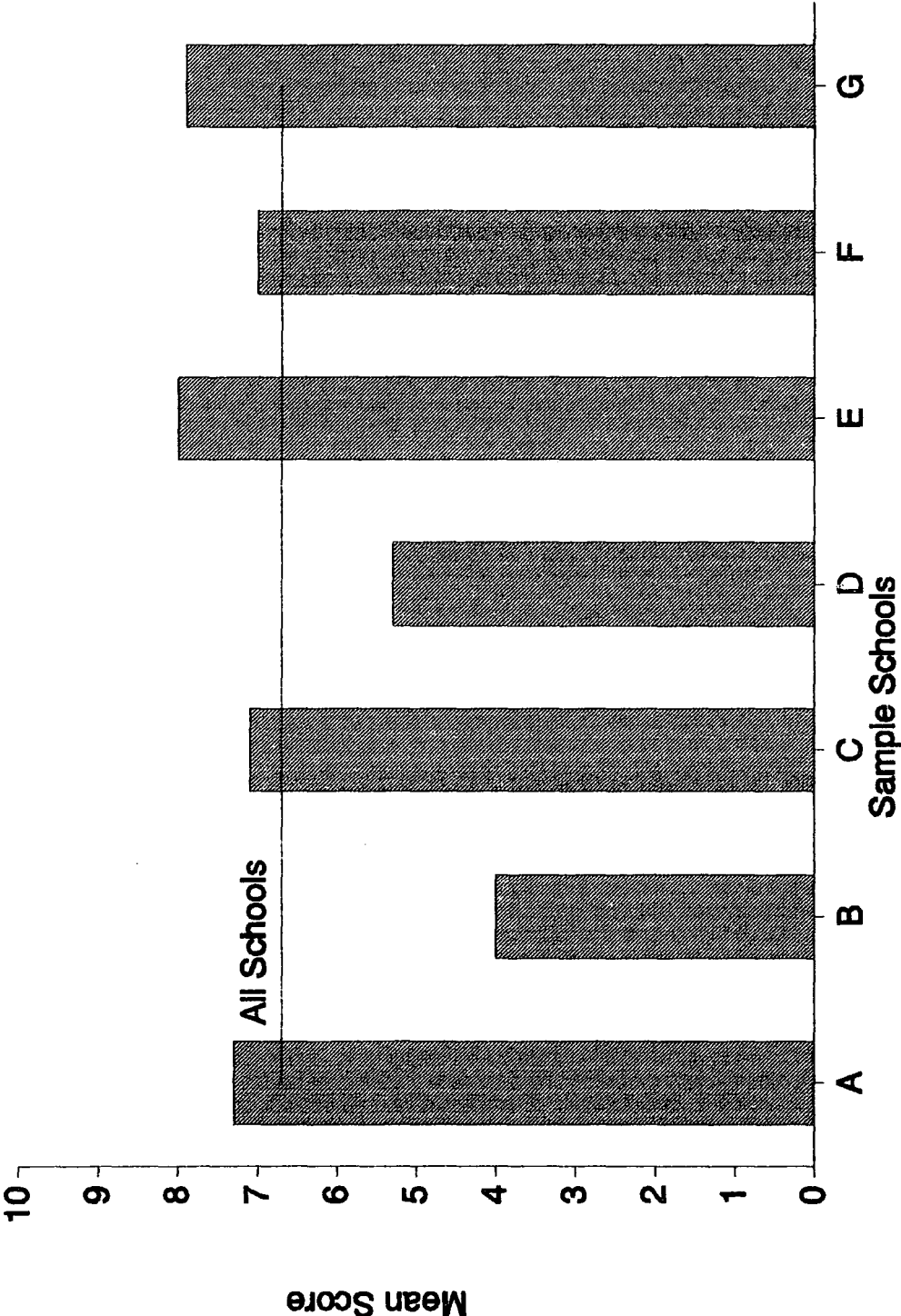
Classroom Suitability: Pupil's Perception

APPENDIX D



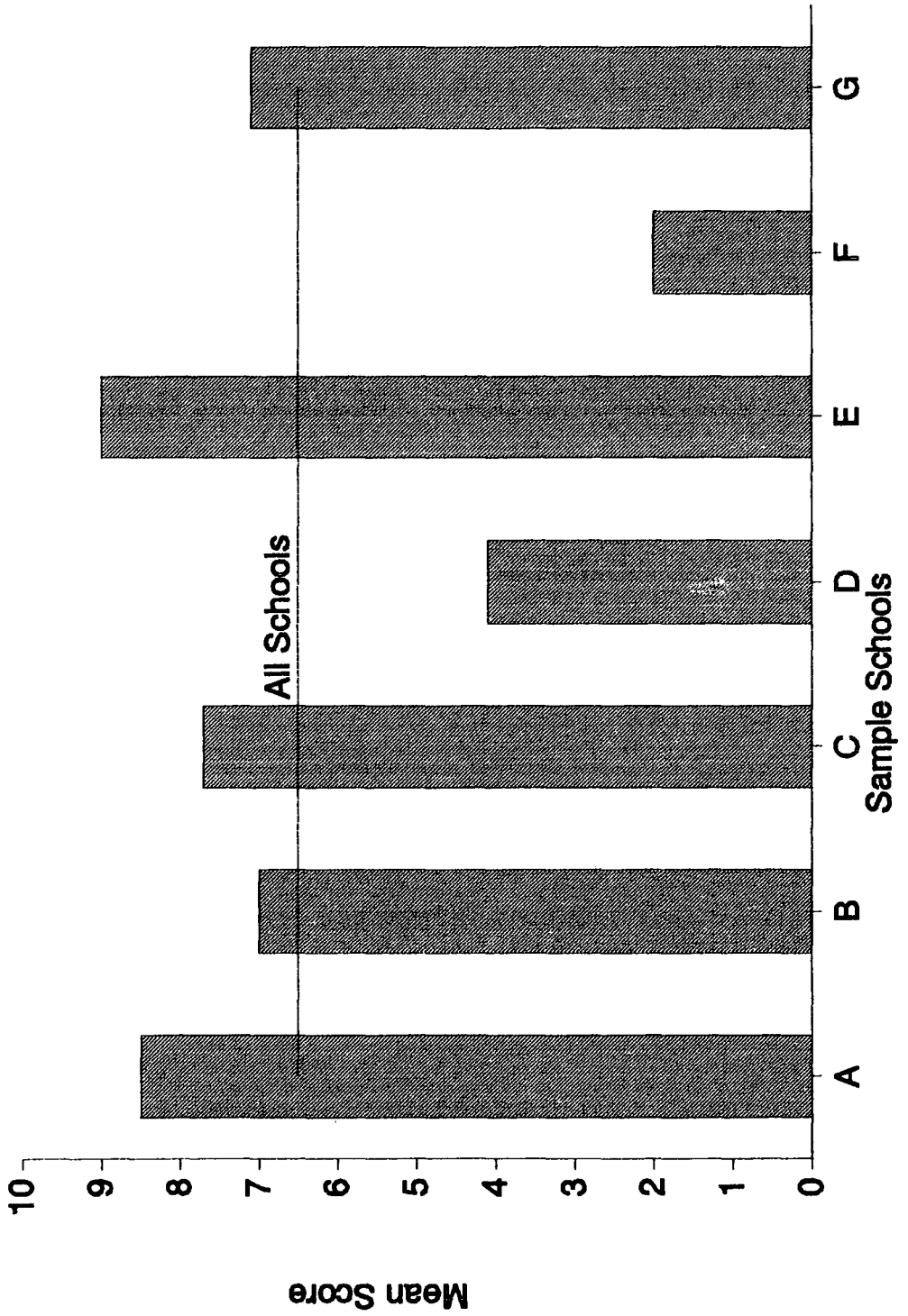
Boarding House Suitability: Pupil's Perception

APPENDIX D



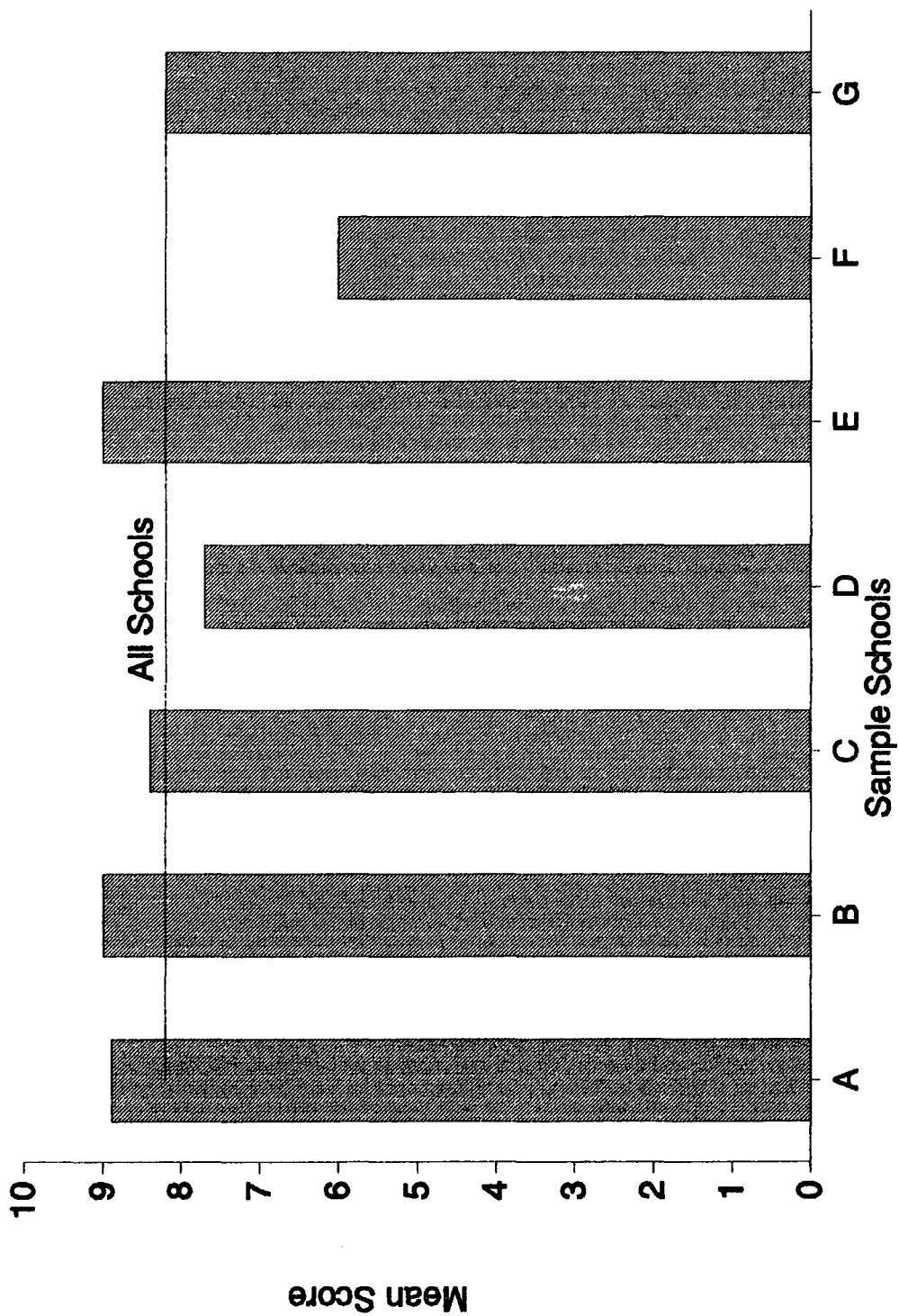
Sporting Facilities: Pupil's Perception

APPENDIX D



Setting and Grounds: Pupil's Perception

APPENDIX D



APPENDIX E

The details of this appendix are discussed in Chapter 7, pp154.

This is an attempt to graphically represent the perceptions of pupils' in the schools studied. The pattern revealed by the scatter plots describes a characteristic school 'type' as detailed on page 196.

'Succeeds' as a term indicates to what extent the pupils feel a school is meeting its stated goals.

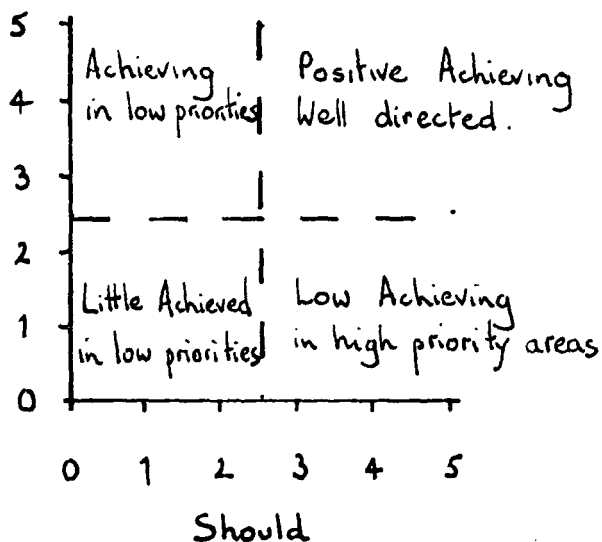
'Does try' as a term indicates to what extent the pupils feel a school is attempting to meet its stated goals.

'Should' as a term indicates to what extent the pupils feel a school should attempt to meet its stated goals.

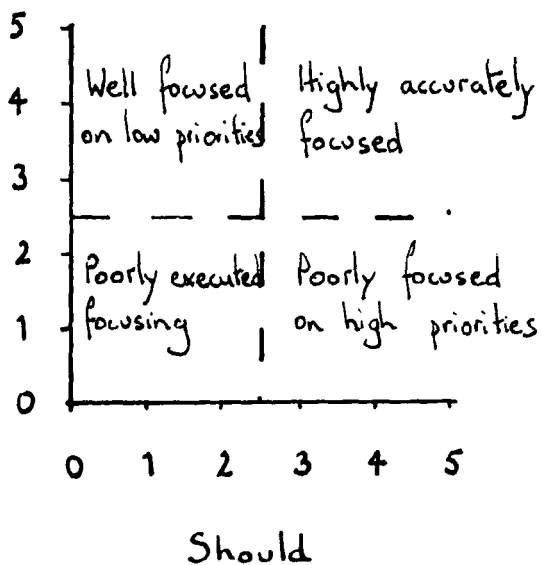
THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

Character Categories.

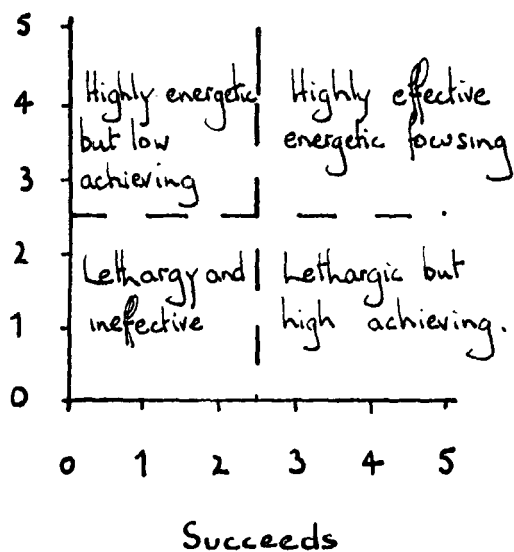
Succeeds



Succeeds

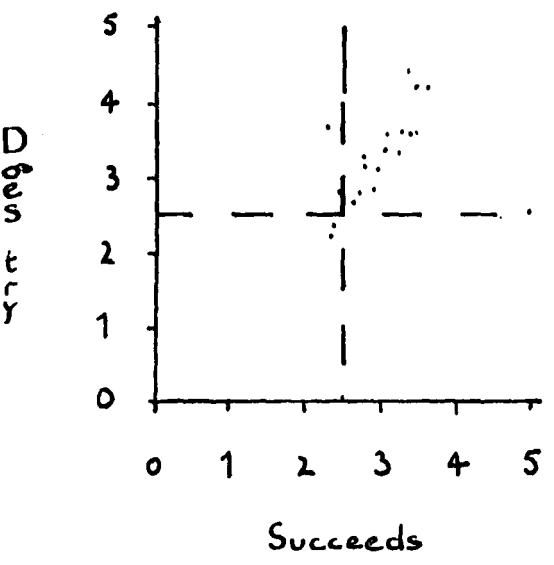
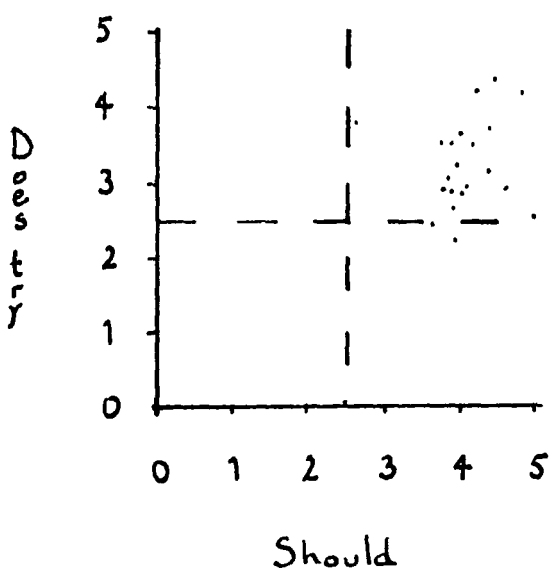
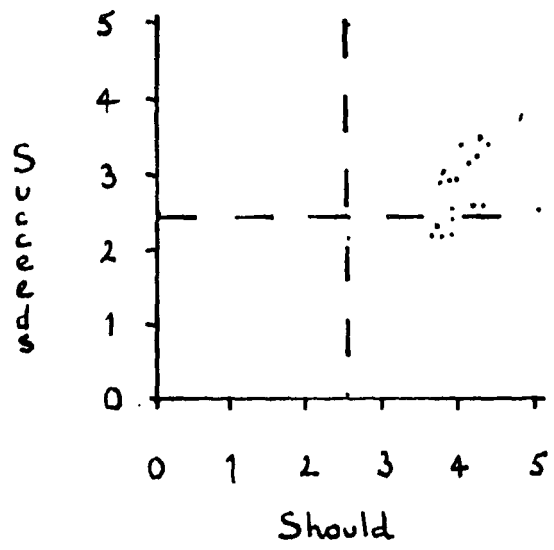


Succeeds



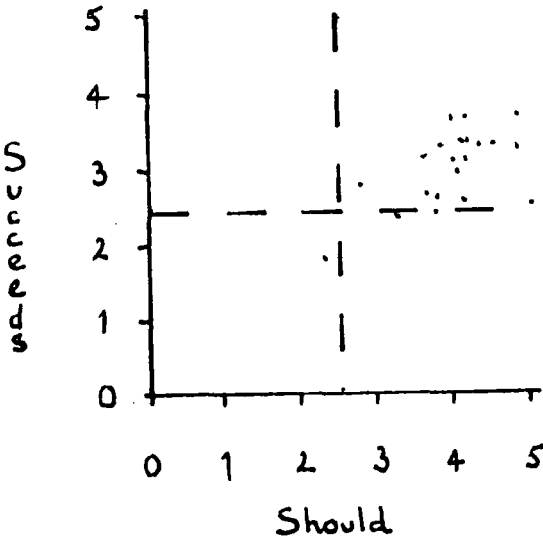
THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

Sample; 15 Schools. 353 pupils.

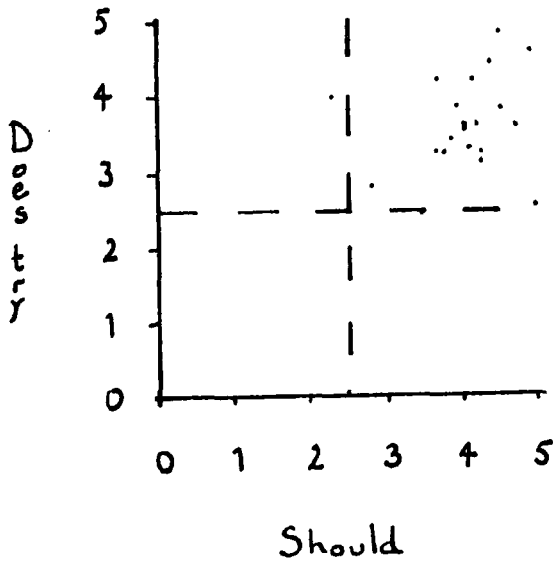


THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

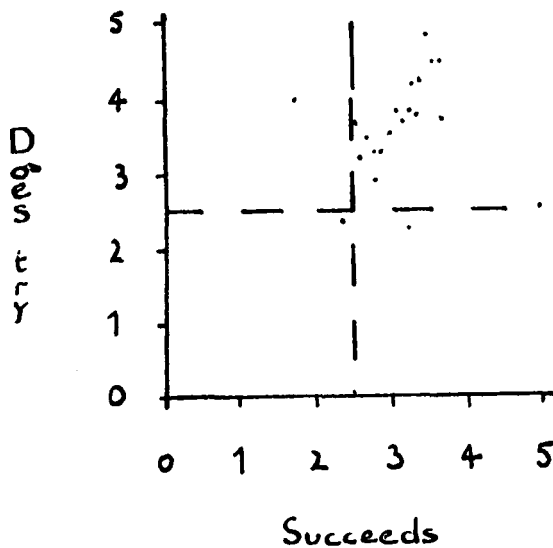
Sample; School A, 40 pupils.



Highly to moderately positively achieving and well directed.



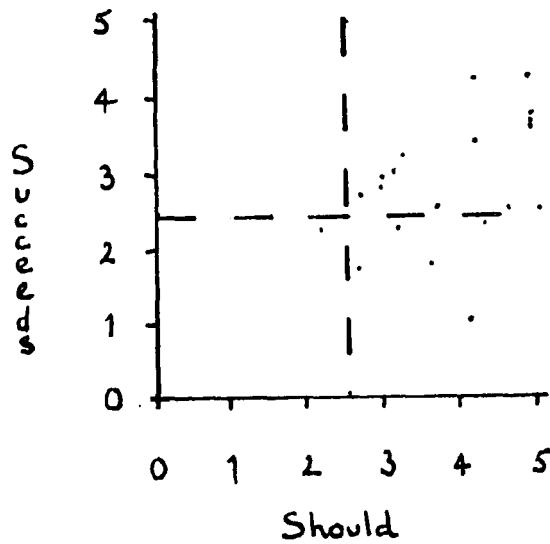
Generally highly accurately focused.



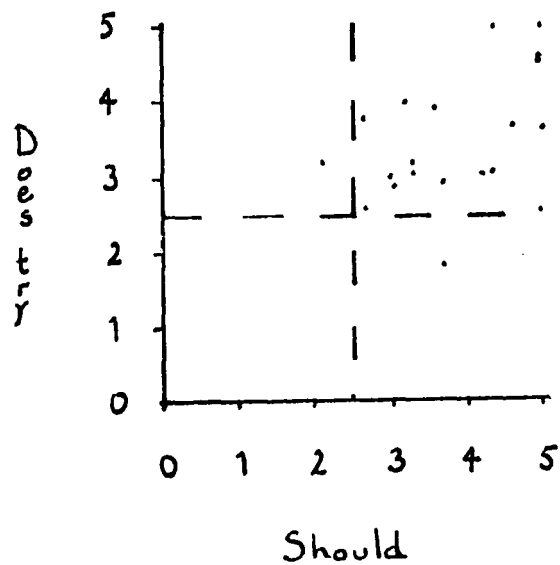
Points demonstrate high to moderately energetic approach with either highly or moderately effective focusing.

THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

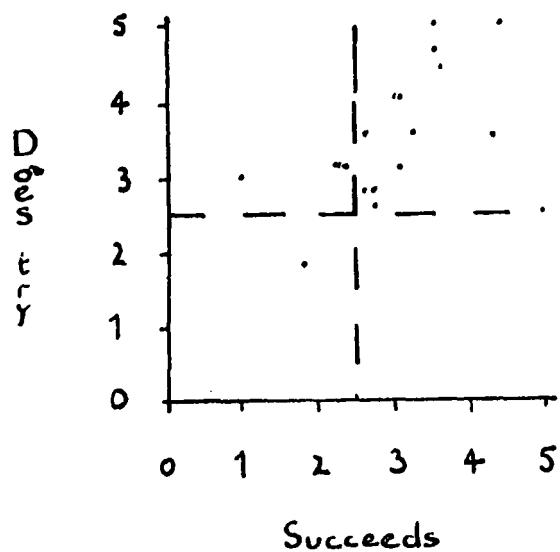
Sample; School B, 20 pupils.



Mostly highly to moderately positively achieving and well directed. However, a number of important goals are only poorly achieved.



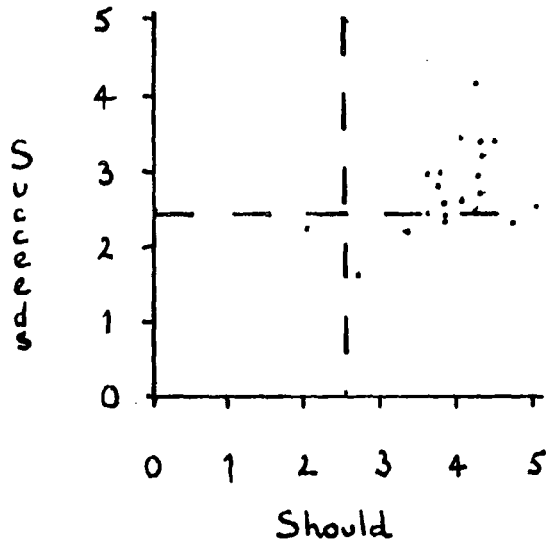
Generally highly or moderately accurately focused.



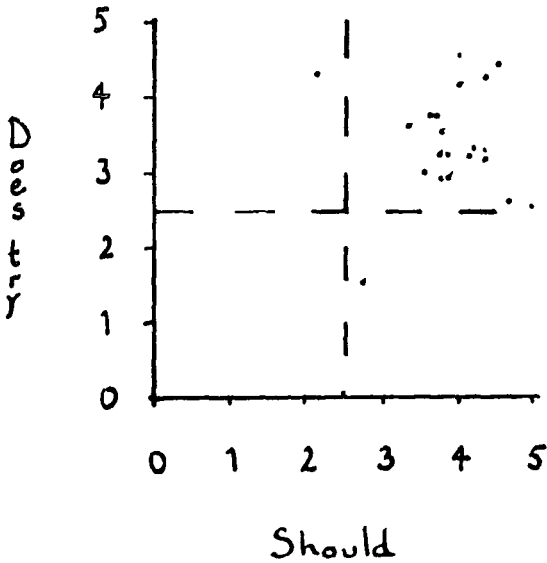
Points demonstrate high to moderately energetic approach with either highly or moderately effective focusing. Some near optimum points plotted.

THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

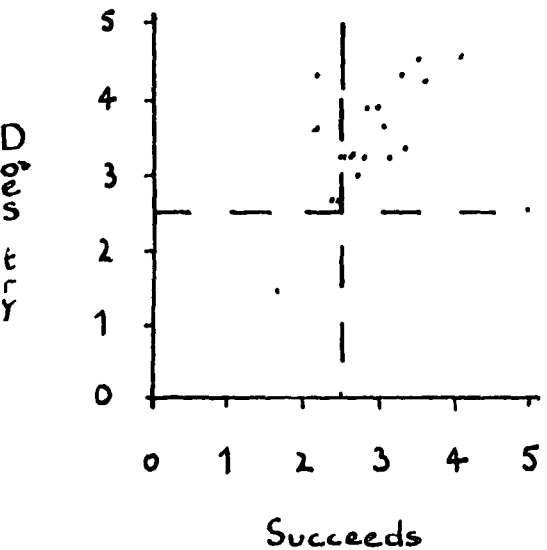
Sample; School C, 36 pupils.



Mostly highly to moderately positively achieving and well directed.



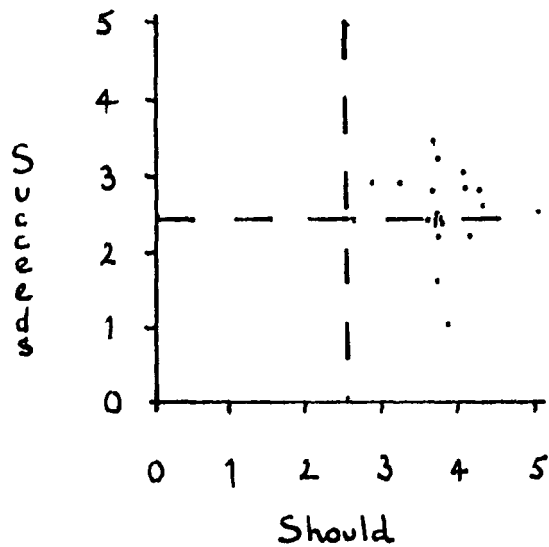
Generally highly or moderately accurately focused.



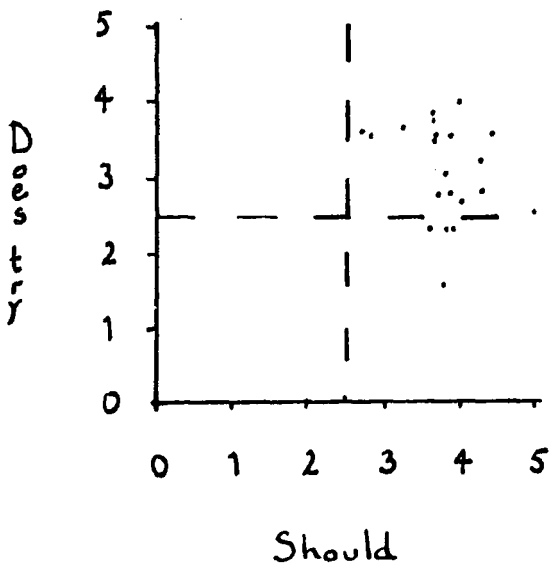
Points demonstrate high to moderately energetic approach with either high or moderately effective focusing.

THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

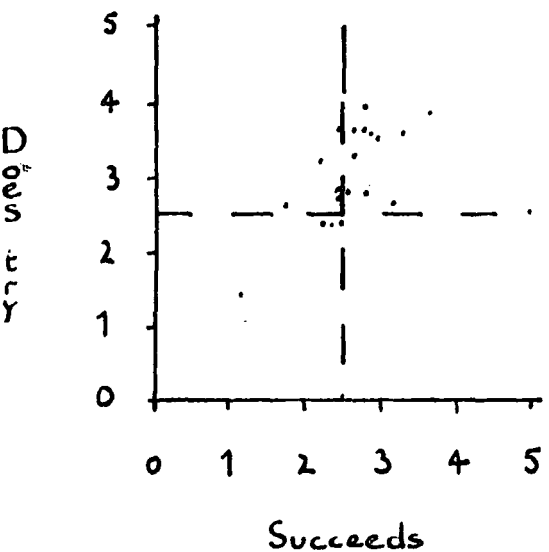
Sample; School D, 13 pupils.



Mostly moderately or low achieving in areas of most priority.



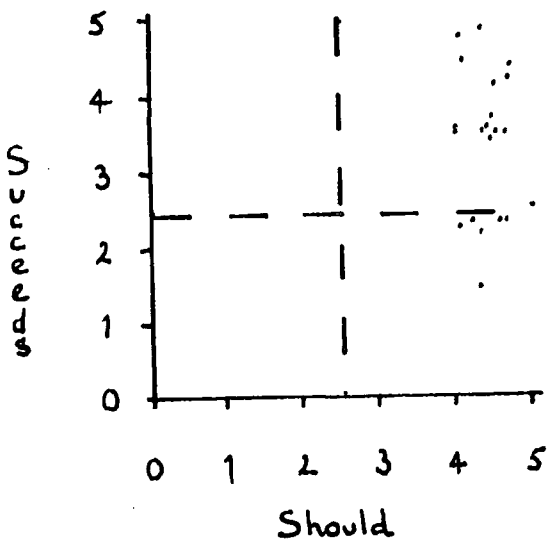
Generally highly or moderately accurately focused.



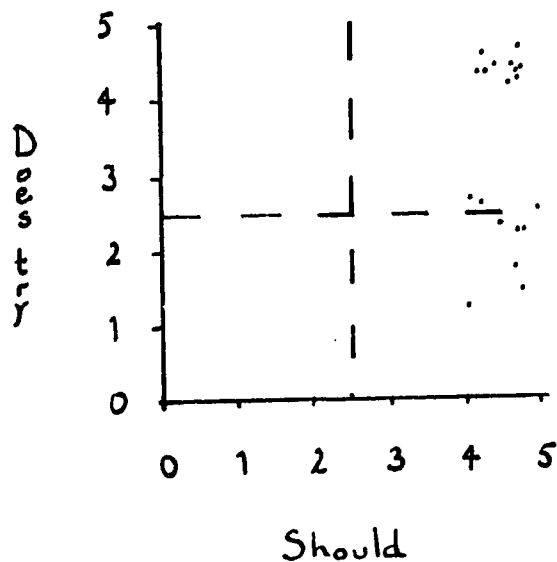
Points demonstrate high to moderately energetic approach but with either moderate or little effective focusing.

THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

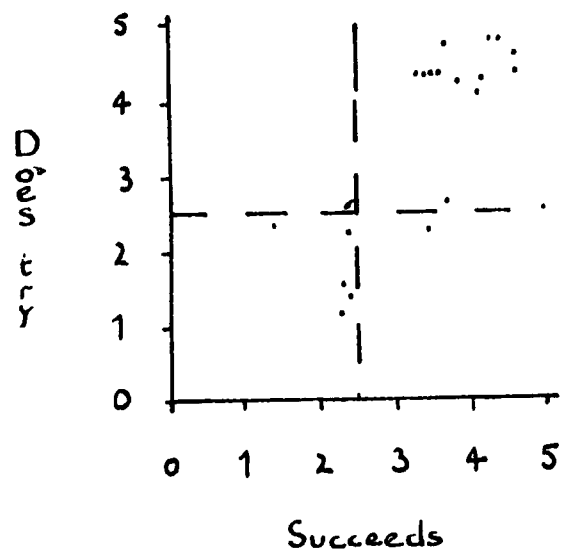
Sample; School E, 25 pupils.



Generally very positive achievement in areas of high priority. Some goals only moderately achieved.



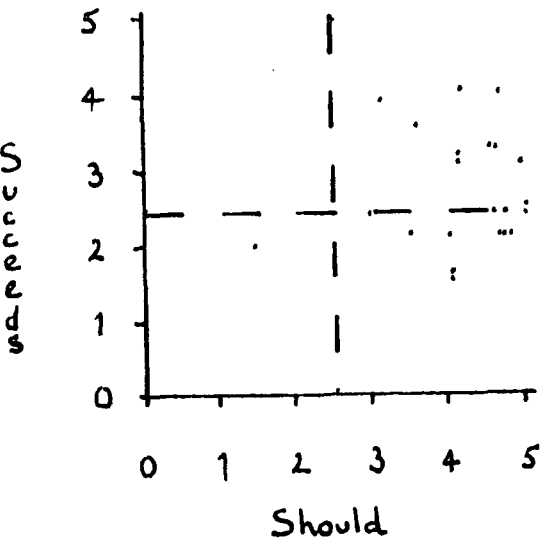
Polarised graph; some points clustered showing very accurate focusing. Another cluster showing moderate to poor focusing in high priority areas.



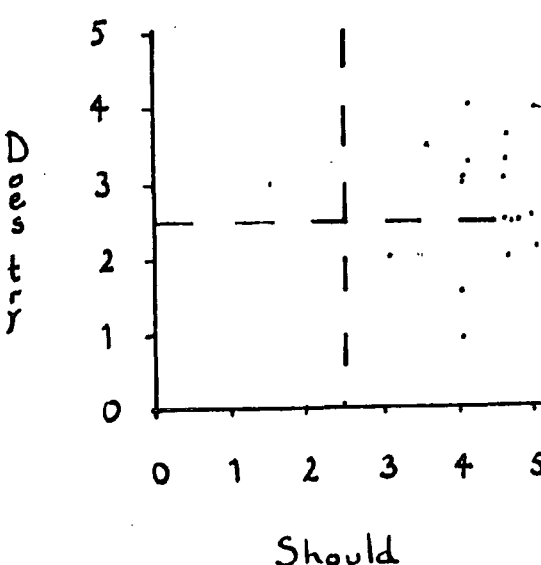
A unique graph; Some points demonstrate very highly effective and energetic focusing. Otherwise widely dispersed plots with no obvious pattern.

THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

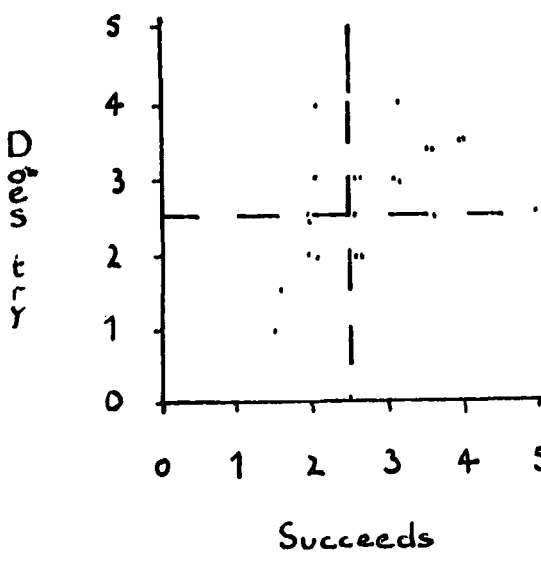
Sample; School F, 25 pupils.



Generally, positively achieving and well directed. A number of high priority areas only moderately or poorly achieved.



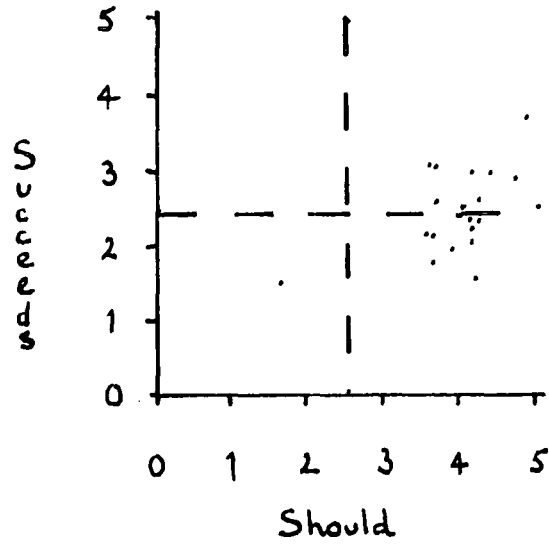
Generally, highly to moderately well focused, though again some poor focusing on high priority areas.



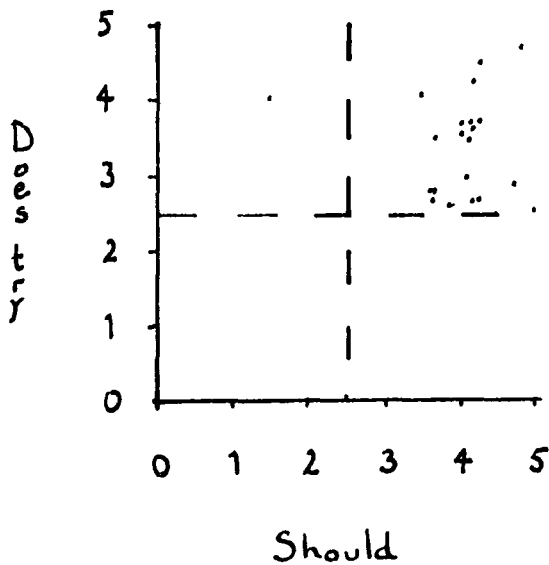
Polarised graphically; points either show highly effective energetic focusing or lethargy and ineffective focusing.

THE GOALS OF A BOARDING SCHOOL: PUPILS' PERCEPTIONS.

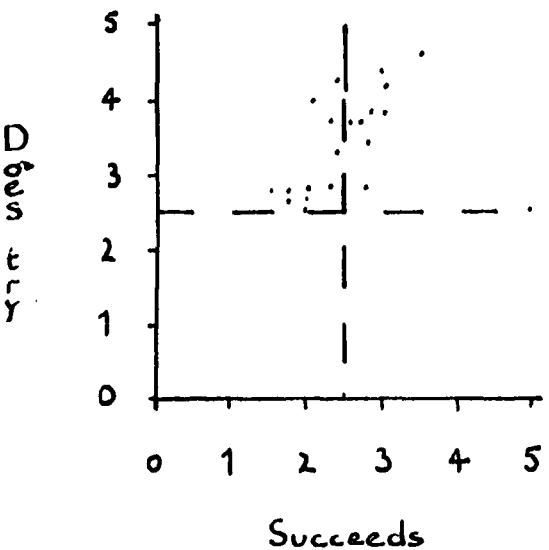
Sample; School G, 40 pupils.



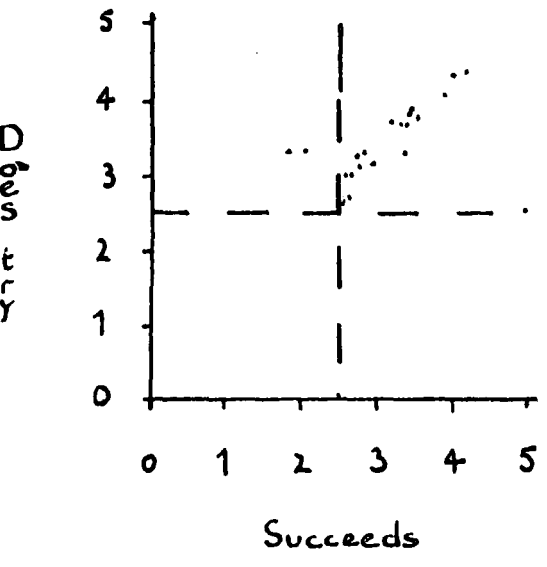
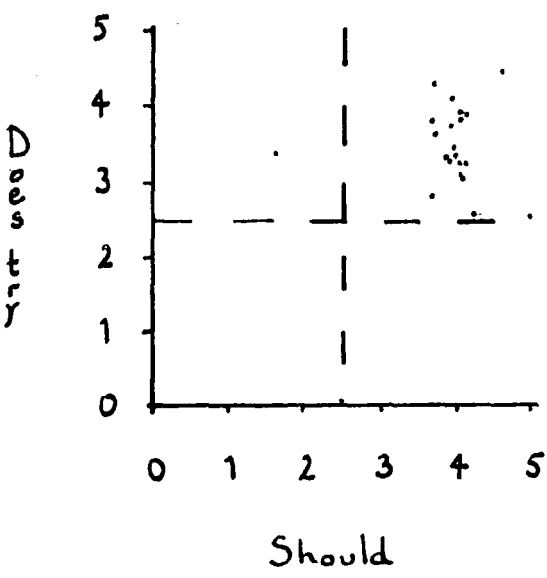
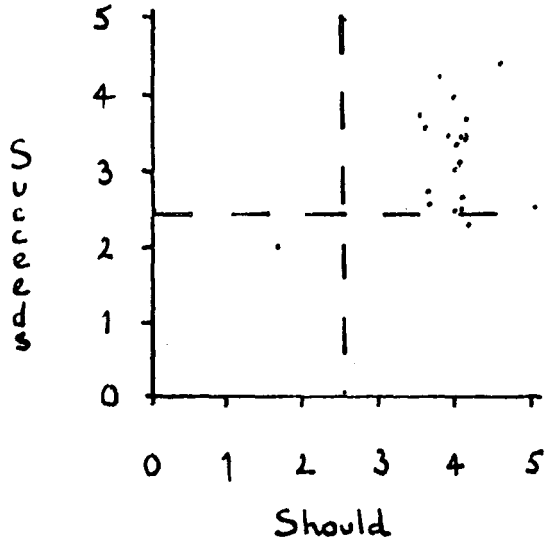
Generally moderate to low achievement in areas of high priority.

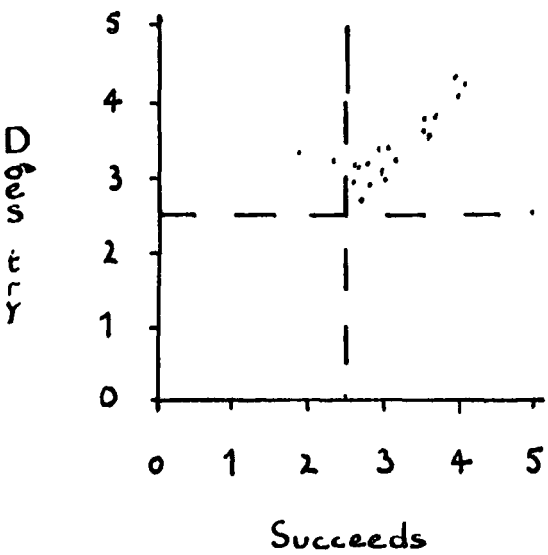
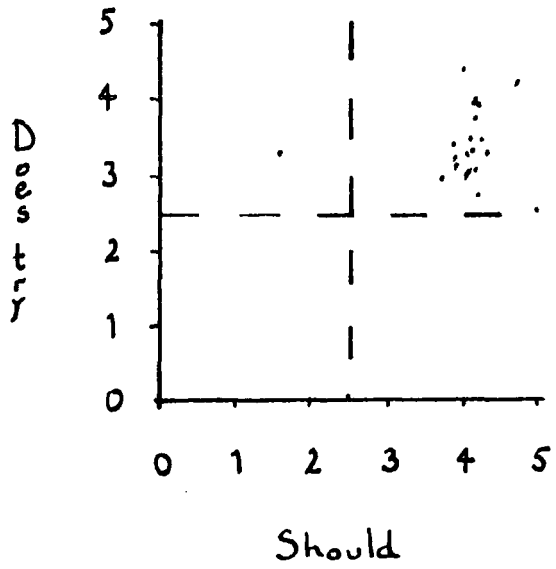
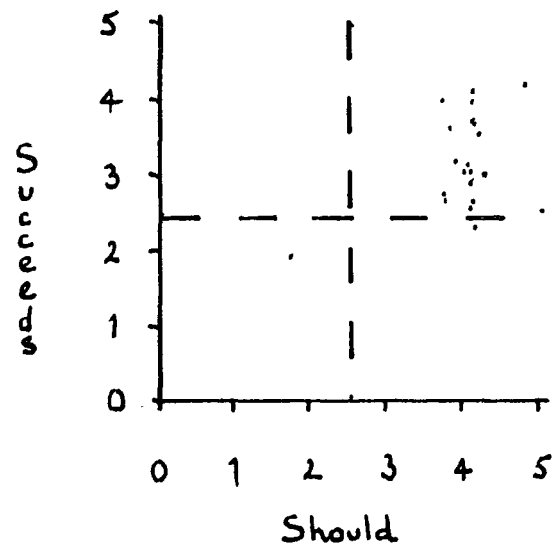


Generally highly or moderately accurate in its focusing.



Again though seen as broadly energetic the success is mostly moderate.





APPENDIX F

Table 1:7

The raw data used in appendix E.

GOAL.	School A	School B	School C.	School D	School E	School F	School G	MEAN
Cultivate each person's individuality	3.6, 4.2, 3.0	3.0, 4.2, 1.0	3.6 3.3 2.1	3.6 2.9 2.8	2.3 4.6 3.3	3.0 4.0 3.0	2.7 4.1 2.0	2.7 3.9 2.5
Make life here something like home	3.4, 4.1, 2.8	3.2, 2.1, 2.4	1.5 2.7 1.6	3.4 3.8 2.4	1.4 4.7 2.4	2.5 4.5 2.0	2.8 4.4 1.5	2.5 3.7 2.2
Give everyone the education best suited to ability	3.2, 4.3, 3.4	3.6, 4.3, 3.4	3.2 4.0 2.7	3.9 3.7 3.5	4.3 4.4 3.6	3.0 4.0 3.0	3.7 4.0 2.5	3.6 4.1 3.2
Train leaders for the future	3.8, 4.0, 3.7	3.0, 3.3, 3.1	3.0 3.5 2.5	1.6 3.9 1.2	4.7 4.2 4.8	2.5 4.5 2.5	2.6 3.8 1.9	3.1 3.9 2.8
Keep the school running efficiently	4.5, 4.3, 3.8	5.0, 5.0, 3.6	4.5 4.4 3.4	3.9 3.8 2.7	4.8 4.1 4.5	4.0 4.0 2.0	3.8 4.1 2.8	4.4 4.3 3.3
Develop each of us physically	4.2, 4.1, 3.4	2.6, 2.7, 2.8	4.2 4.0 8.6	2.8 3.8 2.5	4.3 4.6 3.3	2.0 3.5 2.0	4.2 4.1 2.4	3.5 4.3 2.9
Put into practice Christian values	4.0, 2.3, 1.8	3.8, 2.6, 1.7	4.4 2.1 2.2	3.6 2.6 2.5	4.2 4.8 3.4	3.0 1.5 2.0	4.0 1.6 2.0	3.9 2.5 2.2
Prepare us for a democratic society	3.3, 4.2, 2.6	3.0, 3.0, 3.0	3.8 3.7 3.0	2.7 3.6 1.7	2.6 4.1 2.4	1.5 4.0 1.5	2.0 4.1 2.3	2.9 3.8 2.4
Get good GCSE/A level results	4.6, 4.9, 3.7	4.4, 5.0, 3.7	4.3 4.4 3.3	3.7 4.3 3.3	4.1 4.7 4.2	3.5 4.5 4.0	4.7 4.8 3.6	4.2 4.7 3.6
Maintain firm discipline	3.9, 3.8, 3.3	4.0, 3.6, 3.0	3.8 3.7 2.8	3.8 3.2 2.8	4.3 4.5 3.7	2.0 4.5 2.5	4.0 3.4 3.0	3.7 3.8 3.0
Develop our critical faculties	2.8, 2.8, 2.9	3.2, 4.4, 2.4	3.3 3.8 2.5	2.8 3.6 2.5	2.4 4.3 1.4	2.5 4.5 3.5	3.6 4.0 2.6	2.9 3.9 2.3
Prepare us for a suitable career	3.7, 4.8, 3.2	3.6, 4.5, 4.2	3.3 4.1 2.5	3.2 4.1 2.2	1.6 4.4 2.3	2.5 4.5 2.0	2.8 4.7 2.8	3.0 4.4 2.7
Teach people to respect each other	3.3, 3.7, 2.8	3.6, 4.6, 2.6	2.7 4.7 2.4	3.5 3.6 2.9	2.7 4.0 3.6	2.0 4.5 2.0	3.7 4.1 2.3	3.1 4.2 2.7
Keep us occupied most of the time	4.3, 3.7, 3.3	2.8, 3.8, 2.6	3.0 3.8 2.7	2.3 3.7 2.5	4.3 4.1 4.8	3.5 3.5 3.5	2.7 3.6 2.0	3.3 3.7 3.1
Develop our cultural interests	2.4, 3.4, 2.4	1.8, 3.6, 1.8	2.7 3.9 2.4	2.3 3.9 2.1	2.2 4.6 2.4	2.0 3.0 2.5	2.6 3.6 1.7	2.3 3.7 2.2
Provide experience in managing people	3.4, 3.9, 2.5	2.8 3.0 2.8	3.2 4.2 2.8	2.7 4.0 3.1	4.7 4.3 3.6	1.0 4.5 1.5	2.8 3.5 2.1	2.9 3.8 2.6
Enable us to recognise right from wrong	3.4, 3.8, 2.7	4.6, 5.0, 3.6	3.4 4.1 3.4	3.5 3.9 3.3	4.4 4.0 3.4	3.5 4.5 3.5	3.4 3.8 2.7	3.7 4.3 3.2
Develop our creative talents	3.7, 4.0, 3.2	3.2, 3.2, 2.2	3.2 4.3 3.0	2.8 4.2 2.9	1.3 4.0 2.2	3.5 4.0 4.0	2.9 4.0 2.5	2.9 4.0 2.9
Foster a sense of sportsmanship	3.9, 4.6, 3.4	4.0, 3.2, 3.0	4.5 4.1 4.2	2.8 3.7 2.5	4.2 4.5 4.2	3.0 4.5 2.5	3.8 4.1 3.0	3.7 4.1 3.3
Keep a good reputation outside.	4.9, 4.4, 3.5	5.0, 4.4, 4.4	3.6 3.9 3.0	4.0 4.0 2.8	4.7 4.8 4.3	4.0 5.0 3.0	4.4 4.3 3.0	4.4 4.4 3.4

In each case the first number in the column indicates what the school Does try to do, the second what they

For scoring system see Appendix B.

Qu.No.	Prior to change.	At point of change.	Two years after change.
2	6.4	6.3	6.7
3	6.3	6.0	6.5
4	6.4	4.3	5.8
5	5.7	5.4	7.2
6	6.3	5.7	6.4
7	6.0	4.9	7.9
8	6.9	6.7	7.1
9	8.0	8.1	8.2

For exact questions refer to each question number and the questionnaire in Appendix B

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