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AN INVESTIGATION INTO THE PROCESS OF CURRICULUM CHANGE

IN SCHOOLS

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ABSTRACT

An investigation into the process of curriculum change in schools

John Macdonald Walker

The research concentrates on processes and problems associated with curriculum change in general. It does this by reviewing the implementation of the Schools Council Geography for the Young School Leaver Project which is a major innovation in terms both of its content and the classroom activities in which teachers and pupils are expected to engage.

The research is teacher-based. It was carried out in the school year 1978-79 in four Sheffield schools, with one fourth year class being investigated in each. A broadly Illuminative Methodology was employed so that most of the evidence was obtained from informal observation and semi-structured interviews with the teachers. Observation schedules were also used and the pupils were given an attitude questionnaire to complete near the beginning and end of the year.

Analysis was concentrated on six major innovatory features of GYSL: its objectives framework; assessment as evaluation; local, national and global work; the emphasis on ideas, skills, values and attitudes; individual thinking; and curriculum development. One of the teachers whole-heartedly implemented most of the Project's recommendations, while many were either rejected or only partially attempted by the other three. This contrast was viewed in terms of three broad variables: the teacher's understanding, commitment and skills; the Project Team's strategies; and the material and moral support provided by the schools. These were combined into a model from which three particular ideas emerged: the importance of adequate time provision in curriculum reform both for teachers and for Project Teams; the need for lower school courses to be compatible with the Project; and a redefinition of the criteria for success. Success should be seen as a gradual process of development rather than a definite stage to be attained. Finally, various problems were recognized and possible solutions to them proposed.

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Trevor Higginbottom, one of Geography for the Young School Leaver's original team and now its National Co-ordinator as well as adviser for Geography in Sheffield, has likewise provided immense help. He discussed GYSL with me on several occasions, both as regards its initial characteristics and the changes that have subsequently been made, and talked frankly about the Project's successes and failures during its implementation phase. His comments on earlier versions of this dissertation have been helpful and encouraging.

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My final, and perhaps greatest, debt is owing to my wife. Without the warmth provided by a cheerful and stable home environment, I should never have had the will to carry on. It is to her that this work is dedicated.

PREFACE

The past 20 years have been a period of rapid, far-reaching and some would say unprecedented educational change, although now it seems to be drawing to a close. These changes extend over the whole of the educational system, from nursery schools at one extreme to universities at the other, and even a quick review of the secondary school situation can show their significance and range.

More and more pupils are staying on at school for longer and longer periods, either voluntarily in an attempt to gain the certificates that have become so important in our increasingly meritocratic society, or compulsorily through the raising of the school leaving age. New standards and methods of examining have been created to cater for this wider range of abilities and expectations. The old system of grammar and secondary modern schools, where pupils were separated according to an arbitrary examination at 11 years old, has largely passed away and been replaced by one of comprehensive schools which now cater for over 80% of the secondary school population. Many of them have introduced mixed-ability classes, where academic and non-academic pupils are taught together. New subjects have been added to the curriculum, while others of traditionally key importance have gradually disappeared. In all subjects, new curricula emphasizing new objectives and employing new teaching-learning strategies, have been developed and to promote them organizations such as the Schools Council have been created.

The list is far from complete, but does at least indicate the variety of recent changes. It also illustrates how many current educational features are externally generated, often as a result of government legislation. (At times, as with the raising of the school leaving age, this is in direct opposition to much teacher and even more parental opinion.) Only rarely is innovation wholly-school based, and even then it is strongly influenced by social, economic and political factors. Education is set within a constantly developing societal context: the classroom is not a cocoon where teacher and pupils can busy themselves in total separation from the rest of the world.

As society has changed so have attitudes towards innovation. We are far removed in education from the sunny optimism expressed by Kerr even a dozen years ago:

"At the practical and organizational levels, the new curricula

promise to revolutionise English education. Even the
most resistant of schools, the most conservative of
teachers, it seems, must be swept up into the tide of
advanced theory and practice" Kerr (1968)

Economic prospects have become steadily bleaker and the precise role of
education in society has been increasingly called into question. In
particular, many have challenged recent innovations, sometimes on the
grounds that traditional values have disappeared, and sometimes on the
grounds that, in view of the heavy financial commitment, there has been
insufficient progress:

> "For nearly two decades now, we have seen large amounts
> of capital invested in the production of a variety of new
> curricula. Unfortunately, evidence is beginning to
> accumulate that indicates that much of this effort has
> had relatively little impact on the daily routine of the
> average classroom teacher". Herron (1971)

Why invest so much money and effort on something which has yielded
so little? Thus education does not simply react to social patterns
(through government legislation and the extent of financial provision
made available to it): it also, by the way it has conducted its
affairs in the past, influences society's estimation of itself and,
therefore, the way it is able to conduct its affairs in the future.

Burke noted almost 200 years ago that "to innovate is not to reform."
The educational system is essentially conservative. New ideas are
introduced, but are rapidly neutralized by counterbalancing forces so
that things, in essence, remain very much as they were. Thus, for
example, cuisenaire rods

> "are used as a glorified abacus rather than as media for intro-
> ducing number concepts in a new way; Nuffield materials are
> used in standard didactic ways; and schools are reorganized
> from streaming to non-streaming without any corresponding
> conceptual shift among teachers who continue streaming children
> in their minds". (Hoyle, 1976)

Our thinking can extend in two directions from this quotation.
Firstly, if our considerable efforts at innovation have so far altered
educational practice to such a limited degree, then we should be struck
with a sense of deep concern. Change is not some frivolous side-issue
to be indulged in in moments of idle fancy;

> "it is our means of survival in a rapidly changing environment.
> Unless we sustain an evolutionary growth in education, our
> schools will be like the dinosaur, unable to survive because
> it was unable to adapt." (Nisbet, 1974)

We must seek a more effective means of achieving progress and this can be based only on a real understanding of how the educational system operates.   More specifically, in the present context, we need to examine the life-history of educational innovations: why they were conceived, how they were set up, how they developed, what variables operated on them during the course of their implementation, and influenced their degree of success (Simmons, 1971)   Despite its central importance, this is an area that has been largely neglected.   In 1966, Guba spoke of our "rampant conceptual poverty of the change process in general" and although the succeeding years have brought considerable progress, the basic truth of his statement is still distressingly evident.   The matter is urgent.

Continuing from this, is the second line of thought.   Hoyle's description of "innovation without change" (Hoyle, 1969) reveals the fundamental role of the teacher in educational development.   This seems obvious in so far as curriculum materials can only affect the children through the agency of the teacher (Harlen, 1973);   and yet, as Medley and Mitzel complained in 1963, much early educational research concerned itself with almost everying but the real classroom situation.   Such is no longer the case.   Goodlad has described how the innovations of the 1960s "have been blunted on the classroom door" (Goodlad, 1969); Stenhouse has shown how "curriculum development must rest on teacher development"(Stenhouse, 1975);   and Westbury has stated that a "comprehensive understanding of the tasks of curriculum planning and curriculum development demands an understanding of the classroom " (Westbury, 1978)

This is the background to the present research.   It is an attempt to shed light on the process of curriculum change, and seeks to do so by examining how the Geography for the Young School Leaver Project has been nationally developed and later implemented in four specific class-rooms.   Three important features must be stressed at this point, and constantly borne in mind by the reader.   Firstly, we are dealing with innovation as introduced by Project Teams.   This type of innovation has some special characteristics and problems, but it is still commonly used, even though much curriculum and other change has been school-based.   Secondly, the focus of the research is on innovation rather than geography.   It would be possible to concentrate on whether GYSL

really does make for better geography, but the present aim is more general: it is to look at the processes and problems involved in any curriculum change and, therefore, contribute in the long run towards more sure and effective reform. Finally, the research is based on a small sample of schools, and the fact that all of them are located in Sheffield, where GYSL has had a special history, introduces some bias. Any conclusions which emerge must, therefore, be viewed within this perspective and must obviously be subject to re-examination in different contexts.

Three key ideas underline the whole work:

1. The teacher is at the heart of curriculum development. It is his understanding of a project, his commitment to it and his possession of necessary skills that will determine whether successful innovation can take place.

2. It is a Project Team's responsibility to prepare the teacher for innovation. They must ensure that the understanding, commitment and skills are present, and must design strategies to achieve this.

3. The school provides the background conditions which help or hinder change. This is essentially a management problem, and is particularly the Headteacher's responsibility.

The dissertation is likewise divided into three sections. After this introduction, there is Part 1, consisting of two chapters: the first, a review of the literature on curriculum change, provides a theoretical background to the remainder of the work, while the second is a study of GYSL (its characteristics and the way it developed nationally and locally) linked with the theoretical outline. Part 2 comprises chapter 3 and deals with methodology. Various approaches to researching into and evaluating programmes are examined and a strategy is proposed. The various modifications that were subsequently made and the causes that gave rise to them are also discussed. Part 3 presents the research evidence. Chapter 4 gives a straightforward factual description of each school and teacher, and a statement of basic teaching approaches as revealed by the observation schedules. Chapter 5 contains the main findings, analysed on the basis of six key features that had previously been identified. Finally, chapter 6 considers these findings from a more general viewpoint and relates them to the theoretical background provided in chapter 1. Some suggestions for improving the practice of innovation are put forward.

1:1 <u>INTRODUCTION</u> The field of educational innovation has been tilled with increasing thoroughness in recent years. The quality and form of the individual studies has, of course, varied enormously — in terms of the nature of the changes examined, the methodology employed and the degree of generalization aimed at. Taken together, however, they have provided a steadily expanding range of insights, of which the first and perhaps most important has been the realisation that the processes of introducing and implementing curricula are complex and highly variable both between institutions and over time.

> "The implementation of organizational innovations is a
> process that involves an inter-related set of conditions
> that can shift over time" (Gross, Giacquinta & Bernstein, 1971)

In the past, educational innovation was commonly regarded as being analagous to agricultural innovation. New schemes of work were like new tractors or new brands of fertiliser: once developed, their superiority over earlier alternative versions was such that adoption and implementation was expected to be inevitable among rational and well-informed beings. Such notions have subsequently been recognized as being completely at variance with complex reality, but even as recently as 1970 they were still reflected in the type of research being carried out. Much of it was concerned with problems of adoption and initial use; only rarely were the more fundamental problems of effective and sustained implementation considered. (Gross, Giacquinta and Bernstein, 1971). An innovation, no matter how brilliant on paper, is worthless unless it improves the practice of the individual teacher, and it is here that the main deficiencies of the curriculum reform movement lie.

> "The central problem of curriculum study is the gap between
> our ideas and aspirations and our attempts to operationalise
> them" (Stenhouse, 1975)

Many of the attempts to conceptualize this problem have produced individual insights which will be referred to later in this chapter. More general summaries of the factors determining successful implementation have been produced by Harlen (1975), Hoyle (1972), Lippett (1967), Morrish (1976), Rudd (1973) and Gross, Giacquinta and Bernstein (1971). Particularly useful, because it reviews a range of original studies, is the work of Fullan and Pomfret (1975). They have listed four broad, inter-related categories of variables, each of which is in turn subdivided:

1. Characteristics of the innovation
2. Strategies for implementing the innovation

3. Characteristics of the implementing unit

4. Macro socio-political factors (the broad context for
the operation of the other three).

1:2. Characteristics of Innovation

The nature of an innovation is the most obvious, although not necessarily the most important, factor determining its likely degree of success. Innovation itself has been defined as

> "the creative selection, organization and utilization
> of human and material resources in new and unique ways which
> will result in the attainment of a higher level of achievement
> for the defined goals and objectives" (Richland in Morrish 1976)

The Ford Teaching Project has listed four changes that innovations at classroom level may involve, and all but the last are typical features of curriculum projects.

1. Changes in the subject matter to be studied

2. Changes in the sort of objectives that are achieved through the study of a body of subject matter

3. Changes in the way that pupils are related to the subject matter they study — so that, for example they are able to exercise independent judgement rather than depend on the teacher as a source of belief and knowledge.

4. Changes in the spatial arrangements for teaching and learning — eg. the creation of open-plan classrooms.

Five main features of this sort of creative development have been isolated in the literature: magnitude, relative advantage, complexity, clarity and potential costs and benefits.

Magnitude relates to whether the innovation represents a fundamental reconstruction or merely a "superficial reshuffling of priorities and activities" (Dalin, 1973) Most innovations require teachers to employ new skills and knowledge and the bigger the change the more difficult is implementation likely to be.

Relative advantage is the manner and extent to which the new programme is superior to existing practice. This at once leads us into the area of the teacher's personal perceptions rather than hard objectivity; we are concerned with his individual understanding and estimation of both the old and new schemes.

Fullan and Pomfret (1975) define complexity as how difficult it is to use the innovation in terms of organizational, normative and

behavioural changes.   They seek objective measures on the grounds that, since implementation depends on the capacity of users to behave in new ways, more complex changes will produce more variable degrees of implementation.   Rogers and Shoemaker (1971), by contrast, working from the perspective of the individual teacher, have emphasized perceived complexity as the key variable.

Clarity concerns the explicitness of the developers about the changes associated with the innovation.   There is a dilemma here for project directors.   On the one hand, teachers need to know exactly what it is that they are supposed to be using:

> "Teachers are likely to adopt only those innovations which they see as 'practical'.....It is not enough to recommend principles or desirable outcomes to teachers - these must be accompanied by specification of procedures" (Brown and McIntyre, 1978).

Innovation is a sufficiently exacting task for the ordinary teacher without adding the lack of confidence, increase in anxiety and psychological strain that can arise from confusion about what implementation precisely requires (Hoyle, 1972 and Nisbet, 1974) These are just the sort of obstacles that Gross et al (1971) mention as inducing resistance among teachers who are initially favourable to change.   On the other hand, there is a danger that in specifying procedures too carefully account cannot readily then be taken of situational differences that may call for adaptations of the innovation. Complexity and clarity are closely linked: the greater the complexity of an innovation the greater the difficulty of achieving an explicit description.

Potential costs and benefits can be sub-divided into material and non-material components.   Material costs include finance, time and space.   Finance is directly related to the provision of resources - new kits, materials and equipment (Crowther, 1972; Gross et al, 1971; Hoyle, 1972) and successful innovations typically require an increased investment of these. "Innovation on a shoestring imposes strain" (Hoyle, 1970).   Time is perhaps even more important, partly so that teachers can familiarize themselves with the new schemes and acquire necessary skills and knowledge (Hoyle, 1972; MacDonald and Rudduck, 1971), and partly so that they can cope with the increased workload:

> "This is initially stimulating, but has to give way
> to a firm working arrangement. In the new situation,
> there are no familiar routines to fall back on; and the
> activities which normally look after themselves, which
> are carried out routinely and automatically, have to be
> planned consciously and deliberately" (Nisbet, 1974)

Teachers participating in innovation require some release from normal duties so that they can cope with the extra strain that innovation imposes. This is another, indirect, form of financial outlay. Finally there is space, needed, for example, to store the new materials, and perhaps also to accommodate new learning activities:

> "Care with the selection of rooms and resources will
> release teachers from peripheral anxieties and unnecessary
> fatigue which, in an intellectually demanding exercise, can
> quickly lower morale" (MacDonald and Rudduck, 1971)

All of these material costs may impose strains on the individual teacher and it is up to the school as an organization so to order itself that the burden of these strains is lightened as far as possible. This is precisely where the non-material costs lie - essential administrative reorganization and psychological unease caused by the changes.

Set against these costs are potential benefits such as the higher quality work, and more favourable attitudes on the parts of pupils and greater job satisfaction and improved career prospects for teachers.

Although this section has been headed "Characteristics of the Innovation", what we are really concerned with are characteristics as they are perceived by and impinge on individual teachers and institutions.

> "Change if it is to be meaningful must take the teacher
> as its heart. Teachers are more than a component of the
> change process for they may set the boundaries within which
> meaninful change can take place" (Pratt, 1976)

Harlen (1973) makes the same point in her evaluation of the Science 5-13 Project: the teacher acts as a filter through which a Project Team's ideas must pass. Whether they do so in a pure or distorted form depends largely on whether they are compatible with the teacher's perceptions, values, attitudes and skills. Rogers and Shoemaker (1971) argue that this is the key variable, and the attempt to achieve such compatibility becomes a prerequisite for innovation success (Morrish, 1976). This is what the Humanities Curriculum Project means when it says that "there is no effective far-reaching curriculum development without teacher development" and leads us directly into the realm of strategies and tactics.

1:3 Strategies for Introducing and Implementing Innovations

In the previous section, it was argued that various strategies for introducing and implementing curriculum innovations were needed to ensure that the attitudes and perceptions of teachers were compatible with those of Project Teams.   Otherwise, effective implementation would only be a rare and chance occurrence.   Most early projects, both in this country and elsewhere, failed to recognize this need.   Based on the agricultural innovation analogy, they held the view that materials were the key to successful implementation in the classroom (Rudduck, 1976) and that almost the entire development effort should be devoted to the production of new ideas and their translation into teaching resources and methods.   Such projects, including Nuffield Junior Science, often had a flourishing start, but as problems began to mount and initial euphoria waned they gradually withered away like the seed sown on stony ground.   Hoyle (1969) has two phrases to describe different aspects of this process: "tissue rejection", where innovative curricula are discontinued shortly after the Project Team have left the scene; and "innovation without change", where a new scheme is apparently accepted but used in a traditional manner, directly contrary to the original ideas.   As this failure, this "formidable gap between the intent of curriculum projects and what actually happens in classrooms" (Goodlad, 1967), became steadily more apparent, there was a parallel realization "of the need for any major development to be complemented by an equally ambitious effort to communicate its philosophy to teachers, to show them how to put it into practice and to modify it to fit their own local circumstances" (Becher and Maclure,1978).

Curriculum development was seen as comprising two inter-linked elements: the devising of ideas and materials, and the communication of them to teachers.   A project team's efforts are judged by their success in both fields.

Such strategies can be examined at both a general and a specific level.   Three groups of authors, each working from a different perspective have made especially significant contributions at a general level: Havelock (1971), Schon, (1971) and Bennis, Benne and Chin (1969)

1:3:1   Havelock's Models of Curriculum Development

Havelock has provided three models of the curriculum development process: Research, Development and Diffusion (R D and D);   Social

Interaction; and Problem Solving.   The R D and D model looks at the process of change from the point of view of the <u>originator</u> of the innovation.   The developer, normally a central agency, begins by formulating a problem on the basis of a receiver need that he himself has identified.   He then designs a potential solution to the problem by carrying out research, developing teaching materials and methods, testing them and revising them in the light of the trial results. Finally, the solution is diffused to a target population that is assumed to be rational but passive throughout.   The main emphasis is on the planning of change on a large scale, in an orderly fashion, over a long period of time.   Development costs are normally high, and the product standardized.

In the Social Interaction model, as in R D and D, the receiver, the receiver's needs and the final message are defined and determined by a central source.   By contrast, dissemination, which in R D and D occurs almost as an afterthought, is the central feature of the Social Interaction process.   The model focuses on the mechanisms and patterns by which an innovation spreads through the adopting group.   Personal contact is seen as the most effective means of diffusion and, therefore, the key to successful implementation is the social interaction among potential adopters.   In particular, local teachers' groups are set up to strengthen communications, promote the exchange of ideas and translate teaching materials into classroom terms.

The Problem-Solving model is based on the view that innovation is part of a problem-solving process that goes on constantly inside the user system, either the individual teacher or the school.   The receiver, who plays an active role throughout, himself identifies an area of concern, translates this into a specific problem and then tries to solve it through his own efforts, perhaps with the assistance of an outside agency.   Where such outside help is recruited, it is given in a collaborative nondirective manner.   Internal resources are fully utilized throughout.

These three models, which represent a move from a central agency to a more informal school-based approach, each have their particular virtues and failings.   The R D and D scheme, which was originally used in agricultural and industrial innovation, has also been the one traditionally applied in education.   Most Schools Council projects have been of this form.   Typically, they have produced a
> "comprehensive set of classroom materials, embodying a
> new curricular philosophy and sufficiently teacher-proof
> to ensure that the philosophy could be effectively put
> into practice regardless of particular circumstances"
>   (Becker and Maclure, 1978).
This is where problems have generally arisen.   The packages so produced have
been over-

standardized, requiring considerable adaptation to be appropriate in all situations. The teacher thus has to participate himself in the process of curriculum development, but the model offers no mechanism to help in this. Indeed the whole programme of dissemination has, perhaps inevitably considering the model's initial pedigree, been its Achilles Heel: the Project's message has nearly always been inadequately conveyed to teachers so that their understanding and commitment have been deficient. Adoption has been slow, haphazard and fallible, and this has led to a growing dissatisfaction with the overall approach.

As a reaction to R D and D, the Social Interaction model, which highlights the need for personal commitment to curriculum change, has been increasingly stressed. By its very nature, it avoids the problems of R D and D: its whole emphasis is on improving the channels of communication among teachers so that, working together, they can produce resources that are adapted to local circumstances. On the other hand, new difficulties have appeared. In particular, the model falsely assumes that all teachers have the time, talents and motivation to take an active part in curriculum development. Time, as we have seen, is the greatest problem:

> "Composing a set of resource materials to be used mainly
> as starting points for teaching and learning will normally
> require a minimum of eight hours for every hour of eventual
> use" (Becher and Maclure,1978)

Since participation must always be an optional activity, the result has been that not enough teachers have joined local curriculum groups; the groups have tended to disintegrate as soon as Project support has been withdrawn; and the quality of their resources has mostly been well below that of R D and D programmes.

The Problem-Solving approach, which is exemplified by the Schools Council 6th Form General Studies Project and the Nuffield Resources for Learning Project, is the one advocated by Stenhouse. Its combination of school-based initiation of problems and the collaborative solution of them with an outside agency does unite some of the advantages of the two preceding models:

> "'The deliberately adaptive materials' allow room for
> initiative by the teacher if he wishes to take it, but do
> not presuppose that he is willing to do all the work of
> curriculum development himself" (Becher and Maclure, 1978)

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However, by preparing resources to meet teachers' direct needs and by allowing teachers to put their own interpretations on such materials, the model follows current traditions rather than moving in radically new directions. Curriculum development may then become excessively slow. It also assumes that teachers have the necessary skills to make changes and this may be rather a large assumption. In addition, if the Problem-Solving strategy is to work properly, it requires a detailed analysis of each school's needs and the development of a specific solution to them. This is unrealistic on the grounds of finance and manpower demands, and the approach tends to become diluted to a more generalized form.

1:3:2. <u>Schon's Models for the Dissemination of Innovation</u>

A second triple set of models concentrating on the outward spread of innovations, has been defined by Schon (1971). These are the Centre-Periphery, the Proliferation of Centres and the Shifting Centres Models. The Centre-Periphery model is based on three assumptions: the innovation has been fully developed before diffusion beings; diffusion consists of an outward movement of the innovation from its developers at the centre to its ultimate users on the periphery; and diffusion is controlled entirely from the centre in terms of training, and the provision of resources and incentives. The centre is thus active and the periphery passive throughout.

The Proliferation of Centres Model is an elaboration on its predecessor, consisting of a primary centre surrounded by a network of secondary centres. The primary centre, having, as before, developed the innovation, has also carefully prepared a method for its dissemination. It trains and supports a group of people who, in turn, form the nucleus of the secondary centres that spread the innovation further among teacher groups. Thus the secondary centres maintain contact with the teachers while the primary centre has a monitoring role and and maintains the flow of information throughout the system.

The Shifting Centres model differs radically from the previous two. There is no clearly established centre - centres, which may overlap and interact with each other, rapidly appear, reach a peak and disappear, soon to be replaced by new centres. Moreover, there is no stable message, but rather an evolving doctrine. The whole situation is thus fluid and informal: centres rise and fall, messages change; the whole structure is loose, adapting to shifts in meaning and direction.

Schon's three models neatly parallel those of Havelock in many
respects.   The Centre-Periphery model, where the emphasis is on
stability and control, can be equated with R D and D.   Most Schools
Council projects have conformed to this structure, and the touchstone
of its success has been the degree to which it has been able to maintain
an effective flow of information between the developers and the teachers.
Normally, this has proved to be difficult, and full, lasting teacher
commitment has seldom been obtained.   The Proliferation of Centres
Model, like Havelock's Social Interaction, greatly increases the reach
and efficiency of the diffusion system because it is based on closer
personal contact.   Once the secondary centres, consisting of trained
personnel and ordinary teachers, have been established and stimulated by
the Project Team, it has been assumed that they will generate and circulate
new ideas amongst themselves, build up a bank of common resources and help
to train further teachers.   This is seen as an essential part of
curriculum development.   The practical problems have been the same as those
for social interaction – lack of time and perhaps motivation on the part
of individual teachers, and the absence of easy channels of communication
between one educational institution and another.   The Shifting Centres
Model is unlike anything in Havelock's system.   Although favoured by
Schon, it has rarely if ever been used in educational innovation, perhaps
since, as Stenhouse (1975) argues, it provides no basis for the critical
development of a new philosophy and procedure.

1:3:3. <u>Bennis, Benne and Chin's Models for Planned Educational Change</u>

        The third series of strategies for planned educational change has
been identified by Bennis, Benne and Chin (1969).   Again there are three
of them – power-coercive, empirical-rational and normative-re-educative.
Power-coercive strategies are based on the legal powers exerted by central
and local governments.   Laws are passed and directives issued;
communication is one-way, from the initiators to the practitioners.
Power-coercive strategies are typically used to make <u>structural</u> changes
in education – for example, the creation of comprehensive schools, the
raising of the school leaving age, and the amalgamation or closure of
schools and colleges.   The agreement of teachers and parents is not
particularly sought after.
Empirical-rational strategies have been the most commonly used in education.
They assume that people are rational and that once they have seen that new
ideas and methods are superior to existing alternatives, they will
automatically adopt them.   The emphasis is thus intellectual, on ensuring
that practitioners understand the new methods.   Empirical-rational
strategies are used by researchers, inspectors, advisers, curriculum

specialists and headteachers - people with influence and expertise.   The medium is the book, the lecture, the research report, and communication is generally one-way, down to the practitioners.

Normative-re-educative strategies focus on people's viewpoints. They assume that the main issue in innovation is how the teacher (or group of teachers) understands his problem and how he can be encouraged to solve it.   Innovation is less a matter of supplying information than of changing attitudes, skills, values and relationships.   The teacher is thus actively involved in the development process and enters into a collaborative relationship with the change agent, who may be an inspector/adviser, headteacher or outside consultant.   Communication is two-way since the change agent is non-directive and is as likely to be influenced by others as to influence them himself.

Empirical-rational strategies have close affinities with Havelock's Research, Development and Diffusion model, whilst the normative-re-educative approach shares features of both Social Interaction and Problem-Solving, particularly the emphasis on teacher development and collaborative relationships.   As far as the curriculum innovation process is concerned, most researchers now favour a combination of the empirical-rational and normative-re-educative strategies; the power-coercive procedure, with its legalistic framework, is entirely inappropriate (Hoyle, 1969).   Most Schools Council projects have, however, relied on an empirical-rational style, and it is only some of the more recent examples, such as the Humanities Curriculum Project, that have benefitted from the failures of their predecessors and have incorporated a strong normative-re-educative component.

2:3:4.   <u>Specific Strategies for Promoting Innovation</u>

These three sets of models, each dealing with particular aspects of the innovation process, provide valuable insights at the general level. They all suggest - and, as we have seen, practical experience bears this out - that the teacher participating in curriculum development needs to understand fully the new ideas and approaches (including their implications for the classroom); needs to assimilate them properly into his own value system; and needs to have the necessary skills and opportunities to implement them successfully.   These are all essential components of that commitment to the innovation without which the teacher can never surmount the obstacles that will inevitably come his way.   How, at the specific level, is this to be achieved?; bearing in

mind that innovation is a continuing, developing process, not something static and rigid. This state of steady renewal which most project teams aim for, has been well described by White with regard to the American High School Geography Project:

> "Ten years from now, if the venture is completely
> unsuccessful, the High School offerings will be little
> different from today. If it is moderately unsuccessful,
> the course will be taught widely and in substantially its
> present form. If it is highly successful, it will have
> generated a series of competitive improvements and
> internal revisions so that the new course will be rapidly
> replaced by more effective ones" (White, 1970)

Among the specific means that curriculum developers use to communicate their intentions to teachers, the most widespread are perhaps inservice training courses and detailed instructional guides (Regan and Leithwood, 1974). Both are potentially useful. Inservice sessions, which may take the form of conferences, courses and workshops, establish contact between developers and users, help to create a common understanding and instil initial enthusiasm for the innovation: instructional guides provide tangible, continuing guidance for teachers. Both, however, have operational drawbacks:

> "When inservice training is limited to sessions prior to
> teacher implementation, and when the teachers' interpretation
> of the instructional guide in practice receives no developer
> support, there is little effort to identify, much less
> rectify errors in teacher understanding" (Regan and Leithwood, 1974)

Moreover, most inservice sessions involve only one member of the user system and one messenger - H.M.I, local adviser, field officer, or representative from a curriculum development agency (Hoyle, 1972) so that the dissemination of ideas is slow, limited and often insufficiently related to classroom experiences. What is needed is a varied series of training sessions that continue through the phase of project implementation and involve as wide a range of messengers and teachers as possible.

This was the policy pursued by the Humanities Curriculum Team who made it a virtual obligation that teachers intending to use the Project should attend a course during which the philosophy would be presented clearly and teachers' skills would be developed. Central and local training courses were held, participants were shown videotapes of H.C.P. in action and given practical experience of neutral chairmanship, one of the Project's main innovatory features.

Crowther (1972) has investigated the effectiveness of various styles of inservice training. Teachers were asked to select from nine alternatives, the styles that they preferred. Much the most popular were "availability of model units" and "observation of demonstration lessons" and this was seen as reflecting teacher desire for specific direction. The lowest rank was "membership of a unit planning committee" which was related to a lack of the time and skills required to develop new units. Although by no means the only consideration, teachers' preferences are important because they influence the level of support for the training scheme and, therefore, its effectiveness.

If Crowther's last finding is of general validity, and it would require testing in the United Kingdom, then it casts some doubts on the usefulness of local curriculum groups, at least in their present form. Local groups, which figure prominently in the Social Interaction and Proliferation of Centres Models, have become a central plank in the support and development structure of projects as diverse as the North West Regional Curriculum Development Project, and the Industry Project.

They are intended to allow teachers, acting together, to develop their curricula and classroom skills, share the workload and exchange ideas and experiences. Local groups normally have a co-ordinator, more closely linked to the Project Team and often trained by it, who maintains a two-way flow of information. Appropriate adaptations and developments to the programme can then be made. Crowther's study suggests that such a proceeding may not, in teachers' eyes, be closely enough related to the practicalities of teaching. They want to know in detail the classroom implications of a project and need guidance in how to put them into practice. Local groups have a further drawback through the absence of any readily identifiable figure to act as co-ordinator.

This last deficiency — the lack of obviously appropriate personnel to support teachers engaged in innovation and to link them to project teams — is a great drawback. Hoyle (1972) cites it as a major reason for "tissue rejection". The appointment of subject advisers, itself indicative of a move towards a joint empirical-rational and normative-re-educative strategy and away from the power-coercive role of inspectors (Dalin, 1973) has been an attempt to alleviate this problem. However, advisers have so many different duties, which include giving

advice to individual teachers, organizing local curriculum development schemes, disseminating findings from central research and development agencies and informing L.E.A. administrators about the needs and views of teachers and schools - too many to be accomplished by one person - that although the creation of an advisory network represents a considerable advance in helping schools to develop their problem-solving capabilities, there are still many difficulties to be overcome.

Throughout this discussion of specific strategies for encouraging the introduction and implementation of innovations, there has been an underlying suggestion that the educational system is not at present constituted to facilitate change.   This is a fact which we may lament but which, nonetheless, we have actively to come to terms with.   As MacDonald and Rudduck argue:

> "the system is 'given' and it is for a development team to find out how the system works in order to cope effectively with its characteristics". (MacDonald and
> Rudduck, 1971)

Only by doing so can they spread their ideas convincingly to teachers - a task which, it may be repeated, is as important as having ideas in the first place.

1:4   Characteristics of the Implementing Unit.

So far, it has been argued that the introduction and implementation of an innovation depends on its nature, which operates principally through the medium of the teachers' perceptions and values, and on the strategies which have been used to communicate this nature to the teacher.   The combination of these two sets of variables determines the degree of personal commitment to the change, which is a prerequisite for its successful implementation.   However, the likelihood of this personal commitment being translated into effective use rests in turn on the characteristics of the adopting unit.

> "The impact of a curriculum depends on the setting in which it is used, on the type of school, and on teacher and pupil characteristics"   (Westbury, 1978)

An institution which is inadequately organized to promote change may easily warp initial enthusiasm into lassitude or outright hostility. This is the message of the work of Gross, Giacquinta and Bernstein (1971).

The central question is how congruent is the innovation with institutional goals, structures and resources.   Since an innovation represents a more or less radical departure from traditional practice,

there must be some degree of mismatch between the innovation's demands and the institution's present characteristics. The institution must, therefore, adapt itself to cope with the innovation (part of the non-material costs) and this requires leadership on the part of the Head-teacher. Indeed, it should be adapting itself to promote change and encourage teachers to move out in new directions, rather than simply reacting to what has already taken place.

The Headteacher has widely been recognized as playing a crucial role in innovation (Crowther, 1972; Hoyle, 1972; MacDonald and Rudduck, 1971; Miller, 1967 and Owen, 1973). His importance derives from three sources.

1. His traditional authority.

2. The opportunity which he has to view the school as a whole, and, therefore, to perceive a need for the innovation.

3. The contact that he has with the "messengers" of innovation – inspectors, curriculum development workers, lecturers in education and so on.

Miller (1967) has shown that a Headteacher's influence on the adoption of change increases according to the frequency with whch he is seen to be offering constructive suggestions to members of his staff, bringing educational literature to their attention, discussing with them their professional activities and displaying that he knows precisely what is happening in the classroom. Moreover, although the Headteacher is unlikely to be directly involved in the classroom implementation of a curriculum project, his specific actions can contribute to its likely degree of success:

> "From a reasonably full knowledge of the curriculum development, he will be able to make appropriate choices in terms of staff, material resources and organization, to be sensitive to the tensions that invariably arise in the process of innovation and to provide for the innovating teachers a background of support without dominance." (MacDonald and Rudduck, 1971)

Of these aspects, resources and organization have been analysed in more detail by various authors.

Most innovations require an increased investment of resources and an inadequate provision of these is a common cause of failure. Some of the resource demands relate to equipment and audio-visual aids, others to storage facilities and duplication. Particularly important in this latter context is the existence of adequate secretarial support for the

production of classroom materials (Hebden et al, 1977). Of equal significance, and something which Headteachers must take account of in their timetabling arrangements, is the wise allocation of classrooms:

"The size and shape of the classroom impose limitations
on the scope of the work that can be undertaken therein.
The positioning of classroom fittings, the availability
and type of classroom furniture, the scale of provision of
materials serve as constraints in the teachers' planning
and preparation" (Cohen, 1976).

Rooms that are too small, power-points and black-outs that don't exist are precisely the kind of permanently niggling deficiencies that gnaw away at a teacher's enthusiasm, confidence and will.

Among the many aspects of organization — the "climate" of the school — Hoyle (1972) and Dalin, (1973) mention decision-making procedures, professional relationships and communication. All of them affect the problem-solving capability of the school, which is what innovation is primarily concerned with. Hoyle (1972) has argued that a successfully innovative Head will use persuasion rather than issue instructions (an empirical-rational/normative-re-educative strategy instead of a power-coercive one) and for this to be achieved, efficient two-way lines of communication, allowing information and understanding to pass both up and down the system, are needed. Communication between teachers is also essential.

"Those teachers who want to become involved in new
activities soon come up against problems. Usually
they find it impossible to do any educational develop-
ment without close co-operation with colleagues"
(Dalin, 1973)

This, it has already been suggested, is difficult between schools, and within schools it is often not much easier. Dan Lortie has suggested several reasons for the lack of contact among teachers, of which the most widely occurring are:

1. The division of school buildings into separate classrooms.

2. Low task inter-dependence among teachers.

3. Constraints of time-tables, especially the lack of enough shared free time, which discourage mutual association.

Continuing on from this are reasons for the adoption of curriculum innovations. The decision to innovate may be a personal one, or it may be forced on the individual, either at departmental level or by the Head teacher. With either of these enforced adoptions, commitment to the

innovation is likely to be low and failure probable.   Conversely, a
teacher may decide to innovate in isolation from his colleagues, but this
again leads to poor success prospects – because of a lack of the internal
support that is needed to overcome the obstacles that inevitably arise.

Thus the characteristics of the adopting unit form the background
against which the innovation is set and impose limits on the level of
change that is likely to be achieved.   Miles (1964) describes this as
an organization's state of health, by which he means its ability not
only to function effectively at present, but also its ability to develop
and grow into a more fully functioning system in the future.

2:5 Socio-political Factors

"Teaching is a complex activity strongly influenced by
the environment in which it takes place" (Hamingson, 1973)

These environmental factors, which are in a state of continuous interaction
with the school, form a broad social, economic and political framework
within which everything else must operate.   It has been suggested
in general terms that the way the curriculum reform movement has acted so
far has affected society's estimation of it and that this will in turn be
reflected in its present and future development.   For example:

"The perceived 'failure' of some curriculum projects to
bring about desired changes has led to a denouncement of
nationally developed projects and the recommendation of 'grass
roots' development by local teachers, hopefully to ensure the
level of commitment from them that would lead to effective
implementation" (Cooper, 1977).

Equally since innovation is a costly activity and one which can easily,
but falsely, be considered as an extra frill, it is at the mercy of the
country's general economic condition.   When times are hard it is
eminently disposable.   In addition, environmental factors operate at a
specific level, and help to determine whether individual projects
"succeed" or "fail".   The range of these environmental factors, however,
is so vast and the way that they combine so varied that comparatively
little attempt has been made to study their influence.

One set of variables, which belongs partly to the characteristics
of adopting units (2:4) , is the demographic characteristics of the
school and its immediate hinterland – the socio-institutional environment.
This includes such features as the size of the school, the size of classes,
the social background of pupils and their abilities and values.   The
reactions of pupils are particularly important.   Many innovations demand
changes in the role of teachers and pupils, and where they do so, the

contract between teacher and pupils must be renegotiated.   Students are not a clean slate, passively waiting for teachers to inscribe their will upon them (Nash, 1973); they have clear expectations concerning their own role and that of their teachers.   Barth, (1972), for example, has studied an elementary school in the United States, where 40% of the pupils were black and most came from families on welfare.   The children, from their prior experience, saw school as a place where only two conditions <u>could</u> exist: firm authoritarian order imposed by the teacher, or chaos.   Such attitudes seem bound to lead to a rejection by pupils of attempts to introduce a permissive approach where students can choose their own tasks and participate actively in learning strategies.   The crucial question, of course, is whether pupil expectations are formed principally by their school experiences or whether they have developed outside (Whiteside, 1978).   The latter would be much more serious because it would greatly reduce the capacity of the schools for modification. Little research, unfortunately, has been carried out on this issue, although Musgrove and Taylor (1969) found some evidence that changes in the nature of the school organization <u>can</u> lead to changes in the expectations of pupils.   On the other hand, Kohn's work (1969) seems to imply that parent-child relationships can also be a major influence. Middle-class parents valued self-direction in their children and, there- fore, encouraged such qualities as curiosity and self-control, while working class parents stressed obedience, honesty and neatness — the following of explicit rules laid down by someone in authority.   Such ideas have obvious implications for the many new programmes which expect pupils to exercise independent judgements, although much more research needs to be undertaken in this whole area.

Another major and increasingly important influence, now that it is penetrating further than ever before through the ability range, is the examination system.   Any curriculum project must negotiate its existence with the Examination Boards if it is to have much hope of being adopted on a large scale.   The project cannot hope to emerge wholly intact from such an encounter but it must endeavour to ensure that it maintains its essential integrity.   If it does, it can turn the examination system into a useful agent of change instead of the conservative influence that it is often accused of being.

1:6. Implementation Processes and Stages

Before a summary of the determinants of implementation can be made, one further complicating factor, which to a greater or lesser extent affects each of the four main groups of variables, needs to be considered. This is the developmental component of innovation. Certain aspects of this have already been mentioned during the discussion of Havelock's three models. What is important here, however, is the fact that the implementation process itself comprises several distinct stages, from the initial attempt to use the innovation at one extreme to its institutionalization as a fully integrated part of the school system and subsequent further development at the other. Gross et al (1971) describe this as a complex dynamic process that shifts over time. Several attempts have been made to identify particular stages of implementation, including the following by Hall, Wallace and Dossett (1973). Once initial training on the characteristics and requirements of the innovation has been carried out they give four levels of use.

1. Mechanical   — users are engaged in pilot use of the innovation. They make a step-wise attempt to master the tasks required by it, and this often results in disjointed and superficial use.

2. Independent   — the user handles the innovation well as an individual with quality impact on leavers, yet fails to integrate his work with the total effort of the institution

3. Integrated   — the user actively seeks ways to combine his efforts in using the innovation with colleagues to achieve a collective impact on all learners within an institution.

4. Renewing   — the user re-evaluates the quality of the innovation, seeks new alternatives to achieve greater impact on learners, examines new developments in the field and identifies new goals for himself and the institution.

This categorization carries with it two main implications. Firstly, there is a great deal more to ensuring the effective use of an innovation than initial training, and the failure to recognize this has often resulted in the innovation itself failing. As teachers struggle towards a real implementation of a project, they need continued supportive training and consultation, both with outside agencies and with colleagues, to sustain their efforts (Hall et al, 1973). Indeed Hebden (1977) has

argued that as a teacher becomes more deeply involved in curriculum change and becomes concerned with the development of the whole curriculum of the school, so his need for support increases.

The second implication of Hall's model is that innovation is not a finite condition which can reach some definite and visible conclusion. Rather it is a process of constant regeneration and refinement. At this point, however, a practical dilemma arises for teachers. Change is a physically and mentally exhausting state because it involves a vastly increased workload (Nisbet, 1974) A period of frenzied activity is bearable in the short term precisely because it is temporary and will lead to a new and more satisfying steady state, but cannot be sustained indefinitely. A balance has to be struck between the teachers' practical demands for stability and the curriculum's no less insistent demands for renewal. Such a compromise has seldom been achieved in practice and normally it has been the innovation which has suffered. Perhaps this reflects Dalin's rather disquieting comment:

> "The educational system has very little energy left for
> innovation and change. Most of its energy is spent in
> maintaining existing structures and operations"
> (Dalin, 1978)

This leads us back to MacDonald and Rudduck's remarks and to the need for Project Teams to provide a tonic for the system.

1:7 Summary

This chapter has examined the contributions of many who have investigated the process of curriculum reform. Their findings and the concepts developed from them are varied but all point towards the complexity of change. We do not fully understand the process — if we did there would be no point to this research — but we can outline three inter-related groups of variables. Firstly, there are the characteristics of the innovation — what it means to the person who is going to put it into practice. That person is the teacher and it is what he makes of the Project in his mind that will determine what he makes of it in the classroom. For this reason, the Project Team must ensure that the teacher perceives what they do, that he accepts what he perceives and that he has the skills to implement what he accepts. This is the most difficult part of a Project Team's task and it is the part where failure has consigned so many elaborate programmes in the past to premature retirement in dusty cupboards. Effective strategies for equipping

teachers to handle innovation are essential.   This is the second
variable, and together it assumes that teachers will take an active part
in curriculum development and not merely act as sponges soaking up what-
ever is thrown at them.   The interaction between teachers and Project
Teams persists over a long period, and while it does so, it is matched
by an interaction between teachers and school organizations.   The
crucial concept here is the innovative climate which determines the
ease with which individual teachers may make changes.   Much depends on
communication networks within the school and mechanisms for identifying
and solving problems.   This is the Headteacher's responsibility.   He
must manage the school so that innovation is encouraged in general and
the specific resource and support demands of individual projects are
understood and catered for.   Acting as a surrounding framework for all
these variables, are broad social, economic and political factors.
They affect what teachers, schools and project teams are expected, perhaps
required, to do, and what they are able to do.   All three groups must
come to terms with these external variables.

   Figure 1 is a diagrammatic representation of some of these ideas.
It stresses that there are several tiers of factors, with characteristics
of the innovation and strategies and tactics forming the centre, and
leading outwards by way of characteristics of the implementing unit to
external features on the margin.   Each layer influences the ones that
are inside it.   The model also emphasizes the inter-related aspect of
change.   This can be demonstrated through the element TIME.   Time is a
potential cost for the teacher.   Project teams must devise structures so
that the teachers' time is used as efficiently as possible.   The school
must do this too and provide an adequate time allowance for development.
However, this costs money because more staff may have to be employed and
may be impossible because of restrictions in the amount of money
allocated to education, which is in turn affected by the quirks of
government policy and the nation's general economic well-being.

Fig. 1   SUMMARY MODEL OF DETERMINANTS OF SUCCESSFUL INNOVATION

3. CHARACTERISTICS OF THE IMPLEMENTING UNIT

A. Nature of the Process of Adoption - i.e. individual level of acceptance of the innovation

B. Availability of necessary facilities and resources for successful implementation

C. Organisational characteristics (e.g. leadership, qualities of Head, school climate, nature of decision making and communication processes) supporting the innovation

1. CHARACTERISTICS OF THE INNOVATION

Magnitude

Relative Advantage

Complexity

Clarity

Potential Costs and Benefits

operate through the medium of

TEACHER VALUES and **PERCEPTIONS**

2. STRATEGIES - TACTICS

Basic models: Havelock

Schon

Bennis, Benne, and Chin

Specific methods:

Teachers guides

Inservice courses

Local groups

Feedback mechanisms

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4. EXTERNAL FEATURES

A. Demographic characteristics of adopting units and their immediate hinterland. (Social environment of the institution)

B. Examination system

C. General social, economic, and political conditions

The outer variables operate on, and provide the framework for those within them; the arrows showing this relationship have not been drawn on.

CHAPTER 2   THE GEOGRAPHY FOR THE YOUNG LEAVER PROJECT –

IN GEOGRAPHICAL AND MANAGEMENT TERMS.

2:1   INTRODUCTION

2:2   The Nature of the Innovation: the Geographical Context

2:3   The Nature of the Innovation: the Management Context

2:3:1.   The Development of Materials

2:3:2   The Dissemination Strategy

2:3:3   The Examination Component

2:3:4   Summary

2:4   The Situation in Sheffield

2:5   The Research Outline.

2:1   INTRODUCTION

It is important at this stage to examine the life history of the
Geography for the Young School Leaver Project from the moment of its
inception to the time when it was introduced into schools, because this
will provide detailed, even if incomplete, understanding of two of the
key variables.   We can analyse the nature of the innovation - what it
meant in geographical terms, and how teachers as a whole were likely to
perceive it.   (We cannot, of course, describe individual teachers'
assessments, which is the really interesting point: that is among the
tasks of the remainder of the research.)   A study of the Project's
management strategy for developing its message and getting it firmly
established in schools is also essential.   The discovery later that the
GYSL philosophy either is or is not being properly implemented will be
of little practical or conceptual value if we do not know what strategies
were actually used to ensure implementation.   Finally, it is worth
repeating that although our eyes will be focusing here on this one project,
it is not being looked at for its own sake, but rather as an illustration
of curriculum reform in general.

Work on the Schools Council Geography for the Young School leaver
Project began in September 1970 and was intended to be completed by July,
1973.   However, several extensions, with corresponding increases in
finance available, have taken place since then so that now the Project is
scheduled to continue until 1981.   By then it will have been granted about
£142,000 by the Schools Council.

As its name implies, GYSL was originally specified for less able
pupils between 14 and 16, although this specification was at no time
regarded as restrictive either in age or ability terms :

> "It is apparent that work in one age or ability grouping
> in the curriculum has radical implications over a much wider
> spectrum.   For example, to state that something is worth-
> while educationally for the 14-16 year old average to less
> able pupils might imply that something different is worth-
> while for the more able.   This we do not accept.   Our
> schemes, while in technique and methodology are designed to
> assist the less able, in aim and content are designed to
> meet the needs of 14-16 year olds of all abilities.
> Secondly the whole pattern of approach in devising the
> learning experience with its emphasis on pupil involvement is
> likely to be most successful where a similar emphasis is being

developed with the younger age groups in the school"
                          (GYSL — Introduction to the Teachers
                          Guides, 1972).

The Project has in fact spread throughout the ability range and, indirectly, among both younger and older classes, and is now used in about 40% of schools in England and Wales.   At whatever age and ability level, the Project marks, in theory at least, a radical departure in the philosophy and teaching of school geography.   In this, it closely follows changes changes in the organisation of schools, classes and the overall curriculum, and in the nature of geography itself.

Some of these changes are obvious: comprehensive schools and mixed-ability classes have become widely established; the school leaving age has been raised (GYSL was set up specifically to cope with the effects of this); and new curricula and teaching strategies, reflecting the growing diversity of pupil needs, interests and hopes, have been introduced. New approaches include the greater use of individualized learning and the development of Integrated Studies which allow complex problems to be approached from a variety of standpoints in a more realistic and relevant way.

At the same time, there have been fundamental shifts in direction within geography itself.   In place of the former description and differentiation of unique regions, geographers now study recurring spatial patterns and the processes that shape them.   They seek to make generalisations and models based on precisely measured and analysed data, and stress the importance of predictions.   Concepts rather than facts are the current watchword.

2:2. The Nature of the Innovation: the Geographical Context

In pedagogic terms, four basic principles underlie the Project:

"1. The work should be concerned with all aspects of pupil
     development — understanding ideas, acquiring facts,
     developing skills, engaging attitudes

2. The themes should be of interest and relevance to the
    pupils now, but should also be of more than transitory
    significance

3. There should be a structure of ideas which focus attention
    on the concepts of the discipline.   These ideas may be
    initiated by a consideration of the local environment and
    community.   By linkage and analogy these could be
    extended to more distant parts of Britain and the world.

4. The methods should encourage full pupil involvement and
    participation." (GYSL — Introduction to the Teachers Guides,
                                            1974).

The broad aims were translated into three categories of behavioural objectives: concepts, skills, values and attitudes. The concepts are key general ideas which are taken from the academic discipline and defined in terms appropriate to the age and ability of the pupils concerned. This follows Bruner's view that the "foundation of any subject may be taught to anybody at any age in some form" (Bruner, 1961)

In the course of discovering the key ideas, the pupils acquire skills, sometimes specifically geographical in the form of interpreting maps and diagrams, sometimes of basic literacy and numeracy, and sometimes social skills developed through group work and discussion. At the same time, issues are raised which involve attitudes, both their own and other peoples. In particular, pupils are expected to make value judgements in situations where a number of viewpoints are presented.

These objectives (the concepts, skills, values and attitudes) form the core of the Project. They are specified in advance and subject matter is chosen to provide material for their achievement. Facts, in general, have a supportive and illustrative function, helping the pupils to discover the ideas. This is a reversal of the practice, normal before the late 1960s, whereby school syllabus were based on subject matter, and it marks one of the main innovatory features of the project.

In defining objectives, and therefore the curriculum, emphasis is placed on the pupil and his relationship with society. There is a strong desire to bring school geography closer to the present and future lives of the pupils so that the young school leaver is helped to understand the world about him and is prepared for the responsibilities of the adult working life upon which he will shortly embark.

With this basic premise that the work must be relevant to the pupils, but at the same time of lasting significance and capable of maintaining continuity and progression in the learning process, the Project Team (consisting of two co-directors and two Research Officers) selected three themes, each of which is subdivided into five or six units.

1. Man, Land and Leisure
2. Cities and People
3. People, Place and Work

These themes and their associated units are regarded as providing exemplar material: they illustrate a particular approach to curriculum building rather than providing, in themselves, a complete course. Nevertheless, even when supplemented by further blocks constructed along similar lines,

they form the core of the Project and as such give an understanding of some key aspects of the environment and community at local, national and global scales. Throughout the exemplar materials, topics new to school geography, such as leisure, are stressed, while others of traditionally key importance, like the study of landforms, are deliberately omitted. Indeed, although relationships with the environment are frequently emphasized, they are with the social, economic and political environment as much as and perhaps more than the physical environment. Pupils are expected to come into contact with politically contentious issues such as unemployment and immigration into inner city areas. They are encouraged to form and express their own opinions on these matters and to develop a concern for the problems of other people and the environment, in its fullest sense, in which they and their children must live. There is a clear intention to build up the powers of awareness and expression that will allow the children, in later life, to understand democratic processes properly.

The three main themes of leisure, cities and work, are all extensive and can be approached from different angles. Geography can illuminate certain aspects of patterns and processes: History, English and Moral Education can illuminate others. The Project Team encourage such a related approach to curriculum planning to give a deeper understanding of complex reality:

> "Our view is that a realistic and worthwhile aim would be a collaboration of specialists which would preserve their differences and unique viewpoints and at the same time demonstrate their common concern and interests"
> (GYSL – Introduction to the Teachers Guides, 1974)

This leads on to the presentation of the material in the classroom, and here there are further innovations. In the first place, there is an immense range of resources to work from – discussion sheets and worksheets, which are designed to be appealing and usable for a relatively wide ability range, newspaper extracts, taped interviews, photographs, maps, graphs and statistics. Some of this material, such as enumeration district census data and archive maps, is quite revolutionary in the school context, and new skills are required for its analysis – for example, the construction and analysis of scatter graphs and simple correlation techniques. A change in the teacher's role is envisaged too, so that he acts as a guide and adviser rather than a purveyor of facts. The resources are seen as providing a basis for pupil-centred activities where the children, either working individually or in groups, observe, examine

and interpret data, leading to solutions and generalizations which can be tested in other situations. Data collection, through field work and role play, is also highly important.

When using GYSL, the teacher is expected to prepare materials, relating the Project's approach to local needs. He has also to introduce the topic so as immediately to arouse pupil enthusiasm and generally manage a smooth, structured learning situation. Perhaps more awkwardly, he has also to cope with the question of attitudes, which have traditionally been side-stepped in geography lessons. It is not simply a case of presenting agreed beliefs, for in matters like the conflict of land use and the alternative use of resources, these hardly exist, but rather of encouraging tolerance and unbiased judgements based on real evidence.

From this description of GYSL a number of key innovatory areas can be listed in summary form. They fit neatly into the pattern presented from the Ford Teaching Project in Section 1:2.

1. The content. Social and recreational geography have rarely received great coverage in traditional syllabuses. Some aspects of Economic Geography, such as unemployment, are also novel.

2. The initial statement of objectives as the basis of curriculum planning.

3. The positioning of ideas at the centre of the work, with facts occupying a subsidiary role.

4. The introduction of a wider range of skills, including oral, numerical and social skills.

5. A central position for values, attitudes and controversial issues.

6. The use of a wide range of resources instead of the traditional textbook and atlas

7. A wide range of new class activities including discussion, group work, role play and stimulation exercises.

8. A move (not necessarily total) towards pupil-centred learning and guided discovery.

In addition, two further features are less evident. Indeed the first, relating to assessment as evaluation, is not at all obvious. Evaluation is seen as forming an essential component of curriculum planning; its principal function is to assess whether course objectives have been achieved and learning experiences have succeeded. The second feature, more of an implication that something explicitly stated, is that GYSL is

not a fixed course where the teacher can carry out largely the same activities each year, but something which is constantly changing and developing.   In particular, the emphasis on current controversial issues requires regular modifications to be made; by definition, what is new and exciting this year will be dull and irrelevant next.

Not all of these areas, of course, were new to every teacher – many were already locally in use.   Nonetheless, the list as a whole suggests that GYSL is a major innovation and one that, in view of the range of new skills required of the teacher, is fairly complex.   The Teachers' Guides are quite clear about what changes are involved and make specific suggestions as to lesson activities.   Given the fact that the materials are only exemplars, the extent to which the Project Team can be absolutely clear in their statement of procedures is obviously limited.   Finally, GYSL imposes considerable costs on both teachers and schools.   For the teacher, there is the problem of time.   Quite apart from acquiring essential skills and preparing an initial course, the teacher must constantly be revising and regenerating his materials.   This is a great strain, and strategies must be designed to cater for it.   As for the school, there is great financial cost.   The three kits are themselves an expensive item and in addition, subsidiary resources and new audio–visual aids may have to be provided.   Adequate rooms and secretarial support are also essential.

2:3.   The Nature of the Innovation: the Management Contract.

GYSL, by virtue of its later origin, has benefitted from the experience of earlier Schools Council projects which, being based on the agricultural innovation analogy, assumed that curriculum programmes would succeed on their self–evident merits and be gobbled up avidly by the schools.   This, we now know, was false.   In many cases, the resources were ignored completely or at best dipped into haphazardly.   A more systematic management strategy was plainly necessary in GYSL to ensure that the Project Team's final proposals would be translated into improved classroom practice on a wide scale.   Jean Ruddock explains why:

> "Curriculum innovations that are left to make their own
> way travel comfortably for a while on the passport of
> their distinctive authority, but they are unlikely to
> survive; without adequate structures for communication
> and support they will more readily fall prey to teacher
> mobility, become vulnerable to competing demands and
> alternative pedagogies and be more subject to distortion"
> (Rudduck, 1976)

This is especially true of a project like GYSL which expects teachers, in addition to making far-reaching changes to their classroom work, to become curriculum activists who develop kit resources, devise supplementary materials to meet local needs and build further curriculum units around an objectives framework. Project inputs ought to be spring-boards rather than mattresses. Success for GYSL has therefore become dependant on informing teachers fully about the Project, securing their commitment to it, helping to provide them with necessary skills and supporting them as they introduce their own courses.

In achieving these aims, the GYSL team identified for themselves three fundamental tasks.

1. The preparation, testing in schools and eventual publication of exemplar materials relating to each of the three themes.

2. The creation of local curriculum groups in every LEA to establish a co-operative framework for those teachers wishing to implement the Project's work.

3. The forging of close links with the Examination Boards.

The Project Team, even in their earliest days, saw these elements as being closely connected. Teachers were to participate in preparing materials and any experiences which they had in trialling would be incorporated in subsequent editing before final publication. At the same time, their early involvement would immediately lead to some diffusion and this would increasingly be built upon in later stages. The Examination Boards would take part in the dissemination programme and this would hopefully lead to the Project's entry into the examination system, clearly a pre-requisite to widespread implementation. Despite such inter-dependence, however, the three elements will be analysed separately in this section and viewed in relation to the strategies that were discussed in Chapter 1.

2:3:1. The Development of Materials

In its emphasis on preparation, trialling and publication of materials, GYSL clearly reveals the Research, Development and Diffusion origins in which, like most Schools Council projects, it was conceived. It was specifically requested by its sponsors to produce materials, and this almost inevitably led to a strong R D and D component. The Project Team were the experts and their role was that of a central agency for change. However, even in this area, the position was more complex and GYSL did not fit into a rigid framework. The two Research Officers had been teachers immediately prior to their secondment to the Project Team, and practising teachers made a

major contribution to the final product throughout and resources were obtained from teachers, other research teams, writers and educationalists. This suggested objectives and ideas for Project themes and led to the production of a unit on the "Geography of Leisure" for an experiment, with C.S.E. and non-examination classes, in/five Inner London Schools. The teachers of these classes joined the Project Team to form a Development Committee.

The experiment was designed partly to test the materials and partly to highlight the practical problems of administration and communication with schools so that these could be overcome before the Main Trial and Implementation phases. Both teachers and pupils gave their responses and while this indicated the general success of the approach, it also suggested the need for some improvements in communication; in particular for a more detailed teachers guide, with objectives and possible teaching strategies explicitly stated, and for longer workshop sessions before the Main Trials. There might also have to be inservice courses at the disseminiation stage. This, in effect, was a demand for greater clarity.

Following this experiment, resources, comprising a rewritten version of the Geography of Leisure and two further themes on work and cities, were produced for the Main Trial. At the same time 45 schools, located in various clusters throughout England and Wales, were chosen to provide the most varied trialling conditions possible – urban and rural environments, streamed and mixed – ability classes, subject and interdisciplinary organisations, many and few audio-visual resources. The trials started in the summer term of 1972 and continued until July 1973. Once again, the comments of teachers and pupils were sought, and on the basis of their experiences, more detailed materials were produced. In addition the problems that the teachers had had in trialling affected the composition of the Teachers' Guides which were finally published, along with the kits, between August 1974 and June 1975. Each kit contained clear statements of philosophy and objectives, suggested teaching procedures and exemplar materials.

In its development component, therefore, GYSL is best descibed as following an R and D strategy that has been modified through significant teacher inputs. At this stage, also, it is possible to observe strong empirical-rational features. By providing clear expressions of the Project Team's view of what Geography for the Young School Leaver should consist of and how it should be approached in the classroom, the Teachers'

Guides aim to ensure understanding of the Project.

2:3:2. The Dissemination Strategy

While the development component was going on, dissemination work was also being carried out. The strong emphasis on dissemination has been one of the most marked and for its time most original characteristics of GYSL, and represents a major move from R D and D.

The importance of dissemination was recognized and stated explicitly in the Third Consultative Committee Report of December 1971. Change in the educational system, it was argued, depended on the combined action of several inter-connecting agencies (including publishers, Headteachers, Education Authority officers, Examination Boards and College of Education and University lecturers as well as the Project Team and teachers) so that a major aim has been to bring all of these groups together and to use their co-operation at local level as a catalyst for change. This was a recognition of the complex dynamic nature of educational reform and through it, it was hoped to translate one short-term national curriculum project into many long-term local ones. Such views and aims suggest elements of Social Interaction and the Proliferation of Centres Models, even though there is still an underlying centre-periphery structure where Project ideas are spread outwards from the Central Team to potential adopters.

In its early dissemination work, GYSL sought to achieve two things: to spread information about the Project as widely as possible, and to prepare people to participate in future dissemination activities. The first of these aims was fulfilled by arranging meetings and circulating newsletters, while the second involved the use of Trials Schools teachers. The 45 Trials Schools were divided into two categories. Both were made up of five clusters so that the teachers in each group could easily consult with the Project staff. There were 25 first tier schools and the teachers in these were visited three times a year by the Project Team and attended frequent group discussions. In each area, a co-ordinator was appointed to provide a link between the teachers and the Project Team. The remaining 20 schools were given associate status. They received much less central help, with only one visit a term, but were expected to provide feedback so that some measure might be made of the "success" of the Project in a relatively unsupported situation.

Before the Main Trials started, one-day regional meetings, attended by first tier and associate teachers, co-ordinators, Headmasters, advisers,

Local Authority administrators, members of the Project's Consultative Committee, inspectors, Field-Officers from the Schools Council and University and College of Education lecturers were held in each of the five areas with first tier schools. The meetings introduced the Project's work and considered the first of the three themes together with the initial programme of assessment. In all 10 trials areas, discussions were also held on local adaptations to the resources and the planning of C.S.E. and non-examination syllabuses based on GYSL materials.

The meetings show the Project Team using an empirical-rational strategy. They were trying to spread their ideas to as many people as possible, but at the same time were hoping to convince them as to the Project's worth and secure their co-operation for later stages. This is normative - re-educative. In the meetings, the Project Team were working and coming to terms with the broad educational system, and it shows, in action, their belief that each part of the system has an essential contribution to make to curriculum change.

As the Main Trial neared completion, dissemination activity intensified. By June 1973, the Project Team had attended over 60 dissemination meetings and, in addition, the Trials Teachers had addressed their colleagues both within their schools and outside them, at local groups. Various articles were written by the Project Team and practising teachers, both then and later - in the Times Educational Supplement, the Bulletin of Environmental Education, several geographical periodicals and the biennial Teachers Talking.

All this was ploughing the field of innovation and establishing a range of people with an early experience of and enthusiasm for the Project. More important, in a sense fertilising the soil, were three regional dissemination conferences for LEA representatives (Deputy Chief Education Officers, inspectors and advisers) held in May 1973. The Project regarded these conferences and the early commitment of advisers to GYSL as crucial because they have the power locally to stimulate and support change in the school curriculum, organise in-service training and influence decisions relating to the control of finance and the release of teaching staff. This links back to some of the ideas presented in Chapter 1 and provides further evidence of the educational system being first won over and then used to promote innovation. The Project's philosophy was sold hard at these conferences. Ideas about further dissemination and implementation were presented, including the ways by which local authorities could help

teachers wishing to develop GYSL, and LEAs were asked for their comments.

These conferences did ineed prove to be the stage of Project take-off.   Soon afterwards most LEAs took the essential step of forming local curriculum groups so that now they exist in 102 out of 104 authorities in England and Wales, together with all five in Northern Ireland and two in Scotland.   To encourage their effective establishment and to help the participating teachers, 11 regional training courses were held between October, 1973 and May, 1974.   Each of them were run by two members of the Project Team, together with some of the Trials teachers.   The courses built on and expanded the network of 10 groups of trials schools and the links that had been formed earlier with the inspectors and advisers at the dissemination conferences.   They were designed to introduce the Project's Philosophy and schemes of work and to enable teachers to identify and work towards clearly defined objectives in planning and structuring their syllabuses.   In addition, it was hoped that the representatives of each authority (normally about three teachers and an inspector or adviser) would develop an active team spirit during these courses and form the nucleus of a local project.   The bridge between one national and 104 local projects was being forged here.

This was the main dissemination activity, although other elements such as four regional follow-up courses, and the annual conference have subsequently been added, and it leads us into the realm of Social Inter-action and the Proliferation of Centres.   The Project Team had very carefully conveyed their ideas to the Trials teachers.   Together with these Trials teachers, they had trained the nuclei of local groups.   These local groups have carried on the work of curriculum development and guided teachers newly initiated into GYSL after the withdrawal of the central team.   The local groups, whose prime function is to allow teachers to work together in a collaborative and supportive framework, sharing the problems of developing new ideas, materials and skills, have become the new centres.

To help them a network of local, regional and national co-ordinators has been set up.   The main functions of the local co-ordinator are to arrange meetings on the implementation of the Project, organise the preparation of local resources, alternative case studies and further curriculum units, and to act as a link between the area's teachers and the national centre.   Part-time regional co-ordinators have existed since 1974, and the latest extension to the Project is designed to improve this service.   They have a general advisory function, and, in addition,

encourage links and the exchange of information between the various local curriculum groups and other potentially supportive institutions such as university, polytechnic and college of education departments, and local radio. On a higher level still, at the apex of the communication network is the national co-ordinator. His role includes:

1. Organizing an exchange of information between the regional co-ordinators.

2. Establishing a resource centre to facilitate the storage and retrieval of curriculum materials and assessment items relating to the Project (This is in the process of being set up in Sheffield)

3. Liason with the Project publishers on publication developments. One of these is a Project handbook.

4. Planning an annual conference for members of the various curriculum groups to review the progress of the Project at local regional and national levels.

This overall support structure, which is illustrated in Figure 2, P.40 demonstrates the importance that the Project Team attaches to maintaining a flow of communication throughout the system. This is a key feature of Social Interaction and so is the emphasis on personal contact for spreading ideas. Everyone who teaches GYSL has the opportunity of being linked to everyone else. Whether he takes that opportunity of course is another matter – that is something which goes to the heart of the Social Interaction and Proliferation of Centres approach.

2:3:3. The Examination Component

The final element of GYSL's management strategy is the close and growing contact maintained with the external Examination Boards. For any new programme, they are not just another strand in the educational system; they have enormous power over the Project's eventual fate. In developing a working relationship with the examination system, GYSL has, like any other curriculum project, faced a major dilemma. Within the system, certain elements of the Project's philosophy, such as the importance attached to values and attitudes, were likely to be lost or at least weakened; outside it, GYSL's rate of adoption in schools would, given the prevailing emphasis on presenting more and more pupils for external examinations, have been slow. Prescott and Hoyle discuss this positive aspect in relation to the Schools Council Geography 14–18 Project.

"The project was attempting to stimulate change in an
area of the curriculum which was powerfully influenced
by the external exam. system. The approach to change,
therefore, had to include some strategy for coping with
the effects of examinations if it was to stand any chance
of success. Could the examination system be turned into
an agent of change, consolidating and making respectable
changes which might otherwise have been viewed with the
greatest suspicion"   (Prescott and Hoyle, 1976)

From the beginning, the GYSL Project Team felt strongly that they should
work from within the examination framework and try to improve it.   They
invited the Boards to the regional training courses and earlier
conferences and appointed a Project's Examinations Officer, who was one
of the original members of the Consultative Committee.   All 14 C.S.E.
Boards have approved Mode 3 syllabuses based on the Project's themes,
10 have established Mode 2 Schemes and two of these have been converted
to Mode 1.   In addition, at the beginning of 1976, links were formed
with the O-level Boards and the first examination was held the following
year.

         This has been an extremely important development.   In the first
place, the syllabus, which is written by the Boards and which all teachers
entering pupils for the O-level will presumably have read carefully, states
even more clearly than the Guides the essential features of GYSL.   A
selection of short quotations will illustrate the point:

"While there may be extensive use of illustrative material through
fieldwork and other areal studies, the ultimate aim will be
the understanding of ideas";

"The structure of the syllabus illustrates the importance of
teacher involvement in the continuing process of curriculum
renewal.";

"Many of the issues dealt with in both the core syllabus and
the further curriculum unit may involve an expression of
values and attitudes......
The view is held that such involvement is an essential feature
of the course";

"It is hoped that the curricular issues associated with the
syllabus will provide teachers with a further focus for
collaboration at the local level through curriculum groups."

A further sentence, accorded a line on its own in the syllabus, is worth
giving because it has some bearing on what was eventually observed in the
classroom:

"No attempt is therefore made in the assessment programme
to assess either attitudes or values."

Such a statement seems indeed likely to seal the fate of values and
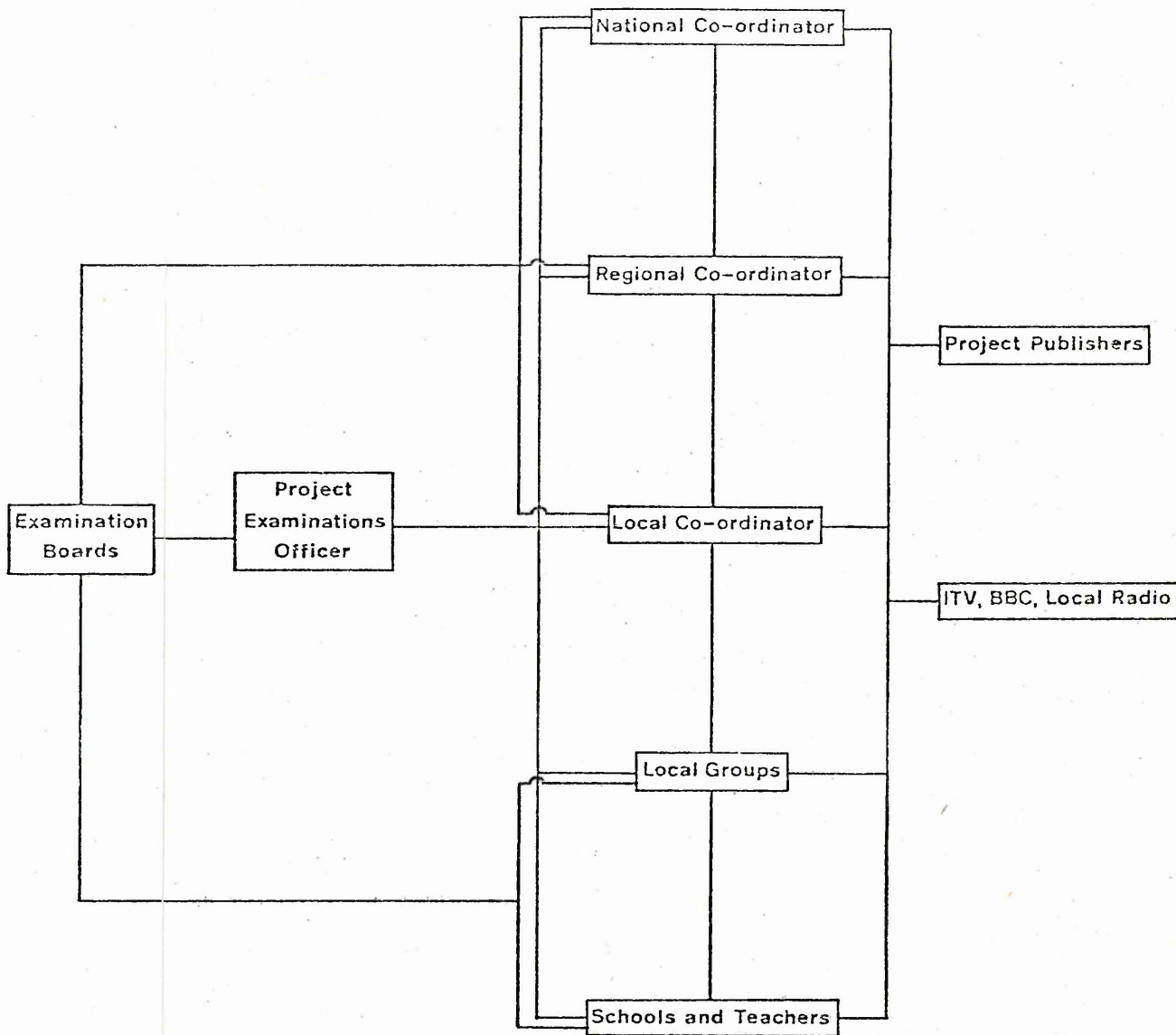
Fig. 2 **The support and communication structure developed to help individual teachers**

All lines indicate a two-way flow

attitudes as the Project Team had feared.

Quite apart from providing a clearer expression of basic GYSL philosophy, the O-level examination fixes the principle of curriculum development as an essential component of the Project. It requires pupils to have studied a fourth theme which has been prepared by the teacher, either independently or in collaboration with colleagues. It also carries with it an obligation towards investigative work. The pupils must carry out three course studies, one of them totally independently. The syllabus lists a series of steps that ought to be followed through, beginning with a clear statement as to the form that the course studies should take:

"Experience has shown that it is helpful if the title of the study is couched in terms of either a problem to be solved or an hypothesis or assertion to be tested."

The course studies and examination questions have given the Project a powerful agent of reform. Pupils whose studies consist of travelogues or step-by-step accounts of fieldtrips (The day I went to Achiltibuie) will score badly. Similarly, those who have had little experience of developing ideas, applying knowledge to new situations and making value judgements in the classroom work will not be able to cope adequately with similar questions in the examination. The range of teaching activities will have considerable bearing on final performances; and, as Trevor Higginbottom, the Project's national co-ordinator has remarked:

"There's no better way of striking a chord in teachers' hearts than them getting poor results."

Since its progression into the O-level sphere, therefore, GYSL seems to have acquired a power-coercive component. Far from being something which merely warps change (though it may continue to do that as well) the exam can actively promote it. How this balance of positive and negative effects works out in the classroom is one strand of the research.

2:3:4. Summary

In summary, then, GYSL's management strategy has been complex. The Project Team have used many of the approaches that were discussed in Chapter 1. While broadly following an R D and D/Centre-Periphery approach, they have incorporated significant elements of the Social Interaction and Proliferation of Centres Models. They have relied strongly on published materials - ineed Dalton, (1974), one of the Project's co-directors, has stated that "GYSL regarded materials as a means of engaging teachers in the curriculum process "They have brought in as many parts of the

educational system as possible so that these agencies may provide support for teachers implementing the Project. Local curriculum groups have been set up all over the country as the cornerstone of present effort. They have been introduced to break down the teachers' traditionally independent position and to force them, faced as they are with the problem of steadily renewing their courses, to work together with their colleagues and share the effort of development.

Has the strategy worked? Has it fulfilled its principal aim of ensuring that teachers have the understanding, commitment and skills that they need to implement the Project? Has it fulfilled its secondary aim of marshalling forces, both within the schools and at various levels outside (such as the polytechnics, radio and television), to help the teachers? These questions can only be answered from a study of how the Project is actually being implemented.

2:4. The Situation in Sheffield.

Before the detailed aims of the research are spelled out, some comments must be made about the special history of GYSL in Sheffield. They have some bearing on what teachers might have been expected to achieve.

Sheffield has had a close association with GYSL from its earliest days. In the first place, the city has provided two of the key personnel: Trevor Higginbottom, who joined the Project Team as a senior Research Officer in 1970, had formerly been Head of Geography at a local school; and Melvyn Jones, a member of the Consultative Committee and later Project Examinations Officer, was Senior Lecturer in Geography at the City College of Education. Secondly, two Sheffield schools and two neighbouring West Riding schools were selected to take part in the Main Trials, and much dissemination activity, including one of the Regional Training Courses, was held in the city. Finally, in 1976, when the Project Team was disbanded, Trevor Higginbottom returned as the adviser for Geography. He is responsible for encouraging and facilitating curriculum development in city schools and has combined this, on a part-time basis, with the roles of regional and national co-ordinator. Thus teachers in Sheffield have had unusually rich opportunities to hear about the Project and to be involved directly in current developments.

This has been reflected in the high adoption rate in the city. 29 out of the authority's 39 secondary schools are at present using GYSL and four active curriculum groups have been set up to keep the teachers concerned. The first deals with Materials Production. Apart from a

large range of local resource sheets, two sets of four radio programmes (complete with Teachers Guides) and a set of slides for the first of these have already been produced. The second prepares test items for the group Mode 3 syllabus which is used in about 20 of the city's schools. The third group is concerned with the O-level further curriculum unit. This unit on physical geography which has been developed by the schools working together in the group, must be completed by those pupils doing O-level, but not necessarily by those doing C.S.E. The first task was to develop a syllabus and this has been followed by the preparation of a set of resources which was trialled in local schools in 1979. Those may eventually be published. Finally there is a familiarization group for teachers new to GYSL. These local groups are set within a general many-layered structure of communication for geography teachers in the area which, while it does not always affect GYSL directly, provides a strong foundation of support. This is illustrated in Figure 3.

2:5. The Research outline

This description of GYSL's management strategies and the way that they are linked to the theoretical background discussed in Chapter 2 requires us now to go on and consider the degree of success which the Project has actually achieved. Success is of course an extremely difficult term to define. At one level, a measure has already been given. GYSL is taught in about 40% of schools throughout England and Wales and to a more limited extent in Scotland and Northern Ireland. It has been expanded to meet the needs of all abilities, and many courses both lower down and further up the schools are based on GYSL lines. Moreover, the Project has maintained a constant momentum. The annual conference, first introduced in 1976, has become an established feature; and a handbook and new materials, based on six themes, some of them related to the original core themes and some of them entirely new, are also being prepared.

The more important issue, however, concerns the way GYSL is being implemented in individual schools. Is the Project used in a truly innovatory way or has it become so watered down as to be barely distinguishable from what it was supposed to replace? This is the question to which the present research addresses itself, and through it, the aim is to look at the processes and problems involved in curriculum change. The teacher is at the heart of such change - he has got to put the new ideas into practice.
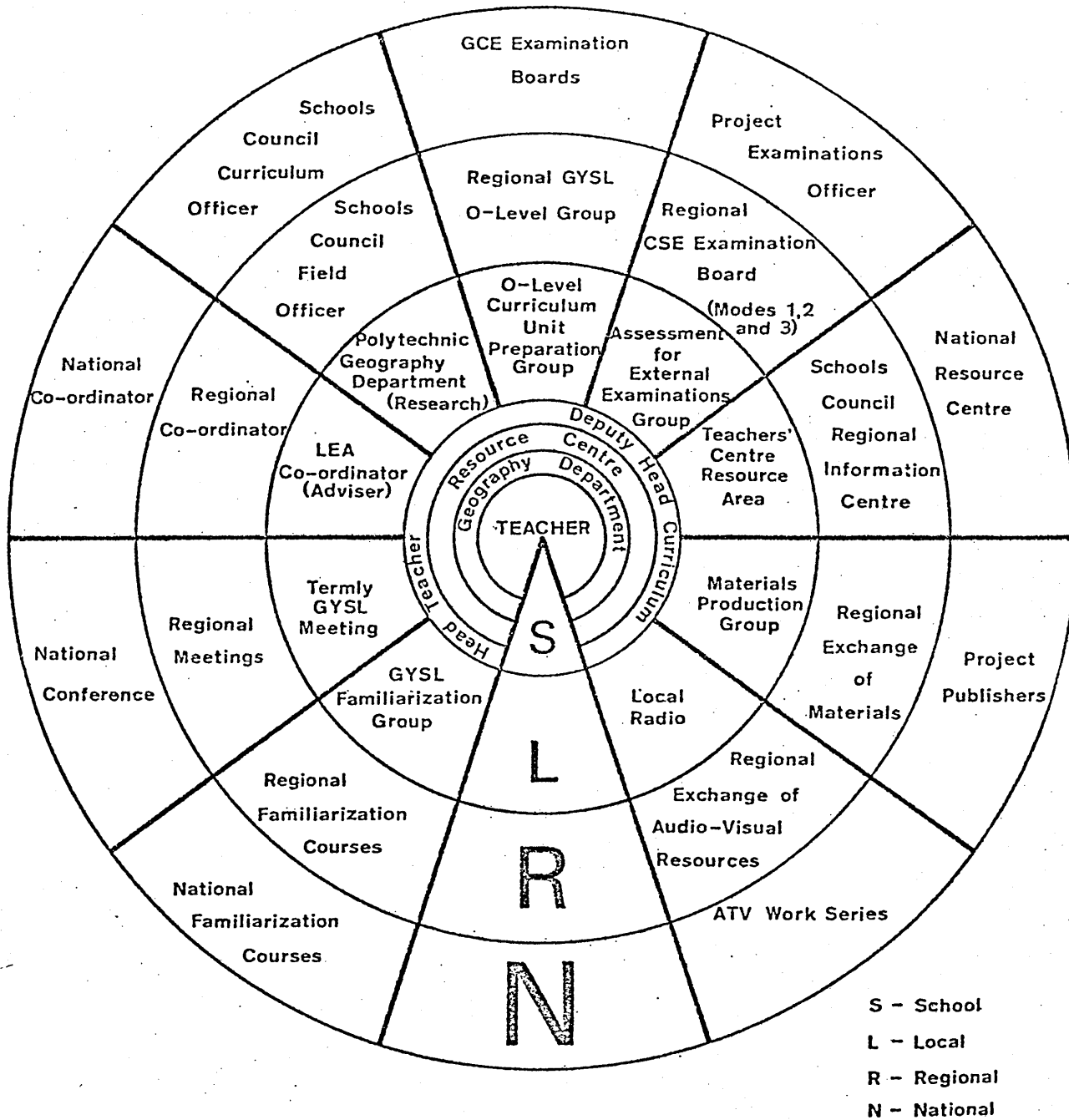
Fig. 3 The relationship between regional and national activities and the support structure in Sheffield

The diagram is a concentric circular chart. From the centre outward the rings read:

TEACHER

Geography Department — Resource Centre — Deputy Head Curriculum — Head Teacher

S — School
L — Local
R — Regional
N — National

Outer segments (clockwise from top):

- GCE Examination Boards
- Project Examinations Officer
- Regional CSE Examination Board (Modes 1, 2 and 3)
- National Resource Centre
- Schools Council Regional Information Centre
- Regional Exchange of Materials
- Project Publishers
- ATV Work Series
- Regional Exchange of Audio-Visual Resources
- Local Radio
- Materials Production Group
- Teachers' Centre Resource Area
- Assessment for External Examinations Group
- Regional GYSL O-Level Group
- O-Level Curriculum Unit Preparation Group
- Polytechnic Geography Department (Research)
- LEA Co-ordinator (Adviser)
- Termly GYSL Meeting
- GYSL Familiarization Group
- Regional Meetings
- Regional Familiarization Courses
- National Familiarization Courses
- National Conference
- Regional Co-ordinator
- National Co-ordinator
- Schools Council Field Officer
- Schools Council Curriculum Officer

Key:

S – School
L – Local
R – Regional
N – National

In doing so he is influenced on the one hand by the Project Team's strategies for spreading their ideas and providing a supportive mechanism, and on the other by the way the school, through its management structures, either facilitates or hinders development. An important side element in this are the reactions of the pupils to the new programme. Thus the three central variables in curriculum innovation - the teachers, the Project Strategies and the schools - are all inter-connected and through their connections, we can use our observations of specific implementation to advance our general understanding of change.

GYSL was introduced formally into schools in 1974. This research, based on four schools, began in October 1978 and continued until July 1979. All four teachers started to use the Project in 1974 and the four-year gap which had thus elapsed before the period of the research helps our understanding of processes greatly. We know that curriculum change is complex and tiring. We know that new programmes and the challenges they bring are initially exhilarating but that, as the months pass and obstacles mount, chill reality sets in for many. The gap will have allowed this to happen if support structures both inside and outside the school have not been effective. Equally, a major innovation, which asks teachers to change their aims and employ new strategies, cannot be wrought overnight. It takes years to effect fully. We have some chance now of seeing whether major reforms have been made, or are still in the process of being made or have been abandoned altogether. This will provide some information on how long a Project Team needs to go on operating.

Any piece of research requires a focus, and the focus here is the teacher. It is he who mediates between the materials and other inputs, and the pupils. Most of the variables operate directly or indirectly through him and it is his capacity to resolve the various constraints and capitalise on the various opportunities that determines the success of the Project. To put it crudely, he does the teaching and that is what a new programme is all about.

Before any attempt can be made to measure the quality of teacher implementation, a baseline, reflecting the essential features of GYSL, must be selected to allow compairson between individuals. In other words, we should specify a number of characteristics of the Project which must be present before it can be said to be properly implemented, and then try to assess the extent to which they are in fact present. At first sight, in a Project which has spent so much money and effort in producing materials these seem to pose no problems. In reality, however, the matter is much more complex because the materials in GYSL represent only an approach to curriculum development; they are not the Project themselves. We must,

therefore, identify what the Geography for the Young School Leaver's approach to curriculum development consists of. Trevor Higginbottom describes its central features in very abstract terms. He argues that GYSL is an agent of curriculum review:

> "The litmus test of the Project is when you talk to teachers who are involved in the Project and they are able to engage in a dialogue about issues....what would be very worrying would be that if you went from teacher to teacher and there was no more evidence that they'd thought about what they were doing."

This offers us nothing with the operational precision that is needed to assess the degree of implementation. Moreover, it hardly fits in with the power which the Project team have started to exercise through the examination system. It is all very well to say that it is satisfactory for teachers to have thought about hypothesis-testing, problem-solving and independent thinking and then to have rejected them; but if the examination questions, which members of the Project Team and the Examinations officer have themselves written, demand these features, the teachers do not really have a free choice. The best alternative is to extract a number of key features from the Teachers Guides. Six of these features, which summarise the innovative character of GYSL and are linked to the list given in Section 3:2, can readily be identified. They have the further advantage that they are clearly expressed in the guides, which provide the closest contact between many of the teachers and the Project Team.[1] (These features are not, of course, given as such in the Guides, but even a moderatively careful reading will pinpoint them). Teachers will, therefore, have had the opportunity to assimilate them and, if circumstances allow, incorporate them as the basis of their work. Whether such understanding does exist will indicate the effectiveness of the guides as a means of communicating ideas.

1.   A careful sequence in curriculum planning with aims and objectives, content, teaching methods and organization, and evaluation being clearly identified and prepared before work begins.

2.   Assessment   Test items should be designed to assess intellectual and other skills, and to gauge pupil sensitivity towards and awareness of values and attitudes. The main aim of assessment should be to test whether

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1   In reality, of course, the Project Team ceased to exist in 1976. However, there is still a definite unite, even though it no longer has the same formal basis.

teaching objectives have been achieved and learning experiences have been successful; it should provide feedback to the teacher.

3. <u>Emphasis on ideas</u> (i.e. concepts relating to location, pattern and process), skills, values and attitudes rather than just facts.

4. <u>Development of ideas and concepts in sequential form throughout a theme and in varying areal contexts.</u> There should not necessarily be a progression from local to national and global, but all three should be used to illustrate a theme, if not always a particular idea.

5. <u>Individual thinking and problem solving to replace memorisation as the dominant classroom activity</u> (The knowledge component, especially of terms, is still recognized as being very important): a flexible use of resources, with pupil-centred learning activities and guided discovery. The pupils should test evidence, interpret, use their own judgement, be aware of their own and other people's attitudes and be imaginatively involved in creative situations.

6. <u>Curriculum development</u> Teachers should plan and structure their own curricula according to Project ideas rather than use the Project kits as they stand. This includes:
   a) designing new materials to replace or supplement those in the kits;
   b) designing new concept-based units and themes around an objectives framework.

These features provide the baseline which allows comparison to be made between the work of individual teachers. They are sufficiently detailed and broad-ranging to accommodate in a recognizable form most of the variables that can operate on teachers. We have already seen how they are linked to the five characteristics of the nature of an innovation, which affect the ways that teachers perceive and value GYSL. Likewise, the influence of the strategies which the Project Team have used to transmit their ideas to teachers is visibly present. The organizational characteristics of schools are important because curriculum planning and development are such time-consuming activities that unless schools have given teachers sufficiently open schedules to become involved in them,

particularly with departmental colleagues, their likelihood of being implemented is low. Similarly, the use of guided discovery, problem-solving and resource-based learning requires that schools have made available the necessary facilities. Finally, there are the external factors. Examinations which stress particular aspects of the Project are likely to encourage teachers to concentrate on those aspects and to neglect what cannot be tested.

To stiffen up the analysis, and to provide a clearer expression of how some of the main variables are operating, three further areas will be considered in some detail. The literature suggests that they are important and that a true understanding of the processes involved in curriculum change is dependent on their explicit inspection.

1. The extent to which teachers feel that the school as an institution helps or hinders innovation.

2. The extent and manner of support from outside agencies which teachers feel that they have had in implementing GYSL – for example, from local curriculum groups.

3. The way in which teachers and pupils react to the work that they are doing. Pupil reactions are particularly important because they set some kind of limit on what their teachers are able to achieve. [1]

Few of these aspects, neither the six key features nor the extensions made from them, may be considered numerically. Indeed the whole area of assessing the degree and manner of implementation is one of the great research problems. It is primarily a methodological one, and attention will be devoted to it throughout the next chapter. For the present, we can conclude by considering the general implications of any research findings that may be obtained.

The fundamental issue is the level of congruence between the teachers' actions and the Project Team's ideas. If there is little such co-incidence, this could mean that there is something inappropriate or inconsistent about the GYSL philosophy so that teachers are forced to make modifications. This seems inherently unlikely, however, on the grounds that the Project was carefully tested and has managed to work its way into 40% of schools a process that is still going on. If this was the case, it would have been generally remarked by this time. There are two alternative groups of explanations: firstly, that the teachers do not understand what the Project says, or do not accept it (at least not

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1. This area will be dealt with in Appendix 1. Although pupil reactions do have considerable bearing on eventual implementation – they provide the practical test of what works and what doesn't which teachers use in modifying their courses – they are not part of the main argument on the processes of curriculum change.

strongly enough), or do not have the necessary skills; and secondly, that the schools are inadequately managed, in terms of their climate, communication channels and resource provision, to help the teachers, and that there is insufficient outside support. These two possibilities may and most probably would be linked; for example, the school does not prevent obstacles from arising in the teacher's path and his commitment to the Project weakened. In any one of these cases, there are major implications for the processes of curriculum change. Finally, there is the possibility, greatly to be looked for, of teachers both knowing exactly what GYSL involves and having the opportunity to put it precisely into practice.

PART 2. METHODOLOGY

METHODOLOGY AND ASSOCIATED PROBLEMS

CHAPTER 3

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METHODOLOGY

CHAPTER 3   METHODOLOGY AND ASSOCIATED PROBLEMS

3:1   Introduction

Methodology is the cornerstone of all research endeavour.   Being
the set of procedures and techniques that are used to approach a particular
problem, methodology largely determines the validity and usefulness of the
research findings.   It is commonly also the first line of attack when any
programme is being criticized.   Such attack deals both with the theoretical
and practical aspects of the methodology concerned.

Educational research is, by comparison with some other forms of
research, of fairly recent origin, but already it has a range of developed
methodologies.   None of them, however, can be applied to all situations
and equally none are without at least some deficiencies for analysing a
particular problem.   All the methodologies are thus a mixture of virtues
and weaknesses and are appropriate only to a limited range of research
areas.   From this, two important consequences arise.   Firstly as
Cronbach (1963) and Orlonski and Smith (1978) argue, a diversified and
multi-faceted approach must be employed so that an analysis of sufficient
depth to match the complexity of the initial problem may be achieved.
Where difficulties still remain, these must be openly recognized and, if
possible, dealt with throughout the work.   Secondly the methodology must
be carefully selected to fit the exact nature and purpose of the research,
which has been described in the previous chapter.   Briefly, it is to
examine the implementation of the Geography for the Young School Leaver
Project by individual teachers and from this to identify some of the major
processes and problems involved in Project-based curriculum change.   The
research focuses on the teacher, and what he does in relation to the six
main features of the Project described in Chapter 2.   Some of these are
fairly simple, such as the presentation of ideas in various areal contexts;
others, including the teaching strategies employed, are more complex and
require careful conceptualization.   Assessment to evaluate teaching is not
observable at all – it is something which goes on in the teacher's head
after the class has gone.   We are, therefore, interested not just in what
the teacher does but also/what he thinks.   His thinking shows how he

perceives and values the Project and can indicate some of the pressures under which he has to operate. Other constraints are all too obvious – sunlight streaming through uncurtained windows and obliterating overhead transparencies, for example. These must be observed and noted; but, by definition, they cannot be predicted in advance, and indeed some will only become apparent after a long period. This, incidentally, illustrates the value of a research programme which spans virtually a whole school session.

The kind of problems which can be expected to exist have already been discussed in general terms. Gross, Giacquinta and Bernstein (1971) echo these ideas in slightly more specific form.

1. Teacher's lack of clarity about an Innovation
2. Their lack of the skills and knowledge needed to conform to the new model
3. The unavailability of required instructional materials
4. Incompatability of organizational arrangements with the innovation
5. Lack of staff motivation

Given the wide range of features which we need direct and indirect information on, and the variety of problems which this information may illuminate, we clearly used a research strategy that is broad and diversified.

3:2. Dimensions of Evaluation

This research area, which brings us close to an evaluative exercise,[1] can be further conceptualized by using Stake's model of curriculum evaluation (Stake, 1967). Stake has considered evaluation along two dimensions. The first deals with antecedents, transactions and outcomes; the second with intents and observations: we are concerned both with what is and what might be. The two dimensions are linked in the following way:-

INTENDED ANTECEDENTS	⟨···········⟩	OBSERVED ANTECEDENTS
INTENDED TRANSACTIONS	⟨···········⟩	OBSERVED TRANSACTIONS
INTENDED OUTCOMES	⟨···············⟩	OBSERVED OUTCOMES
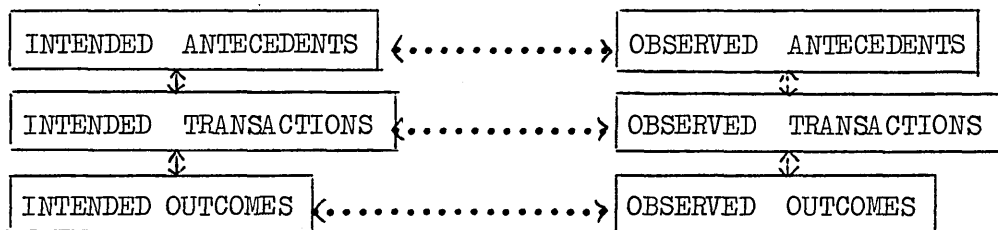
←——→LOGICAL CONTINGENCY←– –→EMPIRICAL CONTINGENCY⟨·······⟩CONGRUENCE

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1 Research, according to Becher and Maclure (1978), aims to formulate and test general hypotheses about educational situations while evaluation is expected to show how a particular process is working and how it might be improved. Evaluation is thus more specific, but there is a sufficient measure of overlap between the two for a study to contain elements of both.

An antecedent is any condition which exists prior to teaching and learning and relates to outcomes. Transactions are classroom events - they form the whole series of encounters between teacher and pupil, pupil and pupil, author and teacher, which comprise the process of education. Outcomes, which are often measurable, are the results of the education process, both on pupils and teachers.

Stake's model is conceptually important for at least two reasons. Firstly, it emphasizes the dynamic and sequential aspects of education: transactions depend partly on antecedents, and outcomes depend on both. Secondly, it draws attention to the fact, recognized by many authors and already mentioned here, that teachers may not ascribe the same meaning to an innovation as the curriculum planners intended. In Stake's terminology, there will be little congruence between intents and observations; the planners' intentions will only be implemented by chance. Account must be taken of both these points when a methodology is being selected.

3:2:1. The Classical Research Model

The classical research model has traditionally been the most widely used methodology in educational evaluation. It provides a hypo-thetico-deductive approach, essentially the same as is found in the natural sciences. Classes are randomly assigned to control and experimental groups; both are given the same pre-test; the control group is taught in the traditional way while the experimental group undergoes a new curriculum package; at the end of the courses, both groups are given the same post-test; the difference in post-test scores shows the impact of the new curriculum. This is, therefore, a comparative design which assumes that the random allocation of classes has eliminated all independent variables and that the only consistent difference between the control and the experimental groups is the curriculum package received.

In terms of Stake's model, this approach concentrates exclusively on observed outcomes. It ignores transactions completely, paying no attention to the teaching strategies (and the participants involved in them) that are used in the classroom. This seems an invalid assumption: teachers, pupils and the interactions between them can considerably augment or substantially neutralize the ability of a curriculum innovation to achieve what is intended of it (Eggleston, Galton and Jones, 1975). The whole experience of curriculum development shows this. The teacher, with his mediating role, is invariably the greatest single factor in the implementation of a new project. The classical model, because of its

failure to recognize that outcomes are dependent on transactions and
that what is intended is by no means what necessarily happens, is thus
quite ineligible for the present research exercise.[1]

3:2:2. The Behavioural Objectives Model

A second approach to curriculum research and evaluation is the
behavioural objectives model. Stemming from the work of Bloom (1956) and
Tyler (1949),it is prevalent in the U.S.A. and owes much to psychometries:

"It begins with the aims of the project,stated in general
terms,and translates these into specific behavioural
objectives so that tests and instruments may be designed
to measure attainment of these, helping thereby to make
exact evaluations."

(Schools Council, 1977)

The curriculum is judged as successful if the objectives are achieved.

As before, the model deals entirely with outcomes, but here the
emphasis is on measuring the congruence between what was intended and
what is achieved. This is a move towards greater realism, but neverthe-
less the behavioural objectives model is almost as inappropriate for the
present research as its predecessor was, and for much the same reasons.
It treats the classroom as a black box, emphasizes outcomes that are
easily measurable to the exclusion of those that are not and takes no
account of the consequences of adoption which were not originally
foreseen. Moreover, the measurement of outcomes only indicates whether
a particular programme has succeeded or failed: it says little about
where it has gone wrong (Becher, 1974).

These two broad strategies (comparison of control and experimen-
tal groups, and matching of outcomes to behavioural objectives) have
traditionally dominated educational research: the classroom has been
relegated to a peripheral role. As early as 1963, Medley and Mitzel
noted, in a spirit of dissatisfaction, that:

"The research worker limits himself to the manipulation or
studying of antecedents or consequences ... but never ever
looks into the classroom to see how the teacher actually
teaches or the pupil actually learns". (Medley and Mitzel, 1963)

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1 This model has other — sometimes logical — weaknesses. The control and
experimental groups are given the same post-tests. For these to be
valid, the two groups must also be given courses that have the same aims.
This, by definition, is not possible: new courses have new aims and
strict comparison is, therefore, not meaningful. In addition, curriculum
programmes have features which are not easily quantifiable even though
they may be of great importance to teachers, administrators and pupils.
The whole affective domain comes into this category and tends often to
be ignored. (Becher and Maclure, 1978 and Reid, 1973).

It took another 10 years for such a feeling to become widespread in Britain.

This new spirit has had important repercussions, first in the United States and later in Britain.   The emphasis has switched strongly from educational outcomes to educational processes and an appreciation and understanding of classroom events is an essential part of these. This is particularly true, as has already been pointed out, with the sort of curricular innovations that are being dealt with here.   Classroom, as opposed to broadly educational, research has acquired a central status and alternative methodologies have had to be developed.

3:2:3: <u>Interaction Analysis</u>

Much the oldest and best known of these is interaction analysis. Lying squarely within the behaviourist traditions of American psychology, interaction analysis is concerned with studying what teachers say and do in the classroom.   Thus it focuses on Stake's observed transactions.   In doing this, it uses strict observation schedules or systems (hence its other common name, systematic observation) in which events are coded in pre-specified ways.   The researcher has already decided what matters and planned to record it in a way that reduces classroom behaviour to small-scale units which can be easily tabulated and computed.   The best known exponent of interaction analysis is probably Flanders (1970) but altogether there are many different systems. In Mirrors for Behaviour, Simon and Boyer (1968 and 1970) detail 79 of them.

Interaction analysis is without doubt a useful technique.   It is simple, accurate, can be used to study a large number of classrooms and supplies a wealth of numerical data suitable for statistical analysis (Delamont and Hamilton, 1976).   It thus fulfills the first requirement for any study:

> "A scientific discipline can be no more rigorous than the techniques it commands for observing the entities and processes that lie within its domain" (Brandt, 1972)

Moreover, interaction analysis provides information about the objective reality of the classroom which is essential to an understanding of the processes involved. One cannot properly appreciate the variables which operate on the teacher without having, as a basic reference point, a clear idea of just how he teaches.   In particular, systematic observation may be a highly effective way of monitoring the extent to which classroom activities are an adequate reflection of a Project's philosophy (Boydell, 1974)

Despite these virtues, interaction analysis has recently come in for a great deal of attack, some of it unfair. Criticism is sometimes made that it _may_ cause distortion or render explanations tautological (Delamont and Hamilton, 1976). Improperly used, no doubt it may: but then, improperly used, so may any other methodology. Few things, either in the educational or the broader world, can afford to be judged by their poorer examples. Almost equally specious is the argument that systematic observation causes detail to be lost and only a partial description provided. The fact is true: but it is true of _any_ method of observation, systematic or otherwise, and of any observer. The issue is not _whether_ information is neglected, but rather _what_ information is neglected; and in particular the concepts and prejudices that lie behind the choice of material. Eisner's (1969) comment that "under the rug of technique lies an image of man", which he originally made with respect to educational objectives, is equally applicable to methods of classroom observation

In one sense, however, the argument is valid: systematic observation is essentially a limited technique. Rosenshine and Furst express this clearly:

> "Current observation instruments disregard the materials being read, the assignments students write, the teachers' use of written and oral material, the physical features of the room such as seating and lighting". (Rosenshine and Furst, 1973)

The omission of such contextual information makes interpretation and explanation much more hazardous; data has no absolute meaning, but only makes sense within a particular framework. Moreover, even within its own sphere of classroom behaviour, interaction analysis concentrates on those aspects which are overt and easily quantifiable to the exclusion of those which are more subtle and harder to define. It breaks the constant, complex stream of classroom action into a series of discrete events which must be relatively simple if they are to be tabulated during the course of a lesson. A single observer in the classroom can only handle a small number of events at any given moment. If he wishes to consider more complex processes, he must either visit the classroom repeatedly and observe different issues at different times, or record a series of lessons and analyse the various elements separately. In either case, the time and expense involved would be quite excessive for a small-scale project, especially as the pattern when the constituent elements are reassembled would be less rich than the original from which they were drawn. The splitting up of the whole classroom action into separate interaction elements necessarily entails some loss. Thus,

at least, interaction analysis provides only a partial picture.

There are other weaknesses too. No account is taken of the intentions which lie behind what teachers say and do - a serious deficiency in the field of curriculum innovation where Goodlad's "formidable gap between the intent of curriculum projects and what actually happens in the classroom" (Goodlad, 1967) has been amply demonstrated. In addition, interaction analysis is highly inflexible: the elements to be observed must be selected in advance, so that those events which were not predicted will be missed out.

Systematic observation has been worthy of thorough assessment because of its potentially useful role in the present research. Its merits clearly render it suitable for summarizing classroom events, for providing a straightforward descriptive account of teaching patterns. It is less satisfactory, however, for measuring the five observable features which form the operational core of the research (Assessment is set aside). This is mainly because of practical considerations. No single schedule could possibly handle such a variety of elements. Moreover, as Dunkin and Biddle (1974) have argued, schedules are best constructed around a single concept; validity and reliability rapidly drop as extra concepts are added. The consequence of this is a minimum of five schedules, again an excessive burden. As far as examining teachers' perceptions and opinions and identifying constraints are concerned, systematic observation has nothing to offer. On these theoretical and practical grounds, therefore, it did play a part in the planned methodology, but only a small one. How useful it actually proved itself to be will be considered later.

3:2:4. Illuminative Evaluation

The fourth and most recent research methodology aims to take a much broader view of educational problems. A difficult choice must always be made between using a general or a highly specific approach. Stake has described this well:

> "The evaluator of an instructional program is faced with
> a descriptive versus analysis dilemma. His design and
> final report can emphasize what he can measure most effec-
> tively given his modest resources - or his design and final
> report can reflect the nature of the program, with fidelity
> to the many important perceptions and expectations of it.
> Both cannot prevail. What the evaluator has to say cannot
> be both a sharp analysis of high priority achievement and a
> broad and accurate reflection of the program's complex trans-
> actions. One message crowds out the other. A choice must
> be made. Which is the most important: to tell of some

special things about the program or to provide the
most veridical portrayal of the program".
(Stake, 1972 and 1975)

Harlen draws a similar distinction on the basis of her experience as the
formative evaluator of the Science 5-13 Project (Harlen, 1975).   Each of
the three previous methodologies have chosen a specific analysis, but
Stake opts for the more general portrayal.

Stake's portrayal has a variety of other names: Holistic
Evaluation (MacDonald, 1971), Illuminative Evaluation (Parlett and
Hamilton, 1972), Transactional Evaluation (Rippey et al, 1972) and Process
Evaluation (Stufflebeam, 1971).   Each conveys some key feature of the
approach: "Transaction" and "Process" indicate that we are dealing with
what goes on in the classroom; "Holistic" implies that we are looking at
the programme as a whole – its rationale, evolution, operations, achieve-
ments and difficulties, all set within the school context (Parlett and
Hamilton, 1972); "Illuminative" – the most common name – suggests that we
are not working on the basis of theory but, instead, are unfolding and
shedding light on what gradually emerge as the main features of the
innovation:

> "The choice of research tactics follows not from research
> doctrine, but from decisions in each case as to the best
> available techniques: the problem defines the methods
> used, not vice versa"
> (Parlett and Hamilton, 1972).

The approach is, in fact, highly inductive and is therefore directly
opposed to the classical research model. [1]

The aims of Illuminative Evaluation, according to Parlett and
Hamilton, are:

> "to study the innovative programme, how it operates; how
> it is influenced by the various school situations in which
> it is applied, and how students' tasks and academic experiences
> are most affected.   It aims to discover what it is like to be
> participating in the scheme, whether as teacher or pupil; and,
> in addition, to discern and discern and discuss the
> innovation's most significant features, recurring concomitants
> and critical processes"   (Parlett and Hamilton, 1972)

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[1]   Although Illuminative Evaluation has only become widely established
within the past decade, it does have quite a long history, key early
works are those of Waller (1932) and Wright Mills who were concerned
with small-scale, real-life settings and the dynamics of social and
interpersonal behaviour.   Later writers have been Smith, Henry and
Jackson (1968)

This statement contains a number of important ideas which need further amplification. It assumes firstly that teachers' perceptions and attitudes must be examined as well as their behaviour:

> "What goes on in the head of the teacher is a critical
> antecedent of what he does" (Smith and Geoffrey, 1968)

How the teacher views the innovation and the discipline that it is a part of, the aims and objectives that he is trying to achieve, the alternatives he weighs as he circumvents obstacles and barriers, the particular strengths and weaknesses that he has are all critical issues. Through them, the teacher adapts and modifies the instructional system in ways that are "rarely trivial" (Parlett and Hamilton, 1972; Hamilton, 1973). In a very real sense, the innovation is as varied as the teachers who use it.

However, modifications come from more than just the teacher. Any new scheme of work requires new pupil behaviour. Whether the pupils do in fact behave in the intended way depends on how they understand and react to what the teacher does. Where pupils misinterpret (or simply disapprove of) their teachers' actions, they in turn will not behave appropriately: the teacher may be forced to change his approach and the programme is further modified. In addition, both teacher and pupil behaviour have meaning only within the context of the classroom and the school:

> "We may have to look beyond the four walls of the classroom
> and consider departmental organization and school policy.
> Decisions from these sources can penetrate into the class-
> room and influence the occupants' day-to-day behaviour.
> Taken together, the defining features of a classroom should
> add up to an inter-related and dynamic totality"

> (Hamilton, 1973)

The school situation, by the extent to which it encourages the actions and provides the facilities and materials that are a part of the innovation, shapes the way that it can be implemented.

These are the ideas on which Illuminative Evaluation is based. They are also the ideas which have run through this research as a sort of leit-motiv: the focus on classroom activities; the split, in Stake's terms, between intended and observed transactions; the way that teachers' perceptions form the link between the two; the class and school constraints which operate on the teacher. Illuminative Evaluation accepts all this — it is designed to accommodate the complexity of the classroom, and not to manipulate, control or eliminate variables. How does it do this?

Illuminative Evaluation aims to produce detailed and fully documented accounts of individual cases (Parlett and Hamilton, 1972). In

view of the complexity of the situation, the way in which behaviour is dependent upon attitudes and local circumstances, it is impossible to chart the exact course of the research in advance:

> "Illuminative Evaluation is adaptive and responsive to the particular learning situation and to the programme under review ... Beginning with an extensive data base, the researchers systematically reduce the breadth of their enquiry to give more concentrated attention on emerging issues. This "progressive focussing" permits unique and unpredicted phenomena to be given due weight".

> (Parlett and Hamilton, 1972)

This lack of a close pre-determined plan reduces, but does not necessarily eliminate the role of observation schedules, which must normally be prepared in advance. At most, they form part of the broader methodology of participant observation. Here, the researcher immerses himself totally in the culture of the classroom that he is studying, in order to become so familiar with the daily pattern of events that he can ascribe the same meaning to them as the participants do.[1]

He builds up a continuous record of events, interactions and informal remarks through field notes and field recording. "At the same time he seeks to organize this data at source, adding interpretative comments on both manifest and latent features of the situation (Jenkins, 1976). Such observation stresses how the innovation is part of the learning of children. Informal discussions with teachers and pupils are also held to discover the attitudes and beliefs that underlie behaviour, and questionnaires may also be used. Finally, a key principle, in accordance with the ideas of Cronbach (1963) and Orlonsky and Smith (1978) mentioned at the beginning of this chapter, is that there should be a variety of techniques:

> "Equally, no method, with its own built-in limitations is used exclusively or in isolation; different techniques are combined to throw light on a common problem. Besides viewing the problem from a number of angles, this 'triangulation' approach also facilitates the cross-checking of otherwise tentative findings".

> (Parlett and Hamilton, 1972)

This is the methodological basis of Illuminative Evaluation. We must

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1 The emphasis on participant observation shows how Illuminative Evaluation has roots in Anthropology, Ethnography, and Sociology – rather than Psychology.

also consider what is to be done with this information that has been gathered, and here there seem to be some inconsistencies and weaknesses. We have seen that the emphasis is on description and documentation. Walker (1974) tries to justify this on the grounds that evaluation and research should be of practical value to teachers who find it difficult to transfer the message of theoretical statements to their specific circumstances. He suggests that educational research should remain close to the "commonsense knowledge of practitioners and support the process by which professional judgment is gained from personal experience" (Walker, 1974). Stake (1967) similarly argues that theory is a simplifier and draws attention away from the complexity and reality of teaching and learning.

One takes the point; but it falls down for two reasons. Firstly, theory is an inevitable component of research. Just as it was argued with Interaction Analysis, so one can not/observe everything that goes on in a classroom. Certain events are selected out and the choice is made, even if unconsciously, on the basis of theory. Moreover, Parlett and Hamilton see Illuminative Evaluation as comprising three stages. The first — seeking to become knowledgable about the programme in operation — leads on to the second stage of intensive, sustained and <u>selective</u> enquiry. Finally, the researcher seeks general principles underlying the organization of the programme; identified patterns of cause and effect within its operation; and places individual findings within a broader explanatory context. This third stage is analysis, the development of theory, and leads almost inevitably on to prediction which Parlett and Hamilton seem to view with particular disfavour. If one understands how an innovation operates and what factors have influenced it, one can predict about other innovations and hopefully then plan better for the future.

This leads on to the second objection to Stake's and in particular to Walker's position. While it is important that research results should be meaningful to teachers and help them to improve their own situations, they must have another role. We desperately need to know more about the general processes of curriculum change and how the educational system at present fails to promote and help it. Only by this means can we aid teachers in their efforts to innovate. We can readily accept that, in the last analysis, it is the teacher who makes change, but that he cannot do the job alone. The first step towards supporting him lies in using the products of research to advance our understanding. In this, we can

echo Parson's (1976) view that case studies which are simply descriptions of particular places at particular times provide only a slow and haphazard accretion of knowledge, whereas studies that include analysis and generalization rapidly accelerate our conceptualization.

Illuminative Evaluation most fully meets, therefore, the needs of the present research. It satisfies the main underlying assumptions: that the implementation of a new curriculum project should be viewed in terms of classroom behaviour; that behaviour can only be understood in the context within which it has developed; and that the actions of teachers and pupils cannot meaningfully be separated from the perceptions that preceded and gave rise to them. It provides also a sufficiently broad methodology to match the complexity of the problem. However, the approach has been modified. The demands of theory have been kept constantly in mind - hopefully not in a restrictive way, but rather so as to allow an efficient and perceptive choice of material[1] and an analysis that fits within a logical framework. In a sense, a middle ground has been sought between the illuminations and systematic brands of observation, avoiding the excesses of either, but capitalising on their advantages.

3:3. The Research Strategy

The preceding analysis, considered alongside the nature of the research problem, has led to the development of a broad methodology. Like many other such constructions, however, its theoretical form had to be altered considerably under the pressure of unforeseen circumstances. The best way to approach the issue is to describe the research outline which was planned and then, in Section 3:4, to discuss some of the changes which had to be made, together with the reasons for them. This will suggest some of the practical and theoretical difficulties that are a naturally accompanying part of research, particularly when it has an observational character. In this context, the remark which was made at the beginning of the chapter must constantly be remembered - no methodology is without at least some deficiencies for analysing a particular problem.

In the research plan, it was intended to study one class for

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1 As Nisbet has remarked, illuminative research "can be an excuse for indiscriminate data collection, for tiresome transcripts of trite interview exchanges". (Nisbet, 1974)

most of its geography lessons during the school year 1978-1979 in each of four Sheffield schools. Observation was to be mostly at a fairly descriptive level, with notes being made on the theme of the lesson, the way it was structured and presented, the emphasis that was given to facts, skills, concepts, values and attitudes (and the nature of these) and the kind of tasks that pupils were given. These cover the five key features which were mentioned earlier. Contextual information, including the nature of the room, seating arrangements and resource provision, was also to be collected, and again at the lowest possible inference level. In addition, three observation schedules were planned. The first, adapted from one used by Alexander in evaluating Nuffield science (Alexander, 1974), was designed to measure the overall pattern of classroom activities. The second was a simplified version of Boydell's Teacher Record (Boydell, 1974) and was intended to analyse the cognitive level of teacher talk. This is an important issue in the Geography for the Young School leaver Project, for it aims to encourage deeper thinking, the ability to analyse a set of data and the development of concepts among pupils. Finally, there was a Pupil Record, again modified from the work of Boydell (Boydell, 1975). It focussed on pupil activity and interaction and was an attempt to measure the amount of work that individual pupils were engaged in. The schedules were intended to provide precise observational data and thereby reduce the dependence on subjective interpretation which, given its normal lack of a strong theoretical base is the greatest danger of Illuminative Evaluation.

Interviews and discussions with the teachers were to be the other main technique. A semi-structured approach was preferred to ensure comparability among the teachers but at the same time to allow for additional questions where greater clarification and explanation was needed. Initially, it was planned to discuss general attitudes to geography and teaching methods as background information, and then to move specifically on to the GYSL Project and its main features. These interviews were expected to show the extent to which the teachers' views corresponded with those of the Project Team as expressed in the Teachers Guides and, therefore, indirectly the degree of congruence between curriculum planners' intentions and teachers' practice. In addition, it was assumed that as the interviews and observations proceeded, constraints operating on the teacher from within himself, the classroom, the school and even perhaps beyond it would gradually

become apparent. Further interviews might be required as these pressures emerged.

Finally, the pupils were to be given attitude questionnaires near the beginning and end of the school year to find out their views on the Project and the way that it was being taught. The attitudes that pupils have to something obviously affect how they react to it and therefore the form that it finally assumes. This element has not hitherto been greatly emphasized in the research but it is an important one. Since GYSL offered a new geography in terms of content and teaching approach, attitudes towards it would depend much on the type of courses that the pupils had previously experienced. Especially where earlier courses had been very different, attitudes might have been expected to change significantly during the year – in a favourable direction if the Project had succeeded. Hence the need for the questionnaire to be given twice.

3:4. Adaptations to the Strategy

The pattern of the teachers' year can never be fully predicted and, therefore, research which is based on it is also liable to considerable modification. The session 1978–79, however, was particularly unsettled. Teachers worked to rule and some pupils had to be sent home in the late afternoon. Caretakers went on strike and schools had to be closed on certain days. Coal and heating oil deliveries were held up causing more closures. During the winter storms, movement virtually ceased for a few days in Sheffield. None of these features are themselves exceptional, but their combination in such intensity was unusual and reduced research opportunities.

The first three months of 1979, punctuated as they were with one interruption after another, were virtually useless for serious study.[1] In addition, time-table clashes made it possible to be present at Milby and Hayslope for only one lesson each week instead of the two that had been planned. Some modifications had accordingly to be made.

However, even before this, problems had arisen with two of the observation schedules at both a practical and a conceptual level. The Pupil Record, a copy of which is contained in Appendix 2, had to be abandoned almost as soon as the research began. The schedule, on

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1 This had major effects on the teaching also. The GYSL syllabus is already very tight, so that the loss of teaching time required some topics to be cut out and others to be taught in a different, less time-consuming manner.

individual work activity and interaction, proved awkward to administer. It sought among other things to distinguish between task and non-task oriented activity, and work and non-work related interaction, but this was not always possible, particularly with pupils in the more distant parts of the room. More fundamentally, the observation schedule required close attention to be directed towards individual pupils, several of whom became aware of this, reacted to it and spread their awareness to their classmates. In one case, there was a danger of a spiralling effect leading to a breakdown of discipline. Such a situation, where the researcher's presence was producing negative behaviour was clearly unacceptable and the Pupil Record was therefore dropped.

The plan to analyse the cognitive level of teachers' task had similarly to be given up. This was intended to be carried out in the latter part of the year but the winter's interruptions presented problems. Some experimental attempts in this area, using a schedule reproduced in Appendix 2, were made, however, but they failed. It had been decided to tape record exchanges and to analyse them later. The complexity of teacher talk is such that it is not always possible to distinguish between questions and statements until after the pupils have responded, either verbally or through their actions. Equally, the cognitive level of a question cannot always be judged on its face value; it may only become apparent from the response which the pupils actually gave, or which the teacher actually sought.[1] In this latter case, the teacher may have to ask subsidiary questions at a lower level in order to reach the conclusion which he was originally looking for. Does one then analyse all the questions or only those which initiated the sequence?, and how does one identify the starting point? These conceptual problems make it impossible to analyse teacher talk in the classroom with any degree of accuracy. The task must be performed afterwards and this requires a permanent record to be kept. However, the practical difficulties in obtaining such a record were insurmountable. Pupil comments and replies were not clearly picked up by the tape recorder and little sense could therefore be made of the exchanges. Further problems arose with two of

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1 Tisher (1970), for example, classified questions according to the activities which the pupils were required to use.

the teachers; one of them was inaudible, and another rarely asked any
questions which he expected the pupils to answer. After half a dozen
repetitions, scarcely drawing breath in between, he replied himself.

The loss of this area was a disappointment but not a disaster
since the aim of the research, following Stake's argument, was to provide
broad-ranging rather than highly specific information on patterns of
teaching. Some general evidence was already being obtained from normal
observation and the activities which the pupils had to carry out indi-
vidually. A teacher's cognitive behaviour is a key element in his
implementation of the Project, however, and should be the subject of
detailed analysis in future research. It is related to and influences
pupil cognitive behaviour, although according to the evidence of Rogers
and Davis (1970) probably indirectly and this is one of the areas where
the Project is aiming for richer outcomes.

The remaining activities went more as planned. The Pupil
Attitude Questionnaire (Appendix 1B) was given twice and the observation
schedule summarizing overall class activities (Appendix 2) was used.
Interviews which were tape recorded to provide a complete and accurate
record and to allow both researcher and teacher to converse freely in a
relaxed, uninhibited atmosphere, were held periodically throughout the
year. Descriptive notes of lesson themes, activities, materials used
and exercises given were made and these were supplemented by contextual
notes. Some changes did have to be made, such as abandoning a more
precise study of one of the units of the course, mainly because of time
pressures.

4:5. <u>Problems Associated with the Research Strategy</u>

This account has suggested some of the practical and conceptual
difficulties which observational research almost inevitably entails.
These are particularly associated with an interaction analysis approach
which is more demanding in the physical conditions that it requires for
operation and provides less scope for making extempore adjustments.
Schedules must be carefully planned and tested in advance both as regards
their ability to measure what is expected of them and their appropriate-
ness for the characteristics of the teacher and the classroom. This is
time-consuming and renders the approach, even when schemes have been
adapted from the work of other authors, less eligible for small-scale
research. Other, more basic, problems have also been hinted at and
this chapter is concluded by a consideration of them.

The most fundamental of all arises from the very nature of participant observation. The observer has to be present in a classroom for prolonged periods, and during that time his presence is bound to be felt. He cannot be, as Gold (1958) has considered him, a "complete observer" or "fly on the wall"; rather he enters into a complex, even if unexpressed, relationship with both teacher and pupils. The teacher may regard the observer's presence as a spur to greater effort and adapt his teaching methods to what he thinks the observer expects. The pupils may also react and behave either more or less favourably than usual. Thus both teacher and pupils may behave atypically and particularly in the case of teachers, it is difficult to assess whether and to what extent such irregularity occurs. Fortunately, Hasling and Stern have discovered that the effects of an outside observer's presence tends to decrease over time (Hasling and Stern, 1969). For this reason no observational notes were made during the first weeks of the research.

The whole question of reactions to the observer is allied to the role that he assumes. To the pupils he must not appear to be a teacher: and to the teacher, equally simply, he must not appear to be an inspector. He must not show any clear views about the innovation or indicate that one approach is better than another. Otherwise, he may only be allowed to see the mirror-image of his own preferences. However, beneath this surface simplicity, there lies a deep inconsistency and dilemma for the researcher. He obviously does have opinions about the Project and as he examines different styles of interpretation, these are likely to become stronger. Teachers know this, and from time to time will ask questions. The researcher cannot answer these and yet he must answer something. He cannot afford to seem so distant and unfriendly that he is not worth co-operating with; nor can he afford to be so non-committal as to appear a fool and a nonentity. He must strike a balance between frankness and discretion, and he sensitive enough to react flexibly to any difficulties that arise.

Sensitivity is required elsewhere. It has frequently been stated that the way a teacher puts a curriculum innovation into practice depends on his perceptions, attitudes and abilities. These are internal and highly personal matters and they must be described and discussed very carefully if offence is not to be given and possible future co-operation withdrawn. Every researcher has a responsibility to keep as many doors open as possible for later work and not to appear personally critical of

those whom he has observed. Yet he must write the truth as he sees it — otherwise his efforts will be fruitless. This is another dilemma.

The final problem also relates to teachers — this time to their selection for research. Illuminative Evaluation samples are seldom representative and this research is no exception: four classes in four Sheffield schools — where, as we have seen, GYSL has followed a special course — is a very small number, especially when three of them are mixed-ability and none is purely C.S.E. Moreover, the teachers virtually selected themselves in that they agreed to have someone observing them for almost a whole year. They had all started to teach GYSL when it was formally introduced into schools in 1974 and they must almost certainly have been above-average in confidence, and perhaps competence as well, to accept being researched. This does not make it more difficult to identify "common processes and common phenomena" and from them to draw conclusions; but it does make such conclusions more tentative, and requires them to be verified in further studies. These limitations must be borne in mind as the findings of the research are presented.

PART 3

CURRICULUM DEVELOPMENT IN ACTION

CHAPTER 4   The Basic Situation in Each School

In presenting any set of research findings, attention must always be focussed on the problem which gave rise to the study in the first place. The discussion must constantly shed light on this central area of concern.

The basic aim of the current research has been to provide some insights into the processes of curriculum change and perhaps to increase our understanding of the issues involved. A particular project was followed and the problem defined in terms of the degree of congruence between the Project Team's ideas and the teachers' implementation of them. This problem was regarded as accommodating all the key variables which could influence reform – the teachers' perceptions, attitudes and skills, the Project Team's strategies for introducing and supporting the innovation and conditions within the school, including its management structures and the reactions of pupils, as well as any external factors. At this stage, six key features, which summarise GYSL's philosophy and illustrate the ways in which it is different from more traditional syllabuses, were extracted from the Teachers Guide and these have formed the operational basis of the research.

Following the line of the proposition at the beginning of this chapter, the findings should be discussed in terms of these six features which are the detailed embodiment of the original problem. This is not being done to reinforce any prejudices which the author may have but to provide a conceptual foundation to the work and to link it to the reason for its existence. Two problems immediately arise. Firstly, of the three main pieces of data, only two – the observational records and the interview notes – relate directly to these features. The third, on pupil attitudes,[1] does intersect with the others, but does not fit fully with the main ideas which are centred on a broader perspective. It does not logically belong, therefore, to the main report, but it is important in its own right. It has been dealt with in Appendix 1.

The second area of difficulty lies in how to present the evidence – and specifically how to achieve a balance between the demands for an abstract and a concrete presentation. It is already difficulty enough with an illuminative approach to be rigorous about one's data collection, to prove that one really saw what one says one saw. (In some instances,

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1 This area was investigated following requests from the teachers .

such as whether the lesson dealt with local, national or global topics, the matter is easy, and tape-recorded interview exchanges obviously help. Generally, observation was conducted at a low inference level even though, at times, this resulted in a loss of detail). More than this, however, data must be processed and interpreted before it becomes the information that can be used for analysis and concept development. Such processing inevitably involves abstraction and the investigator becomes even more open to the charge of subjectivity. As much raw data as is compatible with the need to avoid a structure overweighted with description will be given here.

As a prelude to the main analysis, straightforward, factual accounts of each of the four schools and teachers are provided. These give a flavour of each situation and also a useful background within which the ideas contained in Chapter 5 can have more vivid meaning. These accounts will be followed by a brief review of the results of the observation schedule on the pattern of class activities. This is again background information.

4:2:1 Mr. Shackleton and Hayslope School

Hayslope School is a mixed 11-18 comprehensive with 1100 pupils. It is located in a small town close to Sheffield and the catchment area is therefore semi-rural. Within the town there is a mixture of council and private housing. The school has undergone major organisational and structural changes in recent years. It has become a comprehensive and mixed ability classes are in the process of being introduced in the lower school. A new block has been built alongside the ageing structure of the rest of the school and some small huts are still being used.

In the upper school, pupils are divided into two broad ability bands. The A-band is expected to reach O-level standard in most subjects, while B-band pupils are entered for C.S.E. In 1979, 71 pupils entered for their O-level geography examination but less than a quarter of these did GYSL. There were 11 A-level candidates. The GYSL class under investigation was the only 4th year A-band class studying the Project; the others followed a more traditional syllabus. It contained 29 pupils, both boys and girls, and all of them were being prepared for O-level. As the year progressed, however, a few less able pupils were identified as being more appropriate for C.S.E. although they remained in the class.

During the period of research the GYSL class was taught in two different rooms although neither was used regularly by the teacher. One of the rooms was located in a hut as part of the History Department. It was of average size with individual desks and chairs laid out in rows. There were windows on two sides, but without curtains, and no specialist equipment. The other room, in the new block, belonged to the Geography Department, and was very large with ample storage facilities. The tables, for two pupils each, were laid out on three sides of a rectangle with further tables in the centre. There was plenty of space at the back and two sides to allow some pupils to work on the floor whenever they had very large maps. Curtains were provided for all the windows. The Geography Department, in common with others in the school, had no audio-visual equipment of its own. It was kept on a school-wide basis, was stored in a resources room and normally had to be booked several days in advance.

The four Geography teachers are part of the Social Studies Department, although they have some unity of their own. In the first two years, Integrated Studies are taught, but from the Staff of the 1979-80 session, this is being replaced by separate Geography and History which continues up the school. Only two of the Department's members teach GYSL on a regular basis, while a third, who dislikes the Project and has never attended any courses on it, taught it with 5B in 1978-1979. GYSL is studied by all B-band pupils but only by a small part of the A-band. This is because a few years before the development of the GYSL O-level component, the school had invested in books and materials for the J M B syllabus. It had to get a return on its investment and could not afford to equip everyone for GYSL.

Mr. Shackleton has a B.Ed., with Geography and Biology being his main subjects and is currently a student on the Diploma in Curriculum Planning in Geography course at Sheffield City Polytechnic. He started teaching in 1973 and has only worked at Hayslope. He has attended various courses on Geography and other matters, and has had experience of O- and A-level teaching.

4:2:2. Mr. Scott and Milby School

Milby School is a mixed comprehensive of 800 pupils aged between 12 and 18. (On adjoining sites there are also junior and middle schools). The school is situated in the inner suburbs of Sheffield and serves an extensive catchment area that is made up almost entirely of council estates. Overall, the pupils are below average as regards intelligence and

many also have severe social problems. There is a significant immigrant population. Relatively few pupils at Milby sit O- and A-levels: in geography the average is 16 at O-level and 7 at A-level. This to some extent reflects a low expectation level on the part of the pupils and their parents: many who are capable of O-level leave school at 16 and some who could go to university take apprenticeships.

The school buildings are mostly old, but with a modern three-storey block attached to the rest of the school, which is all located on one site. The room in which GYSL lessons were taught in the 1978-79 session was small and cramped like the other classrooms, and laid out traditionally. The desks and chairs were old and sometimes dilapidated, the blackboard at the front was excessively shiny and difficult to write on, and there was little storage space. There were windows on both sides of the room, but curtains had only been provided for half of them. The room had not been equipped specially for geography and indeed belonged to another department altogether; there were no map chests, tracing tables or map hoists, and everything which Mr. Scott required, including folders, paper, kit resources and audio-visual aids, had to be brought in before or during the lesson. Mr. Scott had no room of his own and all these materials had to be stored in the Head of Department's room.

The Geography Department consists of two full-time teachers plus one who shares his time with European Studies. Geography is taught only in years 4, 5 and 6; in the previous two there is a new integrated Humanities course, which is taught by six teachers from the Geography and History Departments. Mr. Scott started teaching in 1966 and has worked in a total of three schools. He obtained a teaching certificate in 1966 and completed his B.Ed. in 1976 with geography being his main subject. He has had experience of C.S.E., O-level and A-level examinations, both in Sheffield and elsewhere. Mr. Scott is also a year tutor, with extensive and time-consuming pastoral responsibilities.

The GYSL class had 24 pupils, divided fairly equally between boys and girls, and had a broad ability range. About 25-30% of the pupils were expected to do O-level, while the remainder would be entered for C.S.E., some with little hope of success. The class was felt to be more than usually co-operative and interested, and GYSL was taught throughout the fourth and fifth year.

4:2:3. Mr. Cook and Lowick School

Lowick is a small 12-18 mixed comprehensive of 650 pupils located on the fringes of Sheffield. It is a split-site school, with the two sections of roughly equal size, being separated by about 300 metres. The school serves a catchment area that is an equal mixture of council and private estates. About 20-25 pupils sit A-level geography each year and roughly twice that number are entered for O-level. A new Headteacher took up his duties in September 1978, and five months previously the present Head of Geography, who taught the GYSL class being investigated, came to the school.

The two buildings are each about 25 years old and considerable movement of both teachers and pupils takes place between them throughout the day. In an effort to minimize the effects of this, the school day is made up of only four periods, each 75 minutes long. There is a 10 minute interval between the two morning and afternoon sessions to facilitate inter-block movement.

The GYSL class under review was taught in only one room which was the teacher's permanent base. It was fairly large, but some storage space at the front, behind the blackboard, reduced the effective teaching area to rather cramped proportions. The tables and chairs were laid out in rows, and although this was a geography room there was little specialist equipment in the way of map chests and tracing tables. The department did, however, have its own audio-visual aids (overhead projector, slide projector, tape recorder and so on) and the blackout facilities to enable them to be used.

The Geography Department consists of only two teachers whose rooms are in separate buildings. It is hoped in the future to establish a Humanities area with the full History and Geography Departments being located together. At present, geography is taught as a separate subject throughout the school and all fourth and fifth year Geography pupils study GYSL. The GYSL class being investigated contained 24 pupils who spanned a broad ability range. Roughly the top half of the class was expected to do O-level and the bottom half C.S.E. No setting policy was adopted for the fourth year. Their teacher, Mr. Cook, has a degree in geography, started teaching in 1966 and had taught in three schools before coming to Lowick. He has had extensive experience, stretching over a dozen years, of O- and A-level teaching.

4:2:4.   Mr. Parry and Diplow School

Diplow is an 11-18 mixed comprehensive of 800 pupils situated on the outskirts of Sheffield. It is a single-site school and serves a catchment area that is at least 85% council estate. Part of this catchment area consists of a "New Town" which is at present the city's principal centre of expansion and which lies just beyond the main built-up area. About 80 pupils are entered for O-level geography each year, but only about five of them continue to do A-level. This is the pattern throughout the school.

Diplow was built about 20 years ago and had a few huts to provide extra accommodation. The room in which the GYSL lessons under review were taught was the teacher's own. It was very large, with windows - blinds provided - on one side and low cupboards on the other side and the back. The three GYSL kits together with boxes of extra resources, which the teacher had either prepared or obtained, were set on these storage units so that the pupils could help themselves to what they needed. Other materials were also laid out. The class furniture consisted of large tables, for two pupils each, and chairs which were distributed individually in rows. There was some specialist equipment (tracing tables, map hoist, and so on) but the main audio-visual aids were stored in the resources centre. No advance notice seemed necessary to secure these, however.

The Geography Department consists of only two full-time teachers. Geography is taught as a separate subject throughout the school. The junior classes follow the American programme Man A Course of Study (MACOS) while all fourth and fifth year geography pupils study GYSL. The class being investigated had 17 pupils, equally divided between boys and girls, and covering a broad ability range. Perhaps half of them were expected to take O-level (the remainder C.S.E.) but the composition of the class was likely to remain the same in the fifth year. Their teacher, Mr. Parry, was the Head of Department. He has a degree in Geography plus a post-graduate teaching certificate and has spent all seven years of his teaching career at Diplow. He has attended a wide range of courses and meetings on GYSL, including the national conference, as well as on other matters connected with Geography and Education generally, and has been asked to address his colleagues at a number of teachers' meetings. He has had experience of O- and A-level teaching since 1972.

4:3.   Basic Teaching Styles

The descriptions of each teacher and school provide a basic context in which the details of teacher implementation can be placed. Similarly, the observation schedules give further straightforward information on the pattern of teaching in each school. It has already been indicated that, mainly for reasons of time, the schedules could not be used as often as had been intended; but fortunately, the style of each teacher was so remarkably uniform that even a few observations provided a fairly accurate summary. A total of 20 lessons was analysed, six each at Diplow and Lowick, and four each at Milby and Hayslope. The resulting pattern is shown in Tables 1(a) and 1(b).

The basic facts and contrasts are clear. Diplow stands clearly apart while the other three schools, on the surface at least, share many common features. At Diplow, lesson activities varied more than elsewhere. Teacher talk featured prominently, however, in most lessons and on some occasions occupied over 75% of the total time. There was always an element of teacher talking and nearly always a more important one of questioning which, overall, was the most conspicuous activity. Such questioning at times merged with discussion and at times became quite this. By contrast, individual pupil activity was much less present; in three of the lessons it did not exist at all. It was nicely divided between, on the one hand, complete teacher direction, and on the other a large, but not total, measure of pupil freedom. Worksheets were not used. The ratio of teacher talk to individual pupil work was very high, between five and seven times greater than in the other schools. The final characteristic is the discussion which was held on one occasion, but repeated in other lessons that were not analysed with the observation schedule between groups of pupils.

In each of the other three schools teacher talk was much less important and individual pupils work much more, so that the ratio ranges from 0.37 to 0.53. Beyond this, however, there were many differences and each school may, more profitably, be described in turn.

At Milby, lessons invariably began with some teacher talk which, on all but one occasion, consisted of the teacher telling and the pupils listening passively. This was generally followed by an extensive period of individual work when the pupils were either summarizing one of the kit sheets or answering some questions on it. From time to time, the teacher came round to answer individual questions, but for a quarter of the

average lesson he was not interacting at all. For part of the time he was outside the classroom, either collecting materials or dealing with various problems. On one occasion, which was never repeated, the pupils participated in a group discussion.

Teacher talk constituted between 20% and 40% of each lesson in Hayslope. Such talk, which most often took the form of the teacher talking, was always the initial feature and it kept recurring throughout the period. Individual pupil work made up the biggest part of all lessons, and, except for one, represented at least 2/3 of the total time. It consisted of a mixture of pupils writing down notes in their own words (based on teacher talk and with the help of some blackboard summaries) and working from the kit sheets. Mostly, there was some teacher discussion beforehand with a few recall questions. Worksheets were used only once.

Every lesson at Lowick began with some teacher talk with both the straightforward exposition of information and occasional questions. The boundary between the two was hard to draw. Ideas were introduced, and the individual work, which usually occupied at least 65% of the period, was gone over. Most commonly, it consisted of pupils using a worksheet, but also at times answering questions from the blackboard or working from a textbook. On four of the six occasions, it had been introduced by some discussion and questions to give a little guidance, but on the other two it was designed fully by the teacher and the pupils merely had to follow precise instructions. The teacher spent most of his time going round and helping, and towards the end of lessons commonly went over part of the work, although the pupils continued what they were doing.

These brief accounts illustrate each teacher's essential classroom style which is at the same time a reflection of his implementation and an influence on it. They lead naturally on, therefore, to the details of the Project used in the four schools.

TABLE 1(a)
SUMMARY OF OBSERVATIONS SCHEDULE DATA – TEACHER ACTIVITIES

The figures cover all of the activities which the teachers carried out during a lesson. Observations were made in the first 10 seconds of each two minute period. Each activity which occurred during a time unit was recorded, but only once. The figures here are %s and they represent an average from the lessons which were observed, i.e. during 19.9% of the average lesson at Diplow, the teacher was telling something to the whole class

		DIPLOW	MILBY	HAYSLOPE	LOWICK
1	TEACHER TALK TO WHOLE CLASS				
	TEACHER TELLS	19.9	20.05	23.7	11.5
	TEACHER ASKS OCCASIONAL QUESTIONS	27	1.85	7.9	21.0
	TEACHER LEADS DISCUSSION	9.20	–	1.6	–
	PUPILS INITIATE DISCUSSION AND TEACHER CONTRIBUTES	1	–	–	–
A)	TOTAL	57.1	23.9	33.2	32.5
2	TEACHER ANSWERS QUESTIONS FROM INDIVIDUAL PUPILS	14.2	24.2	20	42.8
3	TEACHER DRAWS/WRITES	12.2	2.85	10.2	11.2
4	ROUTINE	5.2	18.9	13.25	11
5	TEACHER GIVES OUT INSTRUCTIONS	7.2	9.85	6.2	7.2
6	TEACHER NOT INTERACTING	4.1	25.0	26.6	3.3
7	TOTAL	100	104.7	109.45	108

Notes

(i) Rows 1, 2 and 3 represent the main teaching activities which the teacher carries out.

(ii) Rows 4 and 5 cover other activities which do not directly involve teaching.

(iii) Row 6 indicates the amount of time during which the teacher is not directly contributing to the lesson.

(iv) Row 7 provides a general total. It must be at least 100% because a teacher must be doing something at any given moment, and rows 1 – 6 cover all the activities which the teacher can be doing. Where the figure is over 100%, this means that the teacher has carried out at least two different tasks during a time unit.

(v) The figures for the various categories of teacher talk have been totalled for each school and these indicate the amount of time the teacher talked to the whole class. Through almost all of these times the pupils were either listening to the teacher or contributing, at various levels, to the discussion.

(vi) The teachers answered questions from individual pupils while the pupils were working on their own, so that although this is teacher talk it is quite a different category.

The figures cover all the activities which the pupils carried out, either individually or in groups. Association, at whatever level, with teacher talk is not included. As before, the figures are %s and averages - i.e. at Diplow, discussion between groups of pupils occurred for 7.4% of the average lesson.

		DIPLOW	MILBY	HAYSLOPE	LOWICK
1	DISCUSSION BETWEEN GROUPS OF PUPILS	7.4	15.2*	–	–
2	PUPILS USE TEXT/REFERENCE BOOKS				
	DESIGNED FULLY BY TEACHER	0.9			10.9 +
	SOME DISCUSSION AND A FEW RECALL QUESTIONS				9.1 +
	A FEW HINTS GIVEN				
	PUPILS WORK AS THEY PLEASE				
3	PUPILS DRAW/WRITE				
	DESIGNED FULLY BY TEACHER	10.1	32.15	4.6	11.5
	SOME DISCUSSION AND A FEW RECALL QUESTIONS		32.1	42.6	23.7
	A FEW HINTS GIVEN	10.5		12.8	
	PUPILS WORK AS THEY PLEASE				
4	PUPILS USE WORKSHEETS				
	DESIGNED FULLY BY TEACHER			2.3	
	SOME DISCUSSION AND A FEW RECALL QUESTIONS				33.35
	A FEW HINTS GIVEN				
	PUPILS WORK AS THEY PLEASE				
5	TOTAL PUPIL WORK - DESIGNED BY TEACHER	11	32.15	6.9	11.5 +
	DISCUSSION AND RECALL QUESTIONS		32.1	42.6	57.05 +
	FEW HINTS GIVEN	10.5		12.8	
6	B) TOTAL	21.5	64.25	62.3	68.55 +
7	RATIO OF TEACHER TALK TO INDIVIDUAL PUPIL WORK (A:B)	2.66	0.37	0.53	0.47

* This figure is totally accounted for by one lesson, which was the only one in the year where such discussion was observed at Milby. The figure thus over-estimates the real situation.

+ At Lowick, the pupils were also drawing/writing on each occasion that they use text and reference books. Accordingly, the text/ref. books figures have been excluded from the totals rows to avoid counting them twice.

  (i) These figures represent pupil work of a group (row 1) or individual character (rows 2 - 6).

 (ii) Row 5 is a summation of rows 2, 3 and 4. Row 6 combines the various elements of row 5.

(iii) Row 7 gives the ratio of class teacher talk to individual pupils work (A:B). The figures are only approximate because on a few occasions the pupils were working individually while the teacher was talking to the whole class. Thus, rarely, the same time interval was included in category A and B.

5:1   Introduction

5:2   A Careful Sequence in Curriculum Planning with a Particular
         Emphasis on the Identification of Objectives before Work Begins

5:3   Assessment

5:4   The Development of Ideas and Concepts in Sequential Form
         throughout a Theme and in Varying Areal Contexts

5:5   Individual Thinking and Problem Solving to Replace Memorisation
         as the Dominent Classroom Activity; an Emphasis on Ideas, Skills,
         Values and Attitudes rather than just Facts

         5:5:1   Flexible Use of Resources
         5:5:2   Ideas

                  5:5:2(a) Lowick
                  5:5:2(b) Hayslope
                  5:5:2(c) Milby
                  5:5:2(d) Diplow

         5:5:3   Values

5:6   Curriculum Development

5:7   Additional Evidence

         5:7:1   Support Provided by the School
         5:7:2   Material Conditions in the Schools
         5:7:3   Support from Outside Agencies
         5:7:4   Reactions of the Teachers and Pupils

5:8   General Summary

5:1   Introduction

This chapter, in which much of the research evidence is presented, forms the core of the study. The basic approach has already been outlined. It follows the six key features, which were described in section 2:5 and are similar to a list given to the members of the local group in 1975, integrating the material from the four schools. One small adjustment has been made, however. Features 3 and 5 (the emphasis on ideas, and individual thinking and problem solving to replace memorization as the dominant classroom activity) have been amalgamated because of their almost inseparable linkage with one another. The two broad sources of information — observational notes and interview comments — have also been integrated, although it is the latter which plays a dominant role in the analysis of the first two features.

5:2   A Careful Sequence in Curriculum Planning with a Particular Emphasis on the Identification of Objectives before Work Begins

The observational notes tell us nothing about this and complete reliance must be placed on the interview exchanges. Two principal questions arise: do the teachers see a particular sequence, with objectives at the forefront, as being important?; and do they actually use this sequence? The first will indicate the extent to which teachers mentally approach curriculum design through objectives, and the second, by comparing teachers' opinions with their practice, may suggest some constraints facing the teachers.

Objectives are valued highly by everyone. Indeed Mr. Parry at Diplow regards them as one of the main features of GYSL. They are very useful because "when you've got something specifically in mind that you want to do, then you organize the teaching so as to achieve those objectives". (Mr. Shackleton). This is the view of the other teachers also, but Mr. Scott adds a slightly different dimension, which will be returned to later, when he states:

> "If you take the trouble to read them, that clears your mind
> tremendously before you actually start work."

There is an implication here that, in addition to being generally useful, the specific objectives in the Teachers Guide should be followed closely.

The Project Team can certainly claim, therefore, that the centrality of objectives has been successfully communicated to the teachers. Indeed, for Mr. Cook at least, it is GYSL which has stimulated him into thinking about them:

"I don't think that I thought very much about objectives
before I came into contact with the Project, but the
Department at Shepperton[1] was objectives-based because
the Head of Department had worked on the Project and he'd
structured the whole of his syllabus from an objectives
point of view ... I'm sure that the Project got him to
think about objectives and it's also got me to think about
them".

One of GYSL's aims has been to act as an agent for general curriculum
review and reform and it has clearly been achieved here. (The quotation
also indicates the usefulness of the Social Interaction approach: one of
the Trials Teachers has moved to another school, established objectives-
based courses there, convinced his departmental colleagues of their value
and encouraged those who have been promoted to introduce such courses
elsewhere). Mr. Scott has been similarly affected: "I'd never come
across anything before that had been so carefully planned as GYSL";
and like all the other teachers, he used objectives as the core of his
courses in other parts of the school.

Little mention was made of the overall sequence of curriculum
planning or of the way that it worked out in practice. Mr. Parry's and
Mr. Shackleton's sequence was objectives, choice of material and method,
and assessment which is the ideal that the Project Team set up. Both also
prepare objectives for each block of work rather than for individual
lessons, which, they feel, is an impossible demand for someone who has
six or seven classes a day. They see objectives as providing a flexible
guide which must still allow the teacher to develop themes which the
pupils find particularly interesting. (As we shall see later, only
Mr. Parry ever did this).

The problem of time was also mentioned by Mr. Scott. His general
approach was to write down objectives (perhaps two or three for each topic)
and then select the best material and strategies for getting through those.
However, this planning sequence has never been followed in detail. When he
started to use GYSL, he was under a great deal of pressure and therefore used
the objectives in the kit more or less as given. He also worked through the
materials and suggested procedures fairly closely, although sometimes adapt-
ing them to meet his own circumstances. Now that he has worked through the
Project for several years, he still does not have a precise structure, but
rather makes adjustments on the basis of his past experiences.

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1 Where he taught previously.

A number of ideas have emerged from this discussion. Firstly the principle of defining objectives at the outset and using them as the basis of course planning is accepted by the teachers. GYSL seems in fact to have been a driving force in this direction and to have encouraged the teachers to adopt such a strategy throughout their syllabuses. The dangers of an over-rigid specification have been realised and objectives, which, as in rational curriculum planning, precede the choice of materials and teaching methods, are identified only for each block of lessons. This is mainly because of time pressures which affect all the teachers and especially Mr. Scott who seems strongly to cling to the suggestions given in the Teachers Guide. Time, as had been forecast throughout Part 1, is indeed proving to be a major constraint.

5:3.   Assessment

A careful sequence in curriculum planning leads naturally on to assessment since it is the last stage in a rational plan. The Project Team have definite ideas both about the form that assessment items should take and about the way in which they should be used by teachers. The Guides state that tests should be designed to "assess intellectual and other skills, and to gauge the pupils' sensitivity towards and awareness of values and attitudes", although, as we have seen, this last element is specifically rejected in the O-level syllabus.

The teachers had no difficulties to face as regards the implementation of this statement. Three of the schools were members of the C.S.E. Mode 3 group, and all the fourth year pupils, including those ultimately destined for O-level, had to sit termly tests which had been designed by the group. The Project's National Co-ordinator, who was also the local Adviser in Geography, helped to devise these tests and so they can be assumed to reflect current GYSL thinking. Only Hayslope, where all the pupils were nominally of O-level calibre, stayed outside the group and gave tests at the conclusion of each unit. The questions, however, were taken from past O-level papers, and since they too were the creation of the Project, they obviously matched the Team's ideals.

Beneath this surface calm, however, deep controversy arose within the group during the year. The second test moved into new fields and was strongly resented by the three teachers concerned. To understand this, we must consider, even though it prejudges a later section, where the Project Team felt that GYSL's philosophy was not adequately being

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implemented. These areas were oral skills, and values and attitudes. Accordingly, Trevor Higginbottom, who is associated with an Open University project into evaluation and new ways of assessment, tried to set questions on those two aspects in the C.S.E. test, with the hope eventually of finding ways of including them in O-level Examinations. This again would be using the examination as a power-coercive strategy to force teachers to move into areas which they had previously neglected. It was not so much the inclusion of oral skills and values and attitudes to which the teachers objected, but rather the way that the test was restricted to immigration within the United Kingdom and particularly Sheffield. It was Mr. Cook who protested most strongly. He felt that the key point of whether "the children have understood the basic issues and can apply them in different circumstances" was being sacrificed to a concern about the suitability of various testing methods. This comment seems to suggest that tests should be confined to a cognitive level and deal simply with the comprehension and application of ideas. It is precisely such views as these which caused the controversial test in the first place and indicates perhaps that teachers do not accept the Guide's statement so fully after all.

The Project's second main concern is to ensure that assessment is not used simply to rank pupils but also, and more importantly, that it tests whether teaching objectives have been achieved and learning experiences succeeded. Direct evidence is provided by interview comments while further ideas may be deduced from classroom activities.

The teachers all adopt similar stances. They do use test results and homework exercises to evaluate their teaching but find that their own general impressions, the level of interest shown by the pupils and the amount of feedback from them, are better guides. "While you're actually doing the lesson you can get much more of an idea of how they are getting on, rather than just looking at a piece of paper a fortnight later" (Mr. Shackleton). Mr. Scott at Milby described his position frankly:

> "At the end of a test you always look back and I certainly
> say, 'you know, I don't think that I've covered that in the
> best way that I could have done' and next year I will do it
> differently. We never actually give assessments which are
> purposely designed to give us that sort of feedback".

Evaluation is more of an incidental by-product of assessment than a cause of it and, as he admits, the whole area of assessment is something that the school has not yet come to terms with very well. Mr. Cook was even less sure in that, initially, he did not consider assessment in terms of evaluation at all. On further questioning, however, he did agree that it was valuable from a feedback point of view.

These comments are not very encouraging. They indicate that the teachers only partially accept the assessment as evaluation argument and find that, in practice, lesson impressions are still more useful. In general, the teachers view assessment in another light. Mr. Cook expressed a common interpretation clearly. In any assessment:

> "You're trying to test the general level of understanding, and the level of competence to deal with an exam. question ... I think techniques of knowing how to use their knowledge in order to gain marks is important, and to try and get them to be very specific and selective about what they've learned as well."

This last sentence is characteristic of the "examination as a hurdle to be crossed" attitude, and is typical of all the teachers. At Diplow and Lowick, the pupils were regularly given past examination questions to answer, and the results were invariably analysed in terms of how to negotiate an obstacle and cope with its difficulties. The O-level was mentioned in 13 out of 40 lessons at Diplow and almost always from the angle of having specific examples to refer to or being able to describe patterns precisely. In none of the other schools was there such an obvious presence, but the nature of the examination and the kind of questions that were likely to be asked had a marked impact on the range of topics covered. At Milby, the pupils were told specifically that land use zones in cities were nearly always asked about and that they would, therefore, spend a long time on the topic. (This is typical of the way in which the teacher tries to join together with the pupils to beat the system). Similarly, at Hayslope, the whole unit on planning was omitted because it was felt to be non-examinable.

These comments and actions suggest that teachers are still gearing their efforts strongly towards the final examination; much of their work is tailored directly to suit it, and the various elements of GYSL are considered according to how they facilitate the achievement of good final grades. The various tests form an obstacle course and it is the teacher's job to get the pupils through them. In such a situation there seems little scope for using assessment specifically to evaluate teaching. On the other hand, where pupils have done badly on particular questions, this would lead the teacher to think again about his resources, method and style. The Project Team has only partially managed to break through traditional attitudes.

<u>The Development of Ideas and Concepts in Sequential Form</u>
   <u>throughout a Theme and in Varying Areal Contexts</u>

Table 2 shows the pattern of lessons observed for Cities and People which was studied by all the schools for about two-thirds of the year. Each school had two lessons a week but only one of these was observed at Milby and Hayslope. It was assumed that the distribution of areal contexts remained the same.

Table 2:   The Areal Contexts of Lessons

	TOTAL LESSONS	LOCAL	NATIONAL	GLOBAL
DIPLOW	27	17	11	7
MILBY	17	9	10	2
HAYSLOPE	16	6	10	1
LOWICK	27	12	17	2
TOTAL	87	44	48	12

(These figures do not add up to give the values in the totals column because in many lessons, particularly at Diplow, material was presented at more than one level.) To allow easier comparison, Table 3 gives these same values converted into percentages.

Table 3:   The Areal Contexts of Lessons (as %s)

	LOCAL	NATIONAL	GLOBAL
DIPLOW	63%	40.1%	25.9%
MILBY	52.9%	58.8%	11.8%
HAYSLOPE	37.5%	62.5%	6.25%
LOWICK	44.4%	63%	7.4%

The values for each category are a percentage of the total number of lessons for the school concerned. Thus 63% of the observed lessons at Diplow contained at least some local work.

A clear pattern emerges here. Local and national examples are important in all four schools but, except for Diplow, with a greater emphasis on the national scene. By contrast, very few world topics are covered, although Diplow does, once again, follow an individual path and includes these in every unit. In addition, there is a great deal of general

discussion at this school (almost none elsewhere) with frequent local analogies being drawn.

How does this distribution match the Project Team's ideas? The Team do not of course state precisely the balance that they seek, but they do indicate, in both the Teachers' Guide and the O-level syllabus, that all three scales should be considered. Appendix II in the syllabus lists the sort of topics which may be covered and, for each unit, examples are given at local, national and international levels. The Teachers' Guide for cities and people, is also clear on the point:

> "It is important at every stage to investigate aspects of problems that have local implications, and by pupil involvement in issues affecting the community, develop the positive aspects of future developments. As in the Man, Land and Leisure theme, an analysis of processes at work in cities at home leads on to complementary studies of these and other processes evident in overseas cities."

Only Diplow fulfils these statements. The other three schools, although they can be said to be providing some variety of areal contexts, do not give the world-wide coverage which GYSL aims for. This neglect cannot be explained simply by the need to modify the course because of the winter's lost time. If global work was really valued, it would not have been abandoned wholesale. In any case, Diplow suffered the same constraints as the other schools and the difference must therefore lie in the importance which the respective teachers attach to world-wide studies.

To examine this, we must turn to their interview comments, which at times cloud rather than clarify the issue. All four teachers argue that a knowledge of the local environment is a basic part of geographical study. Mr. Cook at Lowick expressed this most succinctly:

> "If they can't apply the principles that they've been learning about locally, I think we've failed really."

Mr. Scott at Milby similarly feels that "it would be a big mistake to go through the resources without ever having referred to the local area. It's essential that you bring in your local area as much as you can to parallel the things that are in the kit." Local work is seen as having two principal values: it helps pupils' understanding and it stimulates their interests. This motivational value has considerably affected the nature of several courses. At Diplow, the pupils are "city dwellers ... and, therefore, we're dealing with urban, economic and recreational considerations." Hayslope, by contrast, has a rural setting and so, when GYSL was first introduced in 1974, a fourth theme on rural landscapes (physical geography, rural settlement patterns, and agriculture) was

immediately added. (With the subsequent development of the O-level Physical Geography unit, this has been abandoned and the agriculture component has been added to People, Place and Work). Only Mr. Cook has any reservations. He feels that the local group has overstressed the Sheffield area and drawn attention away from broader topics. There is a danger that pupils may become too insular and unconcerned about others elsewhere:

> "an overconcentration on the local area encourages the view that what exists locally is best which is contrary to the aims of GYSL really".

Geography, for Mr. Cook, has a broadening role, and this is certainly the Project's view too. He offered no convincing explanation as to the lack of fit between such views and his actual teaching, except perhaps that the Third Year third term course on Ghana was felt to have provided adequate coverage. However, that has little to do with GYSL. There were no such problems with Mr. Scott's position. He stated simply that global work is less important, but would be done if there was more time available. Finally, Mr. Barry, whose teaching contained regular lessons on world topics, emphasized this aspect "because we are all part of a world system and what happens in Iran affects us here". His third year course, more than Mr. Cook's, is world oriented, which plainly demonstrates how highly he estimates this dimension.

The neglect of the international scene by three of the teachers is even more surprising when one considers how much pupils enjoy this. Indeed for many geography is about foreign countries. This is reflected in responses to part of the attitude questionnaire where the pupils were asked whether they would prefer to spend most time on the local area or foreign countries. In November 1978, only 39.6% selected the local area, although this did rise to 45.5% in July 1979.[1] Occasional pupils were even moved to vocal protest by what they saw as the imbalance in their teaching. In particular, at Lowick, after the class had analysed the results of a migration survey among fourth year pupils, one boy bluntly remarked:

> "This is not geography. This is not learning about different countries. Geography isn't about school kids moving from one area to another."

This virtual omission by teachers of studies at the international scale in the face of an avowed and recognized pupil interest in them is hard to

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1 Interestingly, Diplow, the one school with even a moderate global component, again stood out; in both questionnaire, more than 80% of the pupils preferred local studies.

explain and still harder to justify. Exactly the same contrast was discussed in an earlier investigation of 400 pupils carried out by Sheffield City Polytechnic (Hebden at al, 1977). After pointing out that a neglect did exist, the authors went on to argue that whatever the criteria for relevance and interest, foreign topics merit a substantial place in a geography course. In addition "more distant instances may be crucial to a demonstration of the wider applicability of concepts encountered locally." (Hebden et al, 1977).

This very limited coverage of the global context by teachers can at least partly be accounted for by its comparative neglect in the kits themselves. This seems to form a marked contradiction with the earlier statement that both the Guides and the O-level syllabus contain overseas examples for each unit of cities and People. They do, but many of the examples are a late addition, having been inserted after the trials took place and not, therefore, ever having been tested. Moreover "the <u>Leisure</u> pack only approaches the International scene through resource material on Yellowstone Park and Foreign Holidays"(Hebden, 1977).

Despite this, however, the Project Team do emphasize, even if less consistently, that the world scene as well as local work should be dealt with in GYSL. (National examples were never likely to be ignored). The teachers have accepted and implemented the latter message on the grounds that the local area helps pupil motivation and understanding, particularly by allowing comparisons to be made. Only at Diplow, however, are examples from the rest of the world regularly dealt with. Their neglect elsewhere reflects the low opinion that the other teachers have of this dimension.

5:5. <u>Individual Thinking and Problem Solving to Replace Memorisation
as the Dominant Classroom Activity; an Emphasis on Ideas,
Skills, Values and Attitudes rather than just Facts</u>

This is an immense area which forms the backbone of GYSL. It is here that the teachers are interacting directly with the pupils and putting into practice the most significant and controversial elements of the Project; it is here, in the teaching situation, that the major constraints are likely to be found.

As an essential first step we can break the broad statement at the beginning of this section into a number of key components in terms of activities. There should be a flexible use of resources; pupils should test evidence, interpret, use their own judgment, show an awareness of their own and other people's attitudes, and be imaginatively involved in

creative situations. This implies that there ought to be a move towards genuine independent learning where pupils try to develop new ideas on their own; there should be a pupil-centred element in classroom activities. The teacher should not structure and narrowly direct activities all of the time but should provide scope for broad open questioning and analysis. Not everything can be pupil-centred, of course. The teacher must lead, control and move forward step-by-step for much of the time. There is nothing wrong with the recall of ideas, application of knowledge and narrow questioning, leading always to a precise, predetermined solution; only there needs to be a balance. This is the Project's position. We can now analyse some of these features to find out the manner and extent of their implementation.

5:5:1. Flexible Use of Resources

The kits contain a wide variety of resources. Cities and People alone contains 43 printed or master sheets, 8 overhead transparancies, two filmstrips and one tape. In addition, the local group have produced printed material, containing maps, photographs, slides, sketches, statistics and text, and radio programmes.

Not surprisingly, the teachers see this as one of the main features of GYSL. Indeed for two of them it is the main feature. Mr. Cook discussed first of all its diversity – "the fact that there's a lot of new and stimulating materials provided by them and also by the local group ... the children are looking at different resources every lesson", which helps to sustain pupil interest. Equally, for Mr. Scott priority went to "the material, the fresh approach of the material, getting away from the same textbook which is given out every week; interesting resource sheets and the resources generally if you include the tapes, TV programmes, things like that."

The prominent position which the resources occupy can also be observed in the classroom. In each school, pupils are working with resources in almost every lesson; only in Diplow were there a few lessons (15.4%) in which no outside resources were used. This was sometimes because of discussions which lasted the whole period and sometimes because the pupils were working from some map or graph which they had previously prepared with the aid of materials.

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Much the most commonly used resources were sheets from the kit. Table 4
shows the pattern for Cities and People

Table 4   % of Lessons in which Sheets from the kit were used

DIPLOW	MILBY	HAYSLOPE	LOWICK
50%	59%	67%	54%

(59% under-represents the usage at Milby. At least two sheets were
studied in four lessons, and in one of them there were four sheets).
The next most important resources were sheets from the local group and the
addition of these gives the following distribution.

Table 5   % of lessons in which either kit or locally produced sheets
           or both were used

DIPLOW	MILBY	HAYSLOPE	LOWICK
61.5%	76.5%	86.70%	80.8%

Cities and People

More than this, each of the schools used books from time to time so that
we can see a very heavy reliance on printed material. Only Diplow, which
has already stood out from the others by its significant coverage of inter-
national examples, does not share this strong dependence. (It is true of
course that both kit and local sheets contain many maps, photographs, charts
and statistics, but the emphasis is still strongly verbal). Conversely,
Diplow is striking in its greater use of outside resources, particularly
those of an audio-visual nature. In Cities and People, three tapes produced
by the local group were played at Diplow compared to only one such in the
other three schools. Equally, slides, overhead projector, transparencies,
air photographs, and wall displays featured quite prominently, but not
elsewhere. Table 6 shows the contrast.

Table 6   % of lessons in which slides, overhead transparencies, air
           photographs and wall displays were used

DIPLOW	MILBY	HAYSLOPE	LOWICK
30%	13.6%	17.4%	17.9%

At Diplow, therefore, a varied use of resources, including audio-visual
material, is found while in the other three schools there is a smaller range,
with sheets predominating.

How is this contrast to be explained? It cannot lie in the opinion of the teachers for they all rate resources mostly highly. Mr. Scott's comment about tapes, and television programmes (which he never used) has already been quoted. Similarly, Mr. Shackleton draws particular attention to the value of air photographs. The only plausible explanation lies in the opportunities which the teachers have for using visual material and here there are, in fact, major constraints.

At Hayslope, all tape recorders and projectors are stored in a resources room and bookings must normally be made in advance. This greatly reduces a teacher's flexibility and unless he has everything prepared in advance he may be too late to get the equipment which he needs. Diplow operates the same system but without the booking requirement; the teacher merely sends for what he wants at the beginning of the period. At Hayslope, also, two different rooms were used for GYSL and only one of those (the one which I almost always visited) had blackout facilities. Visual equipment could, therefore, be used in only half of the lessons, and for this reason the 17.4% mentioned in Table 6 is certainly an over-estimate.

Problems were fewer in Lowick. The Geography Department had its own equipment but for several weeks the power points in the room failed to work. Nothing could then be used. In any case, the pupils reacted unfavourably whenever they were shown slides or overhead transparencies for more than a few minutes. Throughout the school (and the Geography Department was no exception) classes worked individually, usually from worksheets, for most of the time. In the Maths Department this takes an extreme form: "each child is on an individual work programme. They do a card, they bring it to be marked, they do a test, they put it back, they go on to the next one." On such a situation, Mr. Cook feels there is a lack of group feeling and this makes the pupils dislike activities, including broadcasts and slides, which require class participation. To some extent, of course, this problem is self-inflicted.

The greatest difficulties, however, were reserved for Milby. Here, as the summary in Chapter 4 indicated, GYSL was taught in a non-specialist room which was not the teacher's own. It had no blackout facilities and except on overcast days, visual aids could scarcely be used. The Geography Department was not well provided with these in any case and those that did exist were stored in the Head of Department's room. Everything which was needed during a lesson had to be transported at its beginning and this acted as a considerable disincentive for the teacher.

The relatively limited range of resources used by three of the teachers can, therefore, be attributed, in large measure at least, to the constraints which faced them. Mostly, these were of a practical or organisational nature: inadequate or non-existent blackout facilities, power points which did not work, the need to move materials at the start of a period, a cumbersome booking arrangement in the resources room. In one case, the problem is an awkward side-effect of the dominant teaching strategy employed in the school, one which the teacher supports. Only at Diplow are there none of these difficulties and the teacher, who seems to value visual resources no more highly than his colleagues, can use them regularly and provide the variety which the Project Team were looking for. Whether the resources formed the basis of flexible teaching activities will become apparent later.

5:5:2. Ideas

These lie at the core of the Project and any failure by the teachers to focus on them would strike at its very heart. In fact, no such failure exists; the teachers are strongly ideas-oriented throughout. They expressed this conviction in their interview comments too.

For Mr. Parry and Mr. Shackleton, the concept-based approach is GYSL's principal virtue:

> "Ideas are much more important than the straight imparting of information because they make pupils into thinking, reasoning people." (Mr. Shackleton)

Mr. Parry similarly states:

> "My starting point is the ideas and the thinking – the rest are devices to reach that end."

On two occasions he said much the same to the pupils, trying to indicate the essential character of geography:

> "On its own that (skill of having drawn a choropleth map) is fairly sterile. Geography is concerned with the patterns of towns, population, rivers and hillsides and tries to describe and explain those features": "in geography I concentrate on concepts and ideas."

Given this basic emphasis on ideas (no doubt satisfying to the Project Team as a first step) how are they actually handled in the class-room? This is the other half of the battle. The GYSL approach – that pupils should test evidence, interpret and at times develop ideas on their own – has already been outlined at the beginning of this Section. The issue is so complex that it must be considered by looking at each school in turn.

At Lowick Mr. Cook's strategy was hinted at by his opening sentences in the interview notes. He aims to get pupils to analyse, look at patterns, use data, graphs and other materials: "to recognize some basic patterns or themes and then apply the principles that they've discovered to another situation." These aims are to be achieved by guiding the pupils through a series of steps. He is against much teacher talk, except for answering questions:

"If they want to know something I prefer to give it to them on a one-to-one basis when they ask rather than to disseminate a load of information from the front of the class."

Helping pupils, who are working individually for most of the time[1] is the teacher's main task.

The focal point of every lesson is the worksheet and there is a fresh one each day. As the information from the observation schedule on general classroom activities indicated, the teacher normally introduces the lesson with some talk, perhaps revising points which had been raised previously. This leads on to some new idea which is often discussed with the aid of a few questions. The questions are very narrow, structured and closed, allowing only one possible answer and there is little contribution from the pupils. The worksheet is then gone over, difficulties are raised and a brief outline to some of the answers given. The pupils start work, and the teacher circulates, trying to deal with individual difficulties.

This pattern is almost uniform. Occasionally, tapes are played or slides shown, but these rarely last for more than a few minutes. Group work is never used, because although Mr. Cook recognizes it as something stressed by GYSL, he disapproves of it on the grounds that one group never finds out what the other has done. Discussion and role-play exercises, which have the virtue of involving the pupils, similarly play a minor role because they take too much time to set up. Only once throughout the year was a role play exercise attempted – it lasted for less than half an hour, was teacher-directed and did not involve the pupils in acting out the role.

This is clearly not the flexible use of resources, the variety of teaching methods, which the Project Team was looking for. But does the approach lead to the discovery and search for new ideas which was also so strongly recommended? Mr. Cook himself seems to regard this as important:

"The pupils should find things out for themselves and arrive at decisions from materials".

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1 In the six lessons where the observation schedule was used, the average figure was 68.5% (See Section 4:3).

The class teaching which occurs at the beginning of a lesson, and the individual progress through worksheets which follows it, may both contribute to such discovery.

The first feature of class teaching at Lowick to strike the observer is how little the pupils say. During two sessions which were analysed in detail, the pupils spoke for less than 4% of the time and never uttered more than eight consecutive words. Questions were frequently asked and repeated, but nearly all were answered either by the teacher himself or by the same two or three pupils. There is little opportunity in such a situation for the pupils to engage in exploratory thought and grope towards new understanding; rather, as Barnes has suggested, they are expected to supply a "right answer". Whenever the teacher speaks several sentences and leaves the pupils only slots to fill with single words or phrases, it is the teacher who is using language to shape meanings (Barnes, 1971, 1976). This is the case at Lowick. The teacher is presenting material and ideas, and checking on how well they have been understood.

Class teaching only occupies, however, a small part of total lesson time and the bulk of the learning will take place while the pupils are working individually. Once again a standard pattern emerges. Almost every worksheet (see Appendix 3) asks the pupils to draw a map or graph and then, usually by answering specific questions, to describe what it shows. Other questions require the recall of facts and ideas which have already been given either in class teaching, or in the sheet or book which the pupils are using as evidence. Finally, they have to explain features, usually by applying the ideas which have already been acquired. These questions, like their oral counterparts, are always highly structured and closed; there is only one, usually fair obvious, acceptable answer and the pupils are never required to make broad explanations where there are a number of possibilities. Still less are they expected to make value judgments, in which their own opinions are explicitly sought after.

Mr. Cook is at least partly aware of these characteristics and attempts to justify them by the pressures which the examination imposes. "This is a limiting factor ... They've got to have something fairly concrete to fall back on when they come to revise ... Whether or not you wish them to have a general idea or a very precise idea is a result of the examination system. You can't just leave them with a general impression at the end of a piece of work." He ensures that the worksheets contain the examples that the pupils can refer to for their examination answers.

As before, little scope is provided for pupils to extend their thinking in new directions and to incorporate knowledge into their own view of the world. Rather, they are encouraged to produce a "final draft" (Barnes) in which everything is tidily expressed and ready for exam. revision. (This supports the earlier suggestion that all work is a preparation for crossing the examination hurdle). Such a position is reinforced by Mr. Cook's habit of going over some of the questions before the pupils start work and by the encouragement he gives them to ask whenever they get into any difficulties. He stated this explicitly to the class: "ask me if you get stuck - otherwise you may well put down something wrong."

This lack of emphasis on exploratory thought is in one sense almost an inevitable consequence of the heavy dependence on worksheets. The questions must naturally be straightforward enough (which means structured and closed) for the pupils to continue fairly competently on their own. Otherwise, the teacher would be overwhelmed with queries, which, given his desire to help pupils individually, he would be unable to deal with. The approach also prevents him, at least with a class of 24, from considering "the implications of the work", by which he presumably means value judgments and opportunities for exploration. Barnes discusses the difficulties that arise with worksheets:

> "The only individual characteristic catered for in worksheets
> is that of speed. The teacher in his written persona on the
> worksheet is less responsive to his pupils as individuals
> than he is in face-to-face interaction with them. As a form
> of communication, worksheets have two marked characteristics:
> they isolate the learner with his task and they keep control
> firmly in the teacher's hands. In its very nature, the work-
> sheet widens the gap between the child who writes and any
> imaginable demand on him for explicitness". (Barnes, 1976)

This rather lengthy discussion of teaching strategies at Lowick has been designed to show the extent to which the overall approach is in line with Project Team recommendations and the reasons for any deviations that occur. For most of the time, pupils are working with resources and the emphasis is on skills and ideas. Rarely, however, do they take an active part in the development of such ideas. Instead, they are given highly structured, closed tasks which concentrate on description, reproduction of information and application. The teacher is in total control of the learning situation, offering pupils little freedom to influence the direction that the work may take. This is not as GYSL would wish - not at least to such an extreme extent. There is insufficient

variety of teaching approach and a restricted independence for the pupils. This is not because Mr. Cook fails to understand the balance of GYSL's strategies but rather because he feels that, in the conditions under which he operates, he has little real choice. He says that ideally he would' prefer open-ended questions but that the needs and pressures of the O-level syllabus do not permit this. The examination is a constraint. (We shall discuss later whether this is really so or whether it merely shows up a lack of deep commitment to the Project Team's ideals). In another way, it might be argued that he is trapped by the prevailing teaching mode at Lowick; that the emphasis on individualized learning forces him to adopt a strategy, which in an extreme form, is incompatible with real independent thinking. If this is so then he is a willing victim for his ultimate aim is to extend the worksheet system into a larger scale programme which the pupils would go through at their own speed.

5:5:2:(b) HAYSLOPE

The situation at Hayslope can be dealt with more briefly because it contains several of the characteristics which we have just encountered. As at Lowick, lessons follow a standard, although rather different, form.

Normally there is some class teaching, consisting of a mixture of talk, and question and answer, to introduce the topic. Again the situation develops in small steps with questions looking for specific responses, and the aim is to get across particular ideas. The teacher often summarizes these ideas on the blackboard and the pupils then write notes on them in their own words. There may be three or four such sequences in a lesson. This is usually followed by an exercise where the pupils are working individually. The nature of these excercises has been analysed for the 23 lessons which were observed throughout the year and the overall pattern is summarized in Table 7.

Table 7 Breakdown of Activities Involved in Individual Exercises at Hayslope

Drawing maps and graphs	11
Application of ideas and knowledge	10
Extracting information from books and sheets	9
Description and interpretation of maps and graphs	6
Naming of Towns	3
Total number of lessons observed	23

The pattern is broadly the same as at Lowick at least as far as its
cognitive level is concerned. : The accent is once again heavily on
graphic and cartographic skills, description of patterns and the
application of ideas and knowledge.   Almost nowhere are pupils expected
to grope towards new understanding (although they did have one very difficult
exercise near the end of term which partly took this form)   Group work,
role play and stimulation were totally absent, and only two hypothesis-
testing exercises, the second being the O-level course study, were given.

These features, and the background which gave rise to them, may
become more comprehensible if we look at some of Mr. Shackleton's comments.
In general terms, he prefers classroom activities "where the pupils are
trying to develop ideas for themselves from materials provided by the
teacher".   The pupils should work on their own instead of always as a
class, and think on their own instead of always listening to the teacher.
He is opposed to group work "because some pupils don't put in their fair
share of work" and seldom does role play exercises, particularly where the
pupils act out the part "because it's very difficult for kids to try and get
empathy with someone else's point of view".   (This is related to the very
limited amount of time spent on values and attitudes).

The reality of Mr. Shackleton's GYSL teaching differs considerably
from some of these ideals.   Again he sees the exam and the pressure of
time as the main problems and because of them:

> "You probably tend to do more class teaching rather than
> individualized learning..... You've got to try and make
> sure that everybody gets the right ideas down on paper.
> The safest way of doing that is to teach the class your-
> self rather than getting them to learn from individual
> worksheets......for an O-level class, class teaching is
> a more efficient and effective form of teaching."

These remarks bring us back very much to the position at Lowick,
for although the pattern of teaching in the two schools is very different –
they could never be mistaken for one another – there are many common aspects.
Only a small range of the procedures which are suggested in the guides are
actually employed.   Both class teaching and individual work are structured
and controlled by the teacher, so that it is his view of the world which is
being emphasized.   Pupils are not engaged in discovery activities but
rather develop specific skills and apply knowledge to explain patterns.
The variety of skills is limited and particularly those of an oral character
are avoided.   These features relate partly to the teacher's own preferences,
but they also reflect, in Mr. Shackleton's mind, the pressures of the

examination.   He feels obliged to ensure that the pupils have ideas
clearly and logically presented so that they are suitable for later revision,
and this requirement leads him to stress Barnes's "final draft."   The
cognitive interpretation of GYSL is thus rather narrow at Hayslope.

5:5:2:(c) MILBY

Things are less uniform at Milby not necessarily because Mr. Scott
eschews a particular approach but because unforeseen events commonly arise.
In many respects he has the hardest job of any of the teachers being studied.
His difficulties stem partly from the nature of the pupils (the school's
average is below the national average as regards intelligence and there
are widespread social problems), partly from the facilities in the school
and partly from his own position within the school organisation.

Despite a certain unpredictability of lessons, Mr. Scott does have
a preferred approach and describes it himself.   He likes to begin with
about five or ten minutes of introductory talk when he revises and builds
on something which has been done shortly before.   The pupils then do some
individual written work during which he stops the class from time to time
to go over any problems that have cropped up.   Finally, they are given a
homework exercise, something which they can just write up or which requires
only a very simple sheet.   This broadly is the sequence which was put into
practice.   Few variants existed; role play and discussion by the pupils,
where the teacher does not play a dominant role, were absent; the course
study provided the only hypothesis-testing exercise; and group work was
attempted twice.

For the third time, therefore, we have a fairly standardized approach,
with GYSL's less traditional recommendations being left mostly untouched.
The nature of the pupils' tasks was also very much as before.   There was
in fact almost no oral questioning; in the five lessons which were examined
with the observation schedules, the teacher led the class in discussion in
two of the time periods, asked questions in two, and told them information
in 25.   Clearly no opportunities for exploratory thought here.   There
were few in the individual exercises either which formed an almost exact
mirror-image of the pattern at Hayslope (Table 8)

Table 8 Breakdown of Activities Involved in Individual Exercises at Milby

Application of ideas and knowledge	9
Drawing maps and graphs	8
Description and interpretation of maps and graphs	7
Summarizing and extracting information from sheets	7
Recall of information	1
Total number of lessons observed	21

The ideas were often presented, either in the sheet or orally by the teacher, and the related questions were narrowly specific. An example, by no means untypical, is quoted in Appendix 4. One of Mr. Scott's particular concerns is indicated by remarks which he made to the class in five of the 21 lessons observed. Two illustrations are given:

> "Remember every sheet of paper in your folder is likely to be scrutinized when it comes to your final mark. Aim at producing a first class map as neatly as possible";

> "Your standard of diagrams has improved, but there's still a need for improvement in your writing, and some of your spelling is dreadful".

Mr. Scott is clearly looking for a "final draft". He is in fact near the Transmission end of the Transmission – Interpretation continuum which Barnes (1973) has identified. The Transmission teacher shapes and structures knowledge which the pupils are expected to absorb; he uses "closed" questions which "limit the children's task to 'homing' in on whatever answer the teacher wanted"; he regards writing as a record for future reference rather than a means of learning; and he emphasizes neatly produced written work which conforms to his rather external criteria (Barnes, 1973). To a lesser extent, the previous two teachers also share transmission characteristics, although GYSL strongly veers to the Interpretation end. (It is true, of course, that even the most Interpretative teacher will follow a similar pattern for much of the time, but he also engages in other activities).

How has such warping of the Project's message come about? Mr. Scott seems to appreciate (in both senses of the word) GYSL's main features. He has a genuine concern for the pupils and wants to "help the individual child to develop, to be able to look after himself, to be able to work through a certain thought process and solve problems." He values group work, discussion and role play highly but almost never used them with his GYSL class.

Unlike Mr. Cook and Mr. Schackleton, he does not find that the examination is a great barrier. Indeed, it was very seldom mentioned in the interviews. Instead the main difficulties lie within the school and particularly in its organisation. Whether these, together with any other constraints that we may think of, form the complete picture does not matter. It is sufficient that they exist at all and with such force.

The niggling irritations which can constantly attack a teacher engaged in innovation have been discussed in general terms twice in the early part of this study. Milby abounded in these. The class had its

weekly two and a half hours of geography all in the one day; the room lacked any specialist equipment or even curtains; the blackboard could only be written on with one kind of chalk which the schools had no more supplies of. More specifically harmful, however, were two related conditions. Firstly, Mr. Scott taught in a total of ten different rooms and had to bring with him any equipment that he needed. He also needed to be extremely well organized to cope with such frequent locational shifts. If he wanted to do any group work he had to put the individual desks together at the beginning of the lesson and then separate them again at the end. This is all added to the strain of making real change.

The second difficulty related to the pastoral duties which Mr. Scott had assumed in addition to his teaching responsibilities. He was a year tutor and consequently had to deal with many problems both between and within lessons. This reduced his opportunities to be fully ready when the class arrived and required him always to have work which the pupils could get on with when he was called out (which occurred frequently and for up to 30 minutes at a time).

Pupils could seldom be asked to grope towards new understanding but always had to have set out precisely what was required of them. Scope for innovation was thereby greatly reduced, particularly as Mr. Scott never knew in advance when any interruptions might occur. (It may of course be argued that his troubles were partly his own fault for letting himself be put in such a position). In addition, his pastoral commitment demanded frequent attendance at after-school meetings and the writing of many reports. Mr. Scott was aware of the overall effect of these problems on his teaching and that it had reverted to a traditional chalk and talk style:

> "I tend to think that since I've taken on this pastoral
> job that my teaching has become a bit more boring. I'm
> sure it has because I cannot seem to find the extra time
> that you need to put in to prepare a lesson to give it
> that little bit of extra spark.......I would say that my
> teaching style is very much limited at the moment because
> of my purely physical and practical problems."

Allied to this was the nature of the pupils. Indirectly they were important because of their heavy contribution to Mr. Scott's pastoral tasks; they caused the troubles which interrupted him both within and between lessons. In addition, they affected, at least in their teacher's perceptions, the kind of lesson procedures which had to be adopted. He felt obliged to structure and control the work very closely so that the pupils would grasp the main point. Similarly the neat accomplishment of skills was to be

stressed because it encouraged the pupils who normally "don't seem to achieve very much with very much success" to go on.   Such remarks suggest how the nature of a class can influence a teacher's strategy but they indicate even more strongly how Mr. Scott's transmission philosophy causes him to make such an interpretation.

Milby, then, is a third example of how GYSL's approach to the management of the teaching-learning situation is only being partially implemented.   The reasons are complex.   Certainly constraints are imposed: by the pupils, by the school's failure to remove at least some of the little irritants which make teaching and especially innovative teaching, more difficult, and by the conflicting responsibilities which Mr. Scott has.   It is doubtful whether he can perform either job properly because of the demands of the other.   This does not explain everything, however. The teacher's attitude seems to be distinctly ambivalent.   On the one hand, he is attracted by the Project's proposals - "GYSL suggested methods that were much more interesting than anything I'd done before": On the other hand, he is trapped within a transmission philosophy which prevents him from using the things that he is drawn towards.   The trouble may well lie partly with a lack of skills which make him withdraw, in the face of practical hindrances, from the new procedures.

5:5:2:(d) Diplow.

After the complexities at Milby, Diplow presents a much more straight-forward picture.   While many of the features that previously have been described are still found, new elements enter too, so that a quite strikingly different balance is reached.

Mr. Parry's concerns are revealed in the early interview exchanges:

"I try to encourage discussion.   I try to encourage thinking.
I try to encourage the kids to express themselves."

Again, in dealing with class teaching, he says: "I constantly try to involve the class and use their knowledge, ideas and perceptions.

Class teaching forms the basis of work at Diplow: 80% of lessons include this, for many it is the principal activity and some consist of nothing else.   This stands in marked contrast to the other three schools. Mr. Parry seeks to justify class teaching on the grounds that it makes the maximum use of him as a resource, and gets all the class involved, on the same wavelength as the teacher."   Question and answer work is the main element, but whereas in the previous schools it veers towards teacher talk, at Diplow it often merges with class discussion.   To be sure, there are

many straightforward factual questions which he uses to find out what the pupils have understood and remembered, and to evaluate his own teaching. But there are other occasions, when broad open questioning, in which the pupils have to work out some idea or theory themselves, is used. At such times, the teacher has clearly identified in his mind the point which he wishes to reach, but he has charted no pre-determined path for its achievement. He builds on what the pupils offer, sometimes turning the questions round to get another angle, but almost never telling the answer. The process sometimes takes half an hour. Mr. Parry simply regrets that it cannot be used more often:

> "It's a nice way of learning, but given the restraints of the exam syllabus and the time-table you can only do that so much."

Two further aspects of class teaching were observed. Firstly, there was a certain unpredictability. At particular moments, the discussion would lead towards a skill which the pupils did not have. The teacher would stop the lesson, deal with the skill and then continue with the main theme. Secondly, some of the concepts which were developed were of a higher order than in the other schools. An example from the unit on migration will illustrate the point. Early on in the unit, the pupils are asked to suggest reasons for the rural-urban drift and the expected answers include employment, housing and amenities (These are suggested in the Project which has itself been criticised, by Walford among others, for its low-order ideas.) At Diplow, such reasons were also given but they were analysed further in terms of the push exerted by rural areas and the pull offered by towns.

The other staple class activity is individual work which, in contrast to the total usage at Milby, Hayslope and Lowick, was found in only 61·5% of lessons. There were the usual, and essential, exercises on drawing and interpreting maps and graphs, and on the recall, production and application of knowledge. However, there were two essential differences. The pupils were given far less precise instructions for their cartographic work. They received broad directions but had to make detailed decisions on their own. On one occasion, they were told simply: "if you make a mess, you won't next time." In addition, they often had to look outwards to produce new insights and predictions by themselves. This is illustrated in the set of questions contained in Appendix 4. The contrast between these, and the set on a similar topic from Milby is dramatic. Although the questions are quite clear, they are much less structured than the Milby ones.

There are no simple right or wrong answers - instead there are a number of possibilities and considerable scope is provided for the pupils' personal opinions.

In the overall pattern of his teaching, Mr. Parry belongs to the Interpretation end of Barnes' continuum. The Interpretation teacher sees discussion and writing as ways of helping pupils to think more effectively; he wants them to make sense of experience for themselves by thinking and writing about it; he values highly any signs that the pupils are interested and actively involved and grants them considerable influence on the directions taken by the work. In his actions and comments, Mr. Parry exhibits these features. A few illustrations, in addition to the general description that has already been given, will demonstrate this.

Near the end of term, the teacher told the pupils:

"I like to think that the work I do with you lot is about relevance - is about the real world you live in."

Shortly before, during one of the interviews, he spoke about the encouragement he gave to the pupils to raise topics themselves even though the: "classroom situation and the exam. situation don't particularly allow this......Usually, it's a kid who has seen something in what we're doing and sees some relevance in it. And you just say, 'yes it is relevant and I'll look at it'. The pupils' attitudes and the way that they think about things are important."

Such principles were put into practice. On four occasions, the pupils raised some topic and on each occasion, even where it was not directly related to the main theme of the lesson, a discussion was held and the teacher tried to encourage contributions from as many of the class as possible. Mr. Parry was particularly elated at such moments and felt that the pupils were really _wanting_ to know something; that he had succeeded in communicating individual meaning to his work. Finally, immediately after a discussion, which had involved group work, on various alternatives for overcoming the housing problems in the inner city of Sheffield, a pupil suggested that the class should go out and look at some examples of redevelopment. The teacher had not previously thought of this, but a fortnight later, the class went. What is perhaps most striking about the situation, is not that the teacher should have responded in the way he did, but that the pupils should have made suggestions in the first place.

Diplow, therefore, was following a path much more closely in line with that laid out by the Project Team. Teaching strategies were more varied, and the pupils were participating more actively in the work. What is equally striking is that the same exam pressures were operating at

the school as in the other three.   Indeed, in some respects, Mr. Parry
was especially conscious of them and tried constantly to ensure that the
pupils had specific examples to draw on when it came to answering questions.
Yet he was able to reconcile the demands of the examination (which he
recognized had a warping effect on his teaching) with his desire to engage
the pupils in genuine exploratory thought.   Why this was possible will
need to be considered later.

5:5:3: Values

The values area is so closely linked to what we have just considered,
that the pattern of implementation can no doubt he predicted. Part of the
difference between the Transmission teacher and his Interpretative counter-
part lies in the importance that is ascribed to values.   The Transmission
teacher is little interested in them: the Interpretative one sees them as
a central concern.   In the one case, everything is judged by external
criteria: in the other, knowledge must be assimilated into the pupil's
individual view of the world.

This aspect of individual values is a significant one in GYSL. The
Project Team want issues to be raised frequently in the work so that pupils
can become aware of what their own attitudes are and develop a greater
ability to express them. Equally, they should acquire a heightened
appreciation of the values of other people and the problems that they may
face. The aim is not to direct anyone into a particular position, but
simply to make them realise that a values dimension is inherent in almost
every aspect of the work.

Diplow, with its Interpretative teacher, stands out in marked
contrast to the other three schools. Some values aspect was dealt with
explicitly in half the lessons observed, and less obviously in many others.
Four themes kept recurring in this.

1. A concern with the quality of the environment in the local area
   (including shopping provision, the quality of housing and leisure
   facilities).
2. An emphasis on the role of individual decision-making and its
   relation to the future lives of the pupils.
3. An awareness of and sympathy towards the problems that individuals
   or even whole cities may face (for example, migrants from rural
   India to Calcutta and the resulting difficulties which the city
   authorities face).

4. An understanding of the role of planning in trying to create a
   better environment and balance the demands of competing users.
   The complexity of planning decisions and particularly the
   difficulties of catering for the elderly and disabled was
   stressed.

This fourth feature illustrates a strong political dimension to the work,
and it is dealt with at local, national and global scales.

Throughout, Mr. Parry was trying to get the pupils to express
their opinions both verbally and in writing, and to encourage them to
participate in discussion. The pupils rose to the challenge and
demonstrated that they were both articulate and concerned. They had been
encouraged in this direction since their arrival in the school. During
such discussions, Mr. Parry gave his own viewpoint and participated freely.
His attitude to values and attitudes can be summed up in the following
statement:

> "I try to get them to develop, to sharpen their own. It's
> a very important thing to do, and this ability to interpret
> leads to the formation of values and attitudes. I see this
> as an integral part of it. Facts, skills, values and
> attitudes are all inter-related."

In the other three schools, almost the opposite position prevailed.
Values formed only a tiny part of class activities and very rarely were
they explicitly dealt with. This was particularly true at Hayslope where,
for example, the whole unit on planning, which has a strong values compo-
nent, was omitted. Indeed they entered as an underlying element only on
four occasions. At Milby and Lowick, the figure was higher, but open
discussion with attitudes occupying a prominent position, was still a
rarity. There was only one striking exception in each case. At Milby,
there was a brief pupil-initiated discussion on how to solve traffic
problems, while Lowick's first course study asked the following question:
"Is demolition and redevelopment the best way to solve the housing
problems in the Holland Road - Harrington Place area of Highlands?"

Thus, despite these exceptions, one of GYSL's key tenets - that
geography teachers should involve themselves and their pupils in
values discussions - is not being put into practice in three of the
schools. Many of the opportunities which the kit provides for the
development and expression of opinions and attitudes are being left,
and only the cognitive elements considered. The imaginative involvement
of pupils in creative situations is likewise rejected. To understand

this almost wholesale avoidance of a major and clearly indicated aspect of Project philosophy, we must turn to the teachers' own words.

Mr. Shackleton was the most frankly negative. He explains why he cut out values and attitudes with his predominantly O-level class:

> "It's not examined. It doesn't matter — from the point of
> view that your ultimate aim is to get the pupils through
> the exam. It's maybe departing from the spirit of the
> Project but I'm not bothered."

He continued with the theme on another occasion:

> "You aim at an external exam ... and so time presses. The
> cognitive aspect is more important for them."

It was partly for this reason that he also rejected role play which, with its emphasis on mentally entering into another person's position and sharing his problems, is closely related to values, with C.S.E. classes, where he had half as much teaching time again. He dealt more with discussion and attitudes, and in fact his whole course had a strong social bias. Perhaps most worrying of all for GYSL, although it somewhat contradicts an earlier remark was his opinion that there was not a great emphasis on values in the Project and Guides; it came mostly from local groups and Trevor Higginbottom. This is a basic misunderstanding of GYSL's philosophy.

At Lowick, the excision was a little less severe, but the thinking which gave rise to it was very similar:

> "I don't think that values and attitudes are at the core of
> geography ... I'm really interested in what facts inter-
> relate with one another. Although I'd be interested on a
> political level on the implications of all this, unless I've
> got another 10 weeks that's a field that I don't think there's
> time to explore ... the cognitive aspect has got to come first;
> otherwise values and attitudes are just based on prejudice ...
> In the end, the child has got to pass the exam."

This statement indicates a view that the cognitive and values dimensions of an issue are separate, and that values are a desirable but optional extra. Mr. Cook does, however, recognize their important place in GYSL's philosophy and regrets the need so largely to ignore it.

Mr. Scott's greater, albeit implicit, coverage is matched by his view that values are important and difficult to avoid:

> "because the resource sheets would probably show you two
> people's views and the kids would almost certainly begin
> to identify with one or the other. It's there in the kit
> but it's probably the most difficult to deal with."

It was this difficulty rather than the exam which affected his teaching, and in describing it, Mr. Scott raised an important point that goes right

through the implementation of GYSL's innovative features, not just at Milby, but elsewhere too. He is interested in the pupil's own views and tries to get across the idea that there may not be a simple right or wrong answer. The pupils are unfamiliar with this and find it hard to accept. Similarly they react unfavourably to discussion and role play exercises which, like values, differ radically from the strategies that they have been accustomed to lower down the school. Mr. Scott has given such features much greater prominence in the new junior school Humanities course which he has helped to devise and he hopes that the greater experience which the pupils will thereby obtain will enable a much greater element of them to be included in GYSL in future years. Mr. Cook said much the same at Lowick.

Three points emerge therefore from this analysis. Firstly, the amount of values discussion varies greatly but is generally low. Secondly, the O-level examination is cited as a major reason for its abandonment — values cannot be assessed, and, at least by some, are viewed as inherently less important than cognitive work. Thirdly, the possibility of introducing the attitudes area cannot be considered in isolation from the course which pupils have previously experienced. Where these syllabuses have been traditionally based, pupils will be unable to cope with later discussions which call for their opinions and feelings and which, in the process of so doing, challenge the very assumptions on which they have been brought up. The greater the gap between GYSL and its predecessors, the harder will GYSL be to implement and the longer will the process take. This is one aspect of the magnitude of change which was mentioned in Chapter 1, and it operates here through the pupil's behaviour.

5:6.   Curriculum Development

GYSL does not see itself as something which will allow teachers gradually to settle into a new comfortable routine. Rather, it is meant to spur them into reviewing and developing the whole of their professional effort. Naturally, however, it is most concerned with maintaining its own forward thrust and in doing this, it emphasizes two particular areas of growth: the development of new concept-based units, and the preparation of new resources to supplement and replace those in the kit. The two are in many ways quite distinct and will be reviewed separately.

Apart from the three core themes, all teachers entering pupils for the O-level examination must prepare a further curriculum unit. The schools in the Sheffield area have come together as a group and

constructed a concept-based physical Geography unit around an objectives framework. In this they have been helped by a member of the Geography Department at Sheffield City Polytechnic. A "trial" kit of resources has subsequently been completed and is being tested in 1979. Beyond this, no curriculum units have been developed, because, in the teachers' minds, of the tight schedules under which they have to operate. On the other hand, the designing of such units would be an excellent opportunity for the teachers to demonstrate that they had fully absorbed the Project's philosophy.

Only two of the schools did any of the Physical unit during the period of investigation. Of these, Hayslope, which, it may be remembered, had always used a fourth theme on rural environments, cannot fairly be considered because the teacher's plans were repeatedly upset by the delayed arrival of the trials kit. He had expected to use it from the beginning and for several weeks had to work on a hand-to-mouth basis when it kept failing to appear.

The other school was Lowick. Here there was a major structural innovation in that, instead of being taught separately, the Physical unit was integrated with the Recreational Geography theme. The neat linkage of the two required considerable planning on Mr. Cook's part, and in his justification of it he demonstrated that his actions were based on careful reasoning. He felt that Man, Land and Leisure was a bit thin and lacking in explanation of the environment; it was not sensible, for example, to talk about the recreational potential of National Parks without having considered the landscape features which caused that potential in the first place.

However, much of the actual teaching of Physical Geography showed a retreat to a traditional style. While the pattern was broadly the same as before it gave even fewer opportunities for exploratory thought. The pupils had much copying to do, questions commonly asked for the straight-forward reproduction of material that had already been presented, and, on two occasions, there were simply blanks to fill in. These almost reduce teaching to a guessing game. Moreover, some of the ideas were of a very low order, being little more than definitions of physical features. In view of GYSL's efforts, both through the guides and more actively through the local groups, to establish the principle of a concept-based and discovery approach, these results were disappointing.

The other main dimension of curriculum development is the construction of new resources to replace those in the kit. Since GYSL does

not provide a content-specific course, teachers have complete freedom
to design their own materials, perhaps providing local illustrations
of the key ideas. It is one of the major functions of local groups to
encourage and support this process, which was correctly perceived by all
the teachers. Mr. Scott gave most forthright expression to it:

> "I think that the original intention to the kits - and this
> was always made very clear - was that they should be a changing
> thing and we should always be ready to discard the lot if
> necessary, but having replaced it with other things ... You've
> always got that stuff as a guide, but when you feel confident
> or you feel that some of the stuff is irrelevant, you can use
> the approaches on new material."

The teachers have all done this to a greater or lesser extent. As the
difference between Tables 4 and 5 (Section 5:5:1) showed, extra sheets,
sometimes produced by the local group and sometimes from old examination
papers or other projects, were regularly used. Corrected figures, allowing
for all instances when extra sheets were used in Cities and People, are,
as a percentage of total lessons:

DIPLOW 15.4% ; MILBY 17.6% ; HAYSLOPE 40% ; LOWICK 46.2%

The figures are very much lower for Diplow and Milby than for Hayslope
and Lowick, and this might be taken to mean that less curriculum develop-
ment was taking place at the former two schools. Such an interpretation
would not be wholly correct. In the first place, as we have seen, many
more non-kit audio-visual materials were used at Diplow than elsewhere,
and there are at least as innovative as new sheets. Secondly, we must
consider the extent to which kit resources and perhaps even whole units
have been omitted.

In this respect Diplow and Hayslope have pruned severely whereas
Milby has not: Lowick occupies a middle position. At Hayslope, the whole
of the planning unit was abandoned, but otherwise the cut-back was less
vigorous. By contrast, Diplow has kept each of the units (except for
number 6 which was similarly disposed of by all the other teachers) but
omitted many of the sheets in each (for example, five out of the 12 sheets
in unit 3 of Cities and People). In addition, some restructuring of the
ideas in each theme took place. These changes are extremely important
for they constitute a major part of Mr. Parry's whole approach. We have
already seen how he stressed independent thinking, the coverage of
values and attitudes and the pupil initiation of discussion and these
are all time-consuming activities. The only way that he can reconcile
his desire to cover these with the tight schedule imposed by the

Examination Boards is to cut out various sections of each unit and to concentrate on the local area.

The Milby approach is almost exactly the opposite. There was still a strong reliance on the kits as a standard package; few sheets were ignored, although some, up to four in a lesson, were merely read through quickly. Two quotations illustrate Mr. Scott's background thinking. Speaking of the Teachers Guides, he says:

> "There are always suggestions made and in the harrassment of day-to-day lessons when you don't have a lot of time to prepare, I found it very useful at times to fall back on these suggestions and either use them completely or modify them slightly as I went along ... I don't find myself criticising it because I'm under the impression that it's there and you either take it or leave it."

Secondly, he remarks in relation to his present implementation:

> "We try not to miss anything out, but we certainly gloss over some things fairly quickly ... We're almost afraid to leave the kit completely in case there's some really important thing that we should have covered."

There is a clear lack of confidence in Mr. Scott's implementation of GYSL - he wants to cling to the Guides and kits even though he recognizes that it is the Project's ultimate aim gradually to encourage teachers to dispense with them. At least part of his difficulty is revealed by his words, "you don't have a lot of time to prepare." Curriculum development does demand a lot of time, both to prepare new materials and to gain confidence in implementing them. Mr. Scott's conflicting responsibilities prevent him from having such time and the effects run right through his teaching.

A third area of curriculum development, unstated in the Teachers' Guides because it has only become established with the introduction of the O-level component, is the course study. Pupils preparing for O-level must complete three of these during their GYSL syllabus and they give the teachers a genuine opportunity to incorporate an element of geographical enquiry into their work. The syllabus outlines seven stages which are to be followed beginning with the careful statement of an hypothesis to be tested or problem to be solved. It is stressed that, even in the first two studies, which are guided, there should be room for divergent thinking and individual initiative, and that, in general, the studies should be seen as a good occasion for dealing with the areas of attitudes and value clarification which cannot easily be assessed in the final examination.

5:7.   <u>Additional Evidence</u>

The preceding sections have provided the bulk of the substantive evidence of this research and have covered virtually all aspects which relate directly to the implementation of the Geography for the Young School Leaver Project. However, there are still some outstanding issues that relate to the supplementary features identified in Chapter 2: attitudes towards the school as an institution and towards outside agencies as supporters of innovation; and the reactions of teachers and pupils to the work that they are doing. These will now be considered, using data that has been obtained exclusively from teacher interviews.

5:7:1. <u>Support provided by the school</u>

Most of the information concerned the school situation, the role of which can be divided into two parts:

1. The support which the Headteacher and other Senior Staff give to curriculum change; and the management structures which are developed to promote it – the innovative climate of the school.

2. The practical opportunities (resources, time) which are given to teachers to innovate.

According to the teachers, in none of the schools was the climate really oriented towards innovation and this, more than anything else, reflected the attitude of the Headteacher. On the surface, the most constructive interest appeared to be taken at Hayslope, where a Deputy Headteacher had been appointed to be responsible for curriculum development. However, during his first two years he acted as little more than a filing cabinet for details of school syllabuses. Indeed, Mr. Shackleton felt that the aim of the school was to achieve a period of stability after the major organisational changes of the preceding years. Such change as was taking place at Hayslope was almost the entire responsibility of the Head of Department. Senior Staff gave very little encouragement and brought no information about new programmes to the attention of teachers and departments. Some extra financial help could, however, be made available from general school funds.

The position at Lowick was less clear because a new Headteacher had taken up his duties immediately before the research began. The school did have a more highly organized system for the allocation of money to curriculum development.

Each Head of Department had to make out a case for extra finance in front of his senior colleagues, and, following a discussion, money was

allocated at the discretion of the Headteacher. This had resulted, in 1977, when GYSL was first introduced to Lowick, in the school providing three kits for the Geography Department. Otherwise, Mr. Cook felt, teachers had to make their own changes and received neither official support nor hindrance.

Milby presented a very different picture. Whereas in the previous two schools, the Headteacher had largely kept clear of the curriculum, at Milby he assumed an important role. However, this was perceived by some of the staff as tiresome meddling and led to much strain. It was the Headteacher's belief that problems of pupil behaviour, attendance and so on would largely disappear once the school had got the curriculum right. He sought, therefore, to up-date the curriculum in all departments, and although GYSL was not a product of this effort (it had been introduced before the Head's arrival in the school), other new programmes were. For example, the Geography and History Departments were told that their subjects would cease to be taught as such in the lower school and a Head of Humanities was appointed. Once the Departments as a whole had reluctantly agreed to the change, they were left to manage it in their own way; the Headteacher took no further part, offered no real encouragement, and did not even make any effort to find out what was going on. Such a policy was doubly dissatisfying for the teachers: the notion of enforced change was not popular and led to considerable friction within the staff; and the lack of active support when the change was being attempted was felt to be discouraging. Matters were made even worse by the refusal of some teachers to teach the new course so that they had to be drafted into other departments. Staff morale, according to Mr. Scott, was low.

By contrast, morale at Diplow was high. The staff was young and lively and, Mr. Parry suggested, many had been chosen specifically for their interest in curriculum reform. Although the Headteacher did not play a direct role in initiating change, he did give it some active encouragement. He would come into classrooms to see what was being done, and ask to be shown examples of pupils' work. This was felt by the staff to provide considerable support for their efforts.

With at least the partial exception of Diplow, therefore, Headteachers were not taking a constructive interest in the curriculum development of their schools; they were offering little leadership. Closely allied to this are the management structures which the school, primarily through the Headteacher, creates to promote change. Little evidence was obtained because discussions were held simply with the

four GYSL teachers. However, problems of inter-school communication were mentioned on several occasions and current systems seemed to cause some dissatisfaction. At Hayslope, there were no formal departmental meetings and members worked largely in isolation. Only two of the four geographers taught GYSL on a regular basis, while a third, who had 5B, disliked the Project and had never attended any familiarization courses. The two GYSL teachers operated independently, although they did let one another know if they found something particularly successful. This lack of communication was partly, according to Mr. Shackleton, the choice of the teachers themselves. At Lowick, however, it was not. The Department consisted of only two full-time geographers, and they rarely saw one another during the day. To compensate for this they arranged evening meetings in their own houses, to plan the work of new courses, preparation, assessment and so on — a clear reflection of the importance which both teachers ascribed to departmental dialogue. The main problem at Lowick was the split-site nature of the school with the two teachers being located in separate buildings. Mr. Cook was trying to end the arrangement and bring the History and Geography Departments together to form a new Humanities area so that communication could be improved.

5:7:2 Material Conditions in the Schools

The second broad area in which the school can affect the possibility for change concerns the material opportunities that are provided for teachers. It was suggested in Chapter 1 that these represent costs for the school; and the extent to which these costs are met by the schools, influences largely the level of strain and pressure to which the teacher is subjected by the innovation. Much of the information on this area has already been presented in piecemeal fashion, and it will not be discussed at length again.

Mr. Parry felt that Diplow had no material problems and that even if there were any he could make compensatory arrangements. Mr. Shackleton was rather less fortunate. He taught in two different rooms, one of which lacked all specialist equipment and even adequate blackout facilities. Audio-visual aids were kept on a collective basis in the resources room and availability could not be guaranteed unless bookings were made several days in advance. However, the greatest difficulties were reserved for Milby and Lowick. A temporary problem at Lowick was the failure of the power points to work for several weeks, thus debarring audio-visual aids.

More permanently damaging, however, was the absence of proper secretarial support. Nothing could be duplicated, unless the office had been given at least three weeks' notice and no typing was possible. The teachers thus had to spend much of the free time, which should have been devoted to the construction and evaluation of courses and materials, in duplicating and typing.

Milby's position has already been dealt with comprehensively. Apart from the awkward time-table planning, where the class had its weekly geography portion concentrated in one day, a room was allocated which made anything other than traditional chalk and talk teaching very hard to administer (and since there was no chalk with which to write on the blackboard, even that was not easy). During the week, Mr.Scott had to work in a total of 10 different rooms which made any form of teaching difficult and especially one that, in line with GYSL's recommendations, is resource-based, flexible and requiring varied pupil groupings. The conflict between teaching and pastoral responsibilities, which resulted in frequent interruptions during lessons, and a shortage of time for preparation after them, merely accentuated the problem. Mr. Scott summarized his difficulties in discussing the variety of teaching methods encouraged by GYSL:

> "It's just that at this school we don't get round to a lot of them, partly to do with facilities and partly to do with time."

5:7:3 Support from outside agencies

The teachers made fewer comments on their attitudes towards the support that they received from outside agencies, and such as there were related almost entirely to local groups. It has already been indicated that there are four different groups in Sheffield dealing with resource production, assessment, physical geography (the further curriculum unit) and familiarization. The last has no bearing here because the four teachers all started work on GYSL in 1974. Mr. Parry and Mr. Scott were members of the resource production group; Mr. Parry, Mr. Shackleton and Mr. Cook of the Physical Geography group. In addition, there were regular GYSL O-level meetings and termly meetings as well as a whole series related to different areas of the curriculum. Attitudes towards the groups varied according to the individual teacher and to the stage of his implementation.

The teachers were united in feeling that the groups were important when the Project was first introduced to schools. Three main benefits were recognized: a clarification of ideas through ongoing discussions

and the need to express their own thoughts; a gathering of materials from member schools and the group itself; and the provision of support arising from the opportunity to compare problems and situations with other teachers. At this point opinions diverged and the two extremes were represented by Mr. Parry and Mr. Shackleton. Mr. Parry, although he did not agree with everything, felt that the groups were even more important now; the support aspect had grown in significance over the years through his developing links and friendships with other members. By contrast, Mr. Shackleton was less enthusiastic:

> "Once you've worked through the Project a bit, you've got to know it and you've got to know the materials and the way you work through it."

He still found the Physical Geography group, which spent the 1978-1979 session in producing a resource pack, useful but attended no termly or regional meetings because "it became too much time spent out of school for the benefit that you got out of it."

5:7:4 Reactions of the Teachers and Pupils

The reactions of the teachers and pupils form the final area to be considered. The basic attitude of the teachers to GYSL remains what it has always been – one of enthusiasm; disillusionment has been kept at bay. They all saw the Project as representing a big step forward in the nature of Geography teaching. Mr. Shackleton expressed this most clearly, although his remarks were directed specifically towards the O-level:

> "It gives a certain amount of respectability to this type of geography which I find far more interesting and exciting than the traditional type of geography. Bright kids who might previously have learned their way through an O-level geography course, have now got to think their way through it which I think is a lot better."

Equally, Mr. Scott felt that "GYSL suggested methods that were much more interesting than anything I'd done before." The advance which GYSL embodied was being translated in each of the schools into other parts of the curriculum. The persistence of this enthusiasm and its extension into further adaptations of courses (a strenuous task) almost half a decade after the Project's initial contact with the teachers, is important for it stands in opposition to the experience of many previous innovations. Attitudes to GYSL are, of course, much more complex than this simple statement seems to imply; some aspects are strongly approved of, while others are largely ignored. These have already been discussed in the chapter.

Pupil reactions are equally varied and of great significance to
the pattern of implementation. Some information on them is provided by
the analysis of the pupil questionnaire contained in Appendix 1, but
otherwise the picture is misty in the extreme. Hostility was never
striking, although the previous year at Milby, Mr. Scott had been obliged
to keep a very tight rein on proceedings because of pupils' disruptiveness.
Exuberance did not burst forth either, but given the nature of fourth year
pupils, that is hardly surprising.

Pupil attitudes are in fact an immensely difficult area to investi-
gate, both conceptually and practically, and this research has not come
to terms with the hazards. No apology is made for this. Any study must
have a clear focus and where there is an interactive situation between
two groups of people, only one can form the centre. The teacher has been
chosen here because his actions, and the thinking which preceded them,
advance most directly our understanding of the processes involved in
curriculum reform. It is essential, however, for the pupil dimension to
be the core of another research exercise. What do the children make of
GYSL? - of its content, its teaching strategies and the freedom which is
given to them to express their own opinions? Strictly speaking, of course,
they do not come into contact with GYSL at all; what they face is their
teacher's own version and, as a survey of only four schools has shown,
that can vary considerably. How do pupils from different backgrounds
react to the Project? It was suggested in chapter 1 that pupils have
expectations, based partly on their past experiences and partly on their
outside culture, as to the form that school should take. GYSL, as
revealed in official statements, offers one broad, essentially liberal,
learning approach which will be compatible with the expectations of some
pupils, and perhaps groups, but not of others. Does this mean that GYSL
is suitable only for some areas, or must major adaptations be made to it?
Such issues require urgent inspection.[1]

This discussion of the importance of pupil-centred research has
not been an irrelevant diversion. It concentrates our minds, before we
begin the conclusions to this study, on the fact that only one side of the
coin has been investigated. Any conclusions which do emerge provide only
a partial picture, but one that, hopefully, is capable of offering some
genuine illumination.

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1 To some extent this area has already been investigated by the
   Geography Department at Sheffield City Polytechnic. The pupils'
   attitudes and the gap that exists between them and the implementation
   of GYSL were considered, but little evidence was obtained concerning
   the inevitability of a clash between a Project like GYSL and the
   expectations of many pupils.

It is not my intention to repeat the preceding discussion at length, but a few final comments are in order.

GYSL is only partially being implemented. Local and national examples, an objectives framework, an emphasis on skills and ideas, resource-based learning and the development of some alternative materials are all generally present. On the other hand, world examples, assessment as evaluation, independent thinking and discovery, flexible use of resources and teaching methods, and values and attitudes are seldom dealt with, at least not explicitly. Diplow stands out in contrast to the other three schools in its fuller implementation of Project recommendations and this fact, given that Diplow is subjected to broadly the same external constraints as the other schools, is very significant in understanding the principal variables.

Finally, the limited achievement of so many of GYSL's aims should not necessarily be seen as a token of Project failure. What we ought to be concerned with is the advance which GYSL represents over existing courses. Half implementation in a situation where Geography teaching was very traditional is as great a success as full implementation where courses had already been developed on "progressive lines". We must think of innovation as a long term process.

It would be tempting to suggest that each of the schools which has been examined represents such a unique pattern of circumstances and practices that the nature of the Project's implementation can only be understood in terms of the teacher's own personality and the school's individual climate. It is, after all, the teacher who has to handle GYSL and the way that he does so is determined by his perceptions, attitudes and skills. No two teachers are exactly alike and neither are any two schools.

Such an approach is tempting but would be mistaken. The remarks which were made on Illuminative Evaluation in Chapter 3 stressed that an advance in our understanding of general processes must be based on a search for common features. The observational notes have indicated a number of possible variables and the teachers in their comments have suggested more. Some of them are very specific but they can be seen as instances of broader problems: others were less particular from the outset and we can use the contrasts between the schools to shed light on the way in which the variables do in fact operate. The analysis in this chapter will, therefore, be conducted at a general level, dealing less with the details of implementation in individual schools and more with the broad patterns which have emerged.

The basic procedure, then, will be to isolate the main variables which appear to exist, using the contrasts that have been observed between the schools. Three groups of variables have been discussed in rather abstract terms throughout the dissertation: the teacher himself, the school system and the Project Team Strategies. Despite their closely interlocking character these will be considered separately at first and then integrated later in a model that attempts to summarize the process of curriculum change. The model, which, because it is solely the product of the evidence gathered in the research, makes no pretence at completeness, is both a termination and a starting point, and will be interpreted to show some problems and theoretical implications. The chapter is concluded by a brief outline of possible solutions.

It must constantly be remembered, however, that this research is a limited exercise. The issue of pupil behaviour is left largely untouched and even within the focus of the teacher, four schools in one city do not make an extensive sample. When that city has been almost uniquely favoured by the history of GYSL and when it has become the venue for many regional meetings, which local teachers can attend more easily than their distant

counterparts, the sample loses all claim to be representative. The findings of the research, therefore, are not definitive; they do not cover the whole range of variables or possible inter-linkages and demand further verification in different environments.

6:2   The Identification of Variables

The analysis must take as its starting point the differences in the manner of GYSL's implementation. In one school, many of the Project Team's ideas (varied teaching strategies, flexible use of resources, a range of areal contexts, individual development of ideas and discussion of values and attitudes) had been generously incorporated in the teaching course: in the other three they were often either wholly or partially absent. Since this is the case, wide-ranging external factors such as the examination system cannot be a major influence. All schools are equally affected by the O-level: they must all prepare their candidates for it, and yet their reactions to it vary. Thus it is not so much the examination which is important as the way that teachers react to it; and this is a function of the way the teacher perceives his role (whether he sees himself more as a broad educator or as someone preparing pupils specifically for the O-level) and the importance he places on various aspects of the Project's philosophy. When Mr. Shackleton says that values and attitudes are not worth covering because they are not examined, it is not the examination which is the crucial aspect but rather his unconcern about values and attitudes. If he really estimated them highly he would make room for them by reducing something else. That is what was done at Diplow. There Mr. Parry concentrated heavily on the local area because it allowed him to reconcile the need to provide specific examples with his desire to discuss controversial issues and engage pupil opinions. He could also allow pupils to participate in exploratory thinking. In addition, the examination can in no way account for the negligible use of international examples by three of the teachers. Quite the reverse in view of the fact that the 1979 O-level paper contained four questions from 12 that dealt wholly or partly with areas outside Britain. The paper also, as it had done in 1977 and 1978, enabled pupils to express their own opinions and this is no doubt a prelude to more such questions in the future.

The argument that the examination is not, in itself, a crucial variable seems to stand in opposition to the general tone of Chapter 5. It was suggested there that the teachers' efforts were geared strongly

towards the O-level and that many of GYSL's features were assessed according to the way in which they helped the pupils to obtain good final grades. The examination, moreover, has a considerable impact on the details of teaching. It forces teachers to provide specific examples for their pupils to revise from, to emphasize a range of skills and to ensure the knowledge of terms. In other words, there is, in both general and specific terms, a close correlation between the requirements of the O-level and the characteristics of teacher implementation. This is commonly, but not universally the case: and even when it is, the relationship is an indirect one that passes through the medium of the teacher. The examination is important according to the way that the teacher reacts to it. He may see it as something totally inhibiting which dictates the nature of his classroom activities, or he may see it as something restrictive which nonetheless leaves him a measure of flexibility, or he may see it as something quite unimportant. That, essentially, is the position of Judith Mansell who has shown that it is possible to study GYSL and ignore completely the O-level examination based on it. Instead at her school the Cambridge/E.A.B. 16+ examination syllabus is followed (Mansell, 1978). Thus it is the teacher's personality and philosophy with which we are concerned, and the examination operates, sometimes powerfully, sometimes weakly, through them.

6:2:1 The Teacher as the Key Variable

The above review has suggested that it is the teacher rather than the examination system which is really important and the whole of this research has been centred on the assumption that this is so. Each teacher implements GYSL in his own way and therefore produces his own version. The Project Team had always envisaged this; they were not designing teacher-proof materials, but something which would be flexible, growing and adaptable to local circumstances. Two issues consequently arise. Firstly, if teachers are to participate in curriculum development then their perceptions, attitudes and skills are critical features. They are sub-elements of the broad variable. Secondly, to what extent are any of the Project Team's proposals requirements on the innovating teachers? This is of vital importance conceptually. Is it satisfactory or not for someone to have read through the Guides, considered their implications deeply, and concluded that the principle of pupils searching for new ideas on their own is unsound educationally and unworthy of implementation. Is such a teacher interpreting GYSL as soundly as his colleague who approves

of exploratory thought and builds it in as a significant element of his course? Both teachers have fulfilled the same task. They have reflected on the Project's message and have related it to their own views on what education in general and fourth year geography teaching in particular should consist of. If GYSL is primarily an agent of curriculum review, something which is designed to make teachers reappraise what they are doing and why they are doing it, then the two positions are equally valid. Trevor Higginbottom's remark, quoted in Chapter 2 suggests that this is the case, and it therefore becomes difficult to make any comment on teachers' perceptions and attitudes beyond the fact that there are differences. One view is as worthy as another. However, the matter is considerably complicated by the examination component. GYSL has not stumbled into this and become unwittingly trapped. The Project Team made a deliberate effort to enter the system and add its weight to their proposals. In terms of philosophy, the O-level syllabus is virtually a mirror-image of the Teachers Guides; and statements in examination syllabuses are not made on a "take it or leave it basis". Moreover, the actual questions reflect those statements very carefully. Pupils, among other things, are expected to be capable of independent reasoning and to transfer ideas from one situation to another, and the only way that they can do this is by having had experience during their class activities. Thus, it can be argued that GYSL does advocate one position in preference to its possible alternatives and that the perceptions and attitudes of teachers can be considered in terms of the extent to which they are in accord with that position. The six key features represent its tangible expression.

Understanding is the first element of the teacher variable. Any failure here would have most serious implications for the Project Team's management strategy for understanding is the first priority of any innovation. If teachers do not know accurately what a Project's philosophy is then they can only implement it with the greatest good fortune. Happily, there is almost no evidence that this is the case and much that it is not. Perceptions are almost invariably accurate. The only limited exception is Mr. Shackleton's view that values and attitudes are not greatly stressed in the guides and that they have subsequently emerged under the influence of Trevor Higginbottom and the local groups. This is plainly not the case.

The second element concerns the teachers' attitudes towards GYSL's intentions. These intentions are understood but not always accepted.

Occasionally, there is direct evidence for this - especially in Mr.
Shackleton's other attack on values and attitudes (Section 5:5:3);
when he says that he is not bothered that his neglect of them represents
a departure from the spirit of the Project. Group work, too, is openly
rejected both in words and actions by Mr. Shackleton and Mr. Cook.
More often, however, a lack of commitment must be deduced. As we have
already suggested, the abandonment of time-consuming activities like
values discussion, role play and discovery learning in the face of
pressures imposed by the examination means that teachers are not
convinced that such activities really matter. For the Project Team they
do - they are more than a little froth added to give some fizz to the
daily routine; they represent, as much as anything else, what is new
about GYSL. The fact that teachers have not really taken such features
to heart is a major deficiency and reflects both on the will of the
teacher and the effectiveness of GYSL's strategy.

The third element - that teachers do not have the skills to intro-
duce what they know and accept the Project Team's intentions to be - also
has some truth, although it must be deduced rather than observed directly.
Teachers are unlikely to risk implementing those features in which their
skills are in any way lacking. To do so would be to court disaster.
They do not seem happy with discussion and role play although this is
related more to classroom authority conflicts than to GYSL methodology
and consequently rarely attempt them. Mr. Parry is, of course, an
exception. More generally, Mr. Scott's statement that "when you feel
confident you can use the approaches on new material" together with his
heavy dependence on the kits in practice, suggests that he lacks the skills
on which such confidence is primarily based. (Other factors, notably his
inadequate time for preparation and the contrast between such features
and the pupils' previous experience, are also important). This absence
of essential skills is serious because GYSL's position has been that
teacher development is the key to curriculum development and reflects
on the Project's strategy for improving teacher competence.

Even more, however, the lack of skills relates to the nature of
the teacher himself. Although it is virtually impossible to gather
objective evidence on this matter, some teachers are better equipped to
participate in innovation than others. There are a number of basic
dimensions to this capability including interest, power to comprehend
and assimilate a Project's recommendations, imagination and openness to
change. Mr. Parry, for example, was prepared to try out a range of new

ideas and modify them on the basis of his experiences: Mr. Cook, on the other hand, had made up his mind at the outset which features were acceptable and which were not, and his views were almost unalterable. Given such a contrast in risk-taking capacity, it is not surprising that Mr. Parry's teaching is more varied than Mr. Cook's.

This discussion on the teacher variable leads in two directions. They are inter-twined, however, because both emanate from the same source. Firstly, the fact that there are shortcomings in understanding, attitudes and skills is related to the nature of the innovation. Five aspects of this were described at the beginning of Chapter 1. GYSL plainly is a major, complex, but from their comments, highly advantageous change for the teachers; they are required to behave in new ways. The extent of the behavioural change, however, varies from one school to another. At Diplow, it was probably quite low: at Milby certainly very high. The difference lies in the nature of the schemes that were operating in the past so that although GYSL is a recognizable unit the courses which it has replaced are not. The greater the gap between GYSL and its predecessors, the harder the task for the teacher in acquiring new attitudes and skills. In other words, problems of understanding, attitudes and skills should not be treated as something purely personal and internal but rather as something which also has a school dimension. This is another aspect of the broad teacher variable, which has still a further, apparently dichotomous, element.

The pupils' task, like the teachers', is complicated by the gulf that exists between GYSL and previous courses. Where children have normally taken a passive role, accepting information from the teacher and looking at the world through his eyes, GYSL challenges the views to which they have been accustomed. Radically new activities cannot suddenly be foisted on pupils in the fourth year and have any hope of success. The process must be a gradual one, whereby, in the lower school, pupils gradually gain the experience and skill which they will require in GYSL. Once again, the problems vary from one situation to another. At Milby and Lowick, where geography had been traditionally oriented, they were intense: at Diplow they were non-existent. The pupils, at Diplow, had always been encouraged to think independently and express their own opinions, and faced little difficulty when called upon to do so in GYSL. In fact, they were both perceptive and articulate. It is precisely in those schools where the greatest teacher problems are found that the pupil problems are hardest also. The pupils and the way they are

affected by the magnitude of the change that GYSL represents form a variable in their own right. But they are also part of the teacher variable. Any difficulties which the pupils face increase the complexity of the teacher's task and make it more awkward for him to implement the new approach. The demands on his skills are greater and he has to be heavily committed to the Project to overcome any setbacks. This makes the limitations in understanding, attitudes and skills which were previously identified even more serious.

These limitations lead us on to the second extension which was hinted at earlier. This relates to the Project Team's strategies for introducing and implementing GYSL. The fact that teachers are not fully convinced of the value of all of GYSL's ideas and are not able to put all aspects of them into practice suggests that there has been a partial lack of clarity – the fourth feature in the nature of the innovation. Clarity relates not only to understanding but also to acceptance and skills, and the evidence of this research is that three of the teachers are deficient in these areas. It is obviously a nice point as to the exact extent of the teachers' responsibility for this, in terms of his ability and will to innovate, but the ensuring of clarity is also partly the Project Team's responsibility; and the strategies which they have devised to this end form the second broad variable.

6:2:2   The Project Team's Strategies

There were two basic components: the Teachers Guides and the local groups. The Guides, one for each unit, are thorough documents. They provide a detailed introduction to the Project's philosophy in which the six key features, which form the operational core of this research, are strongly emphasized; they list objectives, grouped under the headings of ideas, skills and values and attitudes, for every unit, and suggest a variety of teaching procedures for each constituent part; and they contain a range of supplements, dealing with such matters as interdisciplinary approaches, evaluation, local study, role play and games, and worksheet design. In addition, there are copies of all the resource sheets that are included in the kits which also comprise overhead transparencies, filmstrips and tapes. The Guides and resources, therefore, express in a tangible form much of GYSL's message; they state what the Project's ideas are, and illustrate how they may be translated into classroom activities. As such, they represent the most direct contact which a majority of teachers have had with the Project Team.

Both the Guides and the kits have been enormously beneficial to the teachers, as they themselves recognize, particularly in the early days of implementation when time is at a premium. They provide a sound base, on which confidence can gradually be built.

However, there are problems, which relate partly to the comments of Regan and Leithwood (1974)quoted in Chapter 1. By their impersonality, written pronouncements cannot permit a true relationship to exist between teachers and the Project Team. Understanding is relatively easy to achieve provided that the statements are clearly expressed, but a deep acceptance, especially of those things which are new and complex, is not. Commitment is built up gradually through a dialogue rather than achieved suddenly on reading a few pages. Skills are even more awkward. The Guides make frequent suggestions as to <u>what</u> could be done, but rarely indicate <u>how</u>. Since many of the strategies which GYSL recommends are new, beyond the experience of much of the teaching community, detailed guidance on their classroom management is needed.

A second set of problems concerns the nature of GYSL itself. It is not a static course, but something which is constantly developing and changing. For one thing, the Project is aiming to provide a contemporary geography — a geography of the world pupils live in now and are expected to live in in the future. That world is rapidly changing, and some of the ideas and problems which were important when GYSL was initially prepared no longer have much meaning. Others have taken their place. For example, in Economic Geography, no mention is made of the world energy crisis, yet surely that is one of the greatest issues, both now and in the foreseeable future. If the Project is to go on fulfilling its original aim and not become ossified as the courses that it has replaced, it must evolve through time. This is primarily a task for the teacher, and the Guides, which provide a static exposition, are of limited assistance, except in so far as they provide a framework for future development.

For this reason, the Project Team established their second, and ultimately more important component — the local groups. These represent a strategy for self-help. They were based on 11 initial training courses where it was hoped that the nucleus of the groups, for the support and training of other teachers, would be formed. The groups were intended, as Chapter 2 has indicated, to form the core of a local project, so that the work of development and adaptation, which is an essential part of GYSL, could be carried on. They are a mechanism for future growth, and in them the teachers work together, sharing their efforts and abilities.

In this respect, the groups reveal an awareness of the facts of educational life - that many teachers have not the interest, competence or time to participate in individual curriculum development. By bringing a wide variety of teachers together, the Project Team hoped to generate interest, build up competence and overcome shortages of time.

That this policy of teachers working collaboratively has brought great benefits in Sheffield is undeniable. The teachers themselves feel that it has been a major support, giving them ideas and reassurance particularly in their earlier days of implementation, although Mr. Shackleton, who has not participated actively in general discussion since 1976, is less convinced. (He is still involved, however, with the development of materials on Physical Geography). The Sheffield groups, which are now organized around four separate themes, have also led to the production of a wide variety of resources, mostly locally based, including slides, sheets and two series of radio programmes which had their own Teachers' Guides. These could not have been produced in such quality or quantity without a collaborative enterprise. In addition, group meetings provide opportunities for certain aspects of Project philosophy to be stressed - for example, teachers are recommended to incorporate some values dimension in the course studies that they set for their pupils. On the other hand, as far as actual teaching skills are concerned, there are still deficiencies. Teachers, in line with the findings of Crowther's (1972) study (see Chapter 1) want precise ideas about the preparation and procedures required for GYSL's various innovatory features. Obviously, some progress has been made. Experienced teachers are, at times, asked to address their colleagues, perhaps concerning the steps that they have followed in developing successful course studies, and this is of great help to those who are using the Project for the first time. However, the broader areas of values, discussion and exploratory thought are still largely left untouched, and many teachers avoid using them because they lack sufficient confidence. This is an important shortcoming because it means that one of the major tasks is not being achieved.

These last remarks refer, of course, to the Sheffield situation and each group varies more or less greatly from its counterparts. Many factors influence the way the groups operate - the nature of schools in an area, whether the environment is rural or urban and the support provided by the local authority - but one of the most important is the local co-ordinator. He forms the link between the teachers and the

Project, although it may be through one other intermediary, the regional co-ordinator. He, in a sense, is GYSL personified and the extent of the likeness is determined by his knowledge of the Project and the time that he can devote to it. Where his understanding is suspect, there is ample scope for teachers' ideas to become distorted and it becomes difficult to develop their skills. There is a major problem here: the educational system offers no readily identifiable figures, with the necessary time and skills, to act as local co-ordinators and, therefore, the effective operation of local groups is partly dependent on fortunate circumstance.

This fact helps to explain the very patchy group activity that currently exists. In many areas, after a period of initial enthusiasm, atrophy has set in and the groups have ceased to operate. This has generally been the case except, as in Sheffield, where Group Mode 3 Schemes have been devised; elsewhere the regional O-level moderator seems to have taken the place of the local co-ordinator. This fact has theoretical implications to which we shall return later.

6:2:3 The Supportive Climate of the School

This discussion on local groups has mentioned time on several occasions, and it is one of the costs of reform, the fifth and final element in the nature of an innovation. The costs as a whole involve the school, and it represents another broad variable. Schools are important in curriculum change because they can reduce the amount of strain which innovation, almost by definition, imposes on teachers. The arduous nature of reform has been a theme running right through this dissertation. The acquisition of new ideas, attitudes and skills takes a great deal of effort and their implementation considerably more, because everything is new and uncertain. Tensions arise, particularly in those schools where the innovation constitutes a major break from the pupils' and teachers' past experience. Like Alice, teachers find themselves having to run faster and faster merely to stand still, a state that is neither physically nor psychologically bearable over a long period. This is a constraint and it is the School's responsibility, through the creation of structures that provide physical and moral support, to alleviate it as far as possible. (It is the Project Team's duty also, and the local groups have been their response). For the schools, it is a management task, and the evidence of this research is that it is not being effectively carried out.

As Chapter 5 indicated, the role of the schools can be divided into two related parts:

1. The support which the Headteacher and other Senior Staff give to curriculum change; and the organizational structures which are developed to promote it – the innovative climate of the school.

2. The practical opportunities (resources and time) which are given to teachers to innovate.

The climate of the school is its spiritual essence and the tone for this is set by the Headteacher. There are many dimensions, but perhaps the most basic is the level of constructive interest shown by the Head. In two of the schools this was almost negligible, while in a third, influence was exerted in an excessively peremptory fashion that created a quite unconstructive tension and led merely to grudging acquiescence. Encouragement was not forthcoming except at Diplow where, significantly, implementation was observed at a much higher level. More generally, however, the teachers were not being given the inspiration that they needed to overcome the troubles which, sooner or later, they had to face.

The problem lay in the way innovation was viewed. It was not seen as something concerning the school as a whole but rather as being the exclusive property of the individual teacher and the department that he was a member of. This is partly true of course, but there is a school dimension as well. The most vivid illustration came at Lowick. Mr. Cook's perceptions of GYSL were, in almost all respects, accurate and he knew that various class and group activities were recommended. Some he rejected out of hand, but others were attempted, with less than happy consequences. Part of the trouble, he felt, lay in the lack of class unity which has been caused by the unremitting diet of individual work provided elsewhere. In other words, practices in the school as a whole affect possibilities for introducing a new programme in any constituent part. Communication about the curriculum is needed throughout the school, therefore, so that some form of overall policy can be developed. Problems can then also be identified, new approaches worked out and skills built up among the staff generally. Leadership for this must come from the Headteacher, but again it was totally absent.

In fact, as Chapter 5 has revealed, communication networks within the schools were very poorly developed. Each department was working in isolation, and even within some, members rarely helped one another.

Only at Diplow, where the Department comprised two full-time geographers, who had rooms next to one another, was there frequent consultation and the sharing of resources and ideas. Elsewhere, the problems varied. At Hayslope neither Mr. Shackleton nor his colleagues seemed to value communication highly, while at Lowick and Milby, in line with the comments of Lortie, discussed in Chapter 1, there were either shortages of time or the physical separation of teachers. Could neither of these have been overcome? The fact that they were not (the Headteacher's responsibility) and that communications remained impoverished was a major constraint. Given the difficulties and strains of any innovation, let alone one so broad-ranging as GYSL, teachers need all the help that they can get. The school itself ought to provide the first tier of a support structure that extends outwards to local groups and perhaps beyond.

6:2:4 <u>Material support provided by the School</u>

The second dimension of the school's management task in innovation is the physical support that it offers to teachers. This is a material cost, and again its purpose is to relieve the tensions that teachers face so that they can work as effectively as possible. Such physical support is particularly important in a resource-based programme like GYSL, where demands almost inevitably exceed those that had existed in previous syllabuses. Once more it is the task of Senior Staff; they must distribute the school's resources in such a way that the innovation can thrive and their ability to do so depends on their understanding of the Project's demands.

At one level the schools did this by purchasing Project kits (about £150 for a complete set at the time of initial publication) out of general funds. Elsewhere, however, there were deficiencies, which varied in intensity and covered a range of areas. Firstly, there were the purely physical aspects - rooms that were cramped, without proper blackout facilities, blackboards which could not be written on, power points which were not functioning, and a shortage of audio-visual aids. These are obvious illustrations of Cohen's remarks which were mentioned in Chapter 1. Secondly, there was the level of background support, particularly from the school office. This was extremely limited at Lowick and it meant that the teachers had to spend in duplication and typing much of the free time which should have been devoted to the development and evaluation of courses and materials. Such a situation is unsatisfactory because it

prevents the teacher from performing adequately one of his main roles. Finally, an issue which all schools must face and resolve, there was the conflict between teaching and pastoral responsibilities at Milby. There may be very good reasons why one person should have both, but in such a case he must be given enough time to carry out each effectively. This plainly was not the case at Milby. Mr. Scott's heavy pastoral commitments prevented him from performing his teaching role as he would have wished. Quite apart from the interruptions during lessons, he did not have sufficient time for preparation so that he had to rely on other people's ideas and less demanding approaches. This would be serious enough in a traditional teaching situation but where there are attempts to innovate, which were made moreover partly at the instigation of the Headteacher, it must and does have very damaging effects. In addition, the teacher's attempt to overcome these effects may well have resulted in him not doing his pastoral job properly either, although there is no evidence either way on this. Headteachers must give earnest consideration to the possibly excessive burdens which they impose on their teachers when they give them pastoral and teaching duties, and this marks yet another way in which they have an important bearing on the ease with which curriculum development may take place.

These problems represent brakes, as it were, on innovation, and through them, the schools, far from smoothing the path of progress, were making it more hazardous and burdensome. In addition to the trials, centred around lack of time and confidence with new approaches, and uncertainty about pupil reactions, which change naturally brings in its wake, there were the further drawbacks of imperfect practical conditions in the schools. However, an important consideration arises at this point. Schools themselves do not have all the facilities that they want and they cannot provide what is not there. If a school has 50 classrooms and 51 teachers, someone must be peripatetic. Equally, no organizational tricks can turn a small dingy classroom with rickety furniture into one that is airy, spacious and newly equipped. Schools must work within the limitations that are imposed on them, and those in inner city areas have special problems. Headteachers are aware of these, and, for example, at Lowick, it was hoped to improve the support which the office gave to all teachers.

Whether such improvement can be made will depend largely on financial considerations and the school's ability to obtain extra ancillary staff. This raises the final broad variable – external conditions. A multitude

of these exist but the amount of finance made available to education is among the most important. There is never enough to do all that the schools would like and in a period of economic stringency such as the present, when spending is everywhere being tightened, matters are considerably worsened. The current situation vividly bears witness to Dalin's (1978) statement that the educational system only just manages to maintain itself and has little energy left for moving forward. This can be illustrated by examining once more the problems of time. It has been mentioned that there are few people with the necessary time to act as effective local co-ordinators and that for teachers too innovation imposes time pressures. Ideally, schools need to provide generous time allowances, partly so that their teachers can prepare for the new programme and partly so that they can do other work which will allow them to attend local meetings held at the end of the school day. However, if teachers are to spend fewer hours in their classrooms and more in development work then extra staff will be required. This is a heavy financial burden, which is of course quite unrealistic at present. There seems no obvious way out of this impasse, and it highlights the need for schools to create mechanisms which permit the most effective use of the time that is available. Such mechanisms manifestly do not exist, at least not according to the evidence revealed in this research.

6:3: Synthesis of the Variables into a Model

The information provided by the observations and interview notes has been used as a basis for identifying some of the main influences in curriculum development. These are not complete, of course, and neither are they conclusively proven, but given the limitations of the research this could not be otherwise. Nonetheless, a range of features are present, and most of them neatly parallel the ideas that were described in Chapter 1. So far, they have been discussed individually although some linkages have already been drawn. Figure 4 summarizes the variables that have been isolated, and attempts to show how they are related to one another and how they impinge on teacher implementation. It is hoped, however, that teacher implementation would not be seen as an end-product towards which all the variables lead as a fixed conclusion. Rather it is a process which is in a constant state of flux, although for some teachers it has almost become a rigid structure out of which further development is at best slow and uncertain. In many senses it is an over-simplified diagram, but together with the analysis on which it was based, it does have some practical and theoretical implications.

6:3:1. Contact Provided by the Local Groups

The first of these implications concerns the local groups and the contact which they provide between teachers on the one hand and the Project

SYLLABUSES
(the greater the difference with G.Y.S.L., the harder the teacher's task)

PUPIL REACTIONS

TEACHER
UNDERSTANDING
ATTITUDES
SKILLS

TEACHER'S PHILOSOPHY

TEACHER'S INTEREST IN INNOVATION

DYNAMIC
continual or intermittent

TEACHER IMPLEMENTATION

TEACHER'S DESIRE AND WILLINGNESS TO ATTEND

TIME TEACHER HAS TO ATTEND

TEACHER'S GUIDES

LOCAL GROUPS

PROJECT STRATEGIES

CO-ORDINATOR - TIME AND KNOWLEDGE OF PROJECT

STATIC innovation seen as end product

GENERAL EDUCATIONAL SYSTEM AND ECONOMIC CONDITIONS

FINANCE AVAILABLE TO SCHOOLS

SCHOOL : amount of free time, structures created, and background support provided

HEADTEACHER

INTEREST TAKEN IN INNOVATION

EXAMINATIONS

Fig. 4 :   Summary Model of Variables in Curriculum Innovation

Team on the other. ·This is an indirect contact, passing through the local co-ordinator and perhaps a regional co-ordinator as well. The following sketch shows the connection between Mr. Scott and the Project Team in 1974, when he started to use GYSL, although this simple pattern changed in 1976, when Trevor Higginbottom became the local co-ordinator.

| PROJECT TEAM | Consultative Committee | M.JONES | Local Co-ordinator | LOCAL GROUPS | Head of Department | Mr.SCOTT. |
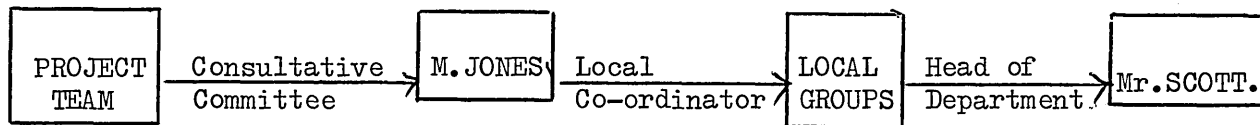
It was suggested in Section 6:2:2 that group activity has failed to secure either total commitment to GYSL or the acquisition of all necessary skills, and that at least part of the difficulty can be traced to the local co-ordinator. Any misunderstandings which he has are likely to be multiplied throughout the system, although the converse, that any short-comings of a teacher are attributable to the local co-ordinator, is by no means necessarily the case. In this respect, Sheffield was, and still is, in a particularly favourable position. Outside the Project Team, Mr.Jones, who was co-ordinator of the local group for several years and still leads the one dealing with Resource Production, must have been more closely attached to GYSL than almost anyone else. The subsequent arrival of Trevor Higginbottom, Project National Director, as local co-ordinator has further strengthened the link. Most co-ordinators, however, were trained simply during the four or five day-long initial courses and Dalton has shown how teachers who were also trained at such courses and who joined the co-ordinators as the nucleus of the local groups, had a number of misinterpretations concerning the Project (Dalton, 1976). This goes to the heart of the Social Interaction and Proliferation of Centres Models which both rely on intermediaries to spread the good news. Social Interaction is all very well provided that it is accurate interaction; but given the difficulty of identifying suitable co-ordinators, this may not always be so. The approach seems very attractive in theory, but there are problems in practice.

These problems were hinted at in Section 1:3:1 during the dis-cussion of Havelock's Social Interaction Model where it was suggested that local groups tended to disintegrate as soon as Project support had been withdrawn. In many areas, this has been experienced by GYSL. Moreover, the effectiveness of the groups that have persisted has been circumscribed by the inactivity of some of their members. This brings us back to the personality of the teacher. Teachers are not a homogeneous group,

sharing the same qualities of ability, awareness and enthusiasm. In particular, the teacher's risk-taking character is a major aspect. Teachers who are prepared to discuss their own interpretations of GYSL and face possible criticism of them, add richly to the group's workings and gain their reward in a deeper understanding of the Project's philosophy. It is hardly a coincidence that it was Mr. Parry who participated most actively in Sheffield's various groups and at the same time implemented GYSL most fully.

It should not be thought, however, that, for all their difficulties, the local groups have been a failure. Many of GYSL's co-ordinators and groups have achieved considerable success, much more than had previously been normal, and, in particular, they have provided a basis for future growth so that the deficiencies which do exist may gradually be removed.

6:3:2. <u>Conflicts inherent in Project Innovation</u>

The lack of commitment to some of its ideals which GYSL has experienced may be indicative of a problem which all Project-type innovation must face. This is the inevitability, arising from their different perspectives, of conflict between Project directors and teachers. Brown and McIntyre have descibed it:

> "The value that teachers put on change proposals depends
> on the extent to which the goals of the proposals fit with
> those of their own teaching, and on the problems they can
> foresee arising from the various constraints under which
> they habitually work. The value that curriculum planners
> place on the same innovation may be stated in different
> terms - for example, the potential of the changes to satisfy
> the outcomes demanded by society or the patterns of teaching
> advocated by educational theorists. Where such conflicts
> exist, the arguments that curriculum planners used in
> advocating particular innovations may be ineffective because
> they do not reflect the primary concern of the teachers
> (Brown and McIntyre, 1978)

Similarly, Shipman's (1974) analysis of the Integrated Studies Project showed that three related elements in the role expected of teachers, which were spelled out in a number of documents and explained at conferences, were not in the end accepted. This was interpreted as reflecting the different perspectives of the Project Team, the Schools and the Local Education Authorities. Each group was interested in his own set of problems, and saw the innovation as a means of achieving a particular set of objectives. Several of the findings in this research are consistent with such an argument. Values and attitudes related to the examination

is a case in point.   Three of the teachers saw this as a hurdle to be crossed and judged the various components of GYSL according to how they facilitated the pupils' task.   Values and attitudes, the testing of which were specifically excluded in the O-level syllabus, could safely be rejected on those grounds.   For the Project Team, however, they were not just an optional sweetmeat for lazy summer afternoons, but an essential element in developing the social awareness of pupils, which was itself one of GYSL's key aims.

If such a conflict between teachers and team members really is inevitable, then a number of options are available.   At one extreme, there is resignation – acceptance of the position as it stands, imperfect though it may be.   At the other, there is the possibility of sweeping away externally developed projects altogether and replacing them with school-based innovation.   Such a proceeding, which moves into the problem-solving sphere, has many attractions, particularly the fact that the new programmes would be relevant to the needs of teachers and pupils, and ought easily to ensure commitment.   However, the time demands, which are already often unsatisfied, would be even greater and a heavy dependence would have to be placed on the support, both moral and material, provided/the Head-teacher.   This, we have seen, is at present generally lacking, so that school-based innovation, while ideal in certain localities, is a dangerous policy to recommend exclusively.   A third possibility is to involve teachers much more closely in the work of the Project Teams so that classroom considerations may affect the nature of the final product more fully, thus narrowing the gap.   Lastly, a Project may try to force teachers to introduce those elements which their reluctance has so far kept them from using.   The gap in perspectives might not be closed, but it would cease to be translated into teacher inaction.

GYSL shows signs of attempting this through the examination system. The basic facts are clear but their interpretation into a meaningful pattern is more complex.   The O-level syllabus contains a series of explicit statements concerning the course studies.   Problem-solving and hypothesis-testing approaches are emphasized and a table is given which shows how they are most likely to be attempted successfully.   To clarify the situation, blunt warnings have been given to teachers during local meetings that pupils who present "excusion-type" course studies will fail.   The same basic approach underlies many of the examination questions.   Other aspects, which have commonly been neglected, including oral and evaluative skills,

have recently been tested too, either locally or nationally. It has been made quite plain to teachers, both what is being done and why it was deemed necessary. These then are corrective measures, a response to the shortcomings which the Project Team have observed in the teachers' implementation; and to this extent they can be seen as the introduction of a power-coercive component.

However, there are difficulties with such an interpretation. Firstly, as has already been indicated, teachers are not obliged to enter their pupils for the O-level examination based on GYSL; there are other possibilities. It is logically dubious whether the requirements of an examination which teachers do not have to work towards can at the same time exert force on those teachers. Nonetheless the vast majority of schools, including all those in Sheffield which follow a GYSL course to O-level standard do in fact prepare their pupils for the examination specifically related to the Project so that it <u>can</u> be held to have power over teachers' actions. The second complication lies in the role which teachers themselves have played in the changes which have been introduced. All alterations in the O-level are arrived at in conjunction with teachers at post-examination meetings. It was they, for example, who requested the clarification which the O-level syllabus now offers concerning course studies. Again, therefore, the power-coercive argument seems untenable. However, the teachers who are likely to ask for such changes are precisely those who were already implementing the Project fully in accordance with its basic philosophy, and who felt dissatisfaction at the efforts of some of their less innovative colleagues. It is hardly probable that someone who encouraged "excursion-type" course studies in his classroom would initiate the steps leading to their eventual proscription. Therefore, although it is not the Project Team alone, but rather the Team in combination with teachers, who have sought to strengthen GYSL's examination characteristics, the effect is still one of forcing other teachers to implement features which they have previously been hesitant in adopting.

GYSL's approach, then, has been to use the O-level as a power-coercive component, although in a modified form. This is an interesting theroetical development because it stands in direct contrast to previous received wisdom which has proscribed force as a means of bringing about curriculum change. What is not clear is whether GYSL's breach of the convention that normative-re-educative and empirical-rational strategies alone should be relied upon is a response to a specific problem or whether it

is a general necessity. Further research is needed on this issue. It can be stated quite definitely, however, that power, the administrative fiat, is not the way to operate in the school context; it does not (and this was proved at Milby) produce a climate conducive to voluntary change. Rather, as Hoyle (1976) has argued, teachers need to be persuaded that reform really is needed, and encouraged to make the effort required.

6:3:3   <u>The Time Element in Change</u>

Another major implication of this research is the time which curriculum change requires to become fully operational. Quite apart from the difficulties which teachers face in acquiring new attitudes and skills, pupils must be prepared also. Lower school courses must be compatible with GYSL before the Project can be totally implemented. Pupils cannot suddenly be told to forget all the principles on which geography teaching has previously been based and accept radically contrasting ones. Three years is the time that it will take new concept-based programmes featuring discussion, role play and problem-solving exercises to be developed through-out the junior school and for pupils reaching GYSL to have been brought up on them. In fact, three years is almost certainly an under-estimate because it presupposes that a new first year scheme is going to be adopted at the same time as GYSL. This would be a dangerous policy, running the risk of so overtaxing the teacher that he would lose his enthusiasm for both innovations.

GYSL was in its fifth year of national implementation when the research began, and also in its fifth year at each school except Lowick where it had been introduced in 1977. It would thus be reasonable for any or all of the schools, and especially Lowick, to be in a transitional state where GYSL was partially being used but still waiting for lower school syllabuses to be brought into full congruity; to be at the Independent level of use in Hall, Wallace and Dossett's (1973) Scheme which was outlined in Chapter 1. Milby, Hayslope and Lowick do seem to be in this stage for they are all in the process of making changes to their junior syllabuses. At Hayslope, the former Integrated Studies course is being replaced by one that is specifically geographical and that emphasizes the skills that are required for GYSL. Milby has a new Humanities course in which greater scope is left for values discussion, role play and hypothesis testing. Less has obviously been possible at Lowick because Mr. Cook arrived there only five months before the research began. However, it is his intention to spend more time on hypothesis-

testing so that the pupils can handle it with greater confidence in GYSL. In all of these cases a concept-based, objectives-structured approach is being used and at least some thought has been given to evaluation. This is - as the teachers readily admit - the product of GYSL, and is just as the Project Team would have wished, for it has been part of their aim to modernize the geography curriculum as a whole. Milby has the greatest task in this respect because their syllabuses were highly traditional with a strong bias towards a regional and factual presentation. By contrast, Diplow is in the easiest position. It is almost certainly out of the transitional stage and indeed was perhaps never in it given the Interpretative character of Mr. Parry. GYSL is properly integrated into the rest of the geography curriculum: lower school syllabuses fit neatly with it, and it fits neatly with the A-level. In Hall, Wallace and Dossett's model, Diplow is in the Integrated stage and may already be Renewing.

This fact, which the Project Team members themselves recognized, that GYSL works best where earlier courses are constructed along similar lines, can be extended in a number of directions. Firstly, it should affect our understanding of the term success. Success is a process not a fact: it should be seen less in terms of attaining a particular level of implementation than as the difference between present teaching patterns and those they have replaced. Secondly, if change in one part of the curriculum necessitates compatible change in every other part, then the supportive responsibilities of schools and Project Teams are doubly great, and any deficiencies doubly serious.

6:4. Possible Solutions

The preceding three sections - contact provided by the local groups, conflicts inherent in Project innovation, and the time element in change - are all implications of the evidence which has been gathered in this research. They are problems too, in each case with both practical and theoretical components, and it is worth considering, even if only briefly, possible solutions to them. This will be done from the perspective of the schools and the Project Team.

6:4:1. Improvements in School Management

Schools, as we have seen, do not in reality provide much support, and this was defined as a management problem. The corollary is that the management characteristics of schools must be improved. Headteachers and their deputies should first of all realise the vital function of the

curriculum and curriculum reform in the school, and also be able to persuade staff members about its importance. In addition, they must understand both the general demands of change, including office support and time free from other duties, preferably with departmental colleagues, and the requirements of particular innovations – for example, the nature of the room and the level of resources. Opportunities for joint consultation are especially significant because they allow teachers to make maximum use of the time which they have available. These could be institutionalized by ensuring that all members of a Department have at least one common free period during the week which would be set aside for curriculum matters – analysing existing courses, preparing new ones, developing resources and discussing teaching strategies. As far as specific demands are concerned, Project Teams have a useful role to play. Figure 4, which showed the linkages between the variables identified in this research, suggests that Head-teachers whose duty it is to provide the support which innovation needs, occupy an isolated position. If Project Teams communicated more closely with Headteachers, informing them of the characteristics and requirements of their new programmes, then part of this isolation would be broken down. It could further be removed through the actions of local education authorities. Their first task must be to appoint Headteachers who are genuinely committed to curriculum development, and then they must give them opportunities and encouragement to attend courses where their management skills can be refined. In this way, the structures and mechanisms on which flourishing innovation are based, are more likely to be established.

6:4:2. Developments related to the Project Team

The duty of Project Teams to provide support has also been mentioned. Their strategy, centred on curriculum groups in every local education authority, has not been wholly successful in terms of securing teacher understanding, commitment and skills, but perhaps our incomplete understanding of the processes of change, together with the imperfections of the educational system, make this inevitable. However, given that this is so, and given the facts that an innovation takes much longer to implement fully than has often been realised and must be parallelled by changes in other parts of the curriculum, Projects need to operate for many years. The development of materials and their dissemination to schools (assuming that this procedure is adopted) must be followed by a

period at least as long when the main concern is with support and further improvement. This truth seems gradually to have been appreciated so that whereas some of the early schemes, such as the Nuffield Science Projects, had a life-span of around five years, GYSL has been continuously funded for 11. Two-thirds of that time has covered the period after the official introduction into schools.

A series of new elements have been created, partly to improve the level of support offered, and partly to rectify failings in early implementation. The most recent has been the inauguration of a one-year (September 1979-August 1980) sister project on Development Education. It aims to build on and extend the material in GYSL and to give it a much stronger international dimension, which we have found to be seriously wanting in the classroom. The basic features remain the same - a concept-based approach around an objectives framework with an emphasis on values and attitudes. Apart from the Project's very existence (intended to maintain GYSL's forward momentum) the most interesting aspect is the strategy which has been adopted for the production of materials. These will be divided into six themes and a co-ordinator is responsible for each. He will initiate the key ideas and be supported by a group of teachers acting as critics and contributors to the proposed material. This strategy has a much greater teacher contribution than was the case with the original GYSL and represents a further move away from the Research, Development and Diffusion structure within which Geography for the young school leaver originally was founded. It ought also to reduce the gulf which commonly exists between the perspectives of teachers and those of Project Teams and which, it was argued earlier, is one of the main problems with this type of innovation.

To reinforce the skills aspect, which is also at times deficient, a curriculum development workshop for teachers new to GYSL is held each year in Derbyshire. The 1980 programme includes talks on GYSL in the classroom (by a practising teacher), the teaching of values and attitudes, and role play and games as teaching techniques. Much of the time will be spent in developing curriculum units relating to the National Parks. This is getting down to the practicalities of teaching and should provide material of direct benefit to the classroom. On a more local scale, Sheffield has attempted to achieve similar ends by establishing a familiarization group so that teachers unaccustomed to GYSL can be guided through its main characteristics.

These last two developments have been designed to help teachers using GYSL for the first time: but this research has shown that experienced teachers have problems too. Undoubtedly, they arise from various sources, but a persistent lack of basic skills cannot be discounted. To help such teachers, local groups could devote part of their efforts to the improvement of these skills - for example, through videotaped demonstration lessons which would give some precise ideas about the preparation and procedures required for the Project's various innovatory features. Again, this follows the results of Crowther's (1972) study which suggested that teachers themselves found such lessons to be the most valuable form of inservice training. They would have the further benefit of increasing the teachers' attachment to GYSL's ideals. If teachers who are highly pragmatic see that a thing works, they are more likely to be convinced of its value. Such conviction does not fully exist at the moment. Finally, demonstration lessons might well encourage greater attendance at local group meetings which clearly is a prerequisite for the achievement of maximum gain. Mr. Shackleton at present rarely attends the groups, feeling that the effort of getting to them is disproportionate to the benefits obtained. If meetings sometimes took the form of inservice training sessions, concerned with the details of class teaching, more teachers might participate actively and the effectiveness of the whole support structure would be increased.

At this point, however, problems arise which illustrate the complexity of any attempt to make change. Existing group activities, which remain extremely important, are already time-consuming and the addition of extra elements would aggravate the strain. In Sheffield, for example, there were 19 meetings on various aspects of secondary school geography which teachers could attend during the autumn term of 1979. With all the other activities that teachers have to carry out that is an impossible demand, however desirable each one of the meetings may in itself be. Teachers must be given more time if they are to participate genuinely in the development of skills and the process of curriculum reform, but in the present economic climate that is out of the question. Similarly, the Derbyshire workshop on GYSL is expensive at £59 for each delegate and there is no guarantee that local authorities will be able or willing to pay for teachers to attend.

As a partial and uncostly solution to these drawbacks, at least as far as new teachers are concerned, initial training courses at Polytechnics and Colleges of Education could deal more specifically with schemes like

GYSL. It is difficult to gauge precisely the nature of current efforts in this direction, although they seem highly variable. During the early part of GYSL's dissemination programme, the Project Team tried to gain the support of centres of Higher Education. This policy has had success in so far as many of the 12 regional co-ordinators, who provide essential links between the local groups and the Project's director, have come from such institutions. No doubt these co-ordinators are introducing their students to GYSL but a more wide-ranging effort is required. If teachers in training could come into specific contact with the Project, or other schemes like it, and more generally with the areas of values discussion and discovery learning, then their classroom work would be greatly enriched. At the particular level, however, there is the problem that many lecturers may not have complete mastery of GYSL's characteristics and therefore be unable to introduce students fully into its ways. Again this highlights how the broad educational system is not oriented towards change. Innovation is rather like a maze: there are many more dead-ends than there are openings.

6:5. CONCLUSION

This research has taken a broad ranging view of a curriculum innovation from the time of its inception to a moment of established implementation, and has attempted to generalize from it. In many ways it has raised as many problems as it has resolved, but perhaps that is in the nature of research. Undoubtedly also it has been the result of the study's limitations which have centred around the small and unrepresentative sample of schools, the lack of a strong pupil focus and the absence of detailed investigation into particular aspects of the Project. These all point towards the need for further research of an extended and corroborative character. Nonetheless, a few features have emerged with special clarity.

In the first place, there is the complexity of innovation. An immense range of forces are operating, and for both teachers and pupils there is a great deal of unlearning and relearning to be done. The capacity of the teachers, around whom all the variables seem to revolve, to participate in this process differs considerably, and even in the most favourable circumstances time is of the essence; a new programme takes years to become a fully functioning part of the school system and will bring tribulation while doing so. Schools need to appreciate this and so must

Project sponsors in their funding allocations.   Success, measured in terms of the advance over existing schemes, is a lengthy and gradual process.

Allied to this is the fact that schools, as institutions, represent one of the biggest constraints to innovation; yet they ought to be its greatest supporter.   Management training, related particularly to curriculum innovation, is an urgent priority so that Headteachers realize the importance of the curriculum on a school-wide basis and can set up persuasive mechanisms to encourage its effective growth.

A third conclusion is that all three of Havelock's models (together with the two related ones of Schon) show weaknesses.   R. D. and D, even in the modified form in which it was used in GYSL, produces too great a conflict between the perspectives of teachers and Project Teams.   The gap is so wide that some aspects of Project philosophy are rejected almost out of hand.   Problem-solving approaches avoid this difficulty but place demands on teacher time and school support which, in present circumstances, cannot be satisfied.   Social Interaction is over-dependent on the quality of the person making the link and provides too much scope for distortion.   A new balance must be struck.   Teachers, perhaps seconded, should play a much stronger development role to ensure greater commitment, although it should be remembered that, from the Project's earliest days and at all stages, there was a significant teacher component; and the eventual practitioners should have closer contact with the initiators of the change.

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Analysis of the Pupil Questionnaire

1 - 1. The Questionnaire

WHAT YOU THINK ABOUT GEOGRAPHY

These questions are meant to show what <u>you</u> think about geography and geography lessons.

Answer each question by putting a / in one of the boxes.

	AGREE	DISAGREE	DON'T KNOW
1. Geography is a subject that I like			
2. I find that geography is better this year than last year			
3. It is important in geography that we should look at the local area and local problems			
4. In geography I can work things out for myself			
5. The teacher talks too much in geography			
6. When I have finished a worksheet I think that I have learnt something			
7. We spend too little time working on our own in geography			
8. In geography we spend too much time looking at our own area			
9. In geography we spend too much time looking at the rest of the world			
10. When I am working in a group I don't have to work so hard			
11. In geography lessons we keep doing the same things			
12. We have too many worksheets in geography			
13. When I am working on my own I have to work harder			
14. Geography lessons are a waste of time			

	AGREE	DISAGREE	DON'T KNOW
15. In geography lessons I like it best when we use a text book			
16. It is important in geography that we should look at world problems			
17. In geography I have to think during the lesson			
18. It is interesting when the teacher talks in geography lessons			
19. When I am working in a group I am more interested in the work			
20. Geography helps us to understand other people and their problems better			
21. In geography we should have to work out what a graph shows			
22. In geography we should have to draw a graph from a set of figures			

1:2 INTRODUCTION

Following a request from one of the teachers, a questionnaire
was prepared to measure pupil attitudes to the GYSL Project. It is
important in its own right too because however briefly, it broaches
an issue that is of extreme concern and not otherwise covered in this
research. It has already been suggested at several points that
pupil attitudes influence behaviour patterns which in turn affect
what teachers can manage to do. In addition, GYSL was developed to
provide a lively geography course attuned to the interests and needs
of pupils, and this should be reflected in a positive perception of
the Project.

The questionnaire was designed to be short and simple so that
it could be completed accurately by pupils of a broad ability range
in only a few minutes, and with a minimum of advance explanation.
It consisted of a straightforward attitudinal scale dealing with
liking for the subject and course, content and teaching methods, and
was given twice - early in November 1978, less than two months after
the pupils had first come into contact with GYSL and again in July
1979, at the end of the first half of the two-year course. This
double administration was intended to show up changes that arose during
the year, once the first flush of novelty was over. A control class
in one of the four research schools, although unfortunately taught by
a different teacher[1] also received the questionnaire.

1:3 QUESTIONNAIRE'S RELIABILITY

Before particular hypotheses are identified, the questionnaire's
reliability may be considered. This was tested by giving the scale
to the pupils of one class a second time, one month after the first.
The consistency of replies was carefully measured and the following
table shows the emergent pattern (Table 1).

Overall, 15.7% of the responses changed between November and
December 1978; 84.3% remained the same. However, the pattern varied

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1. This fact was regrettable but unavoidable. In only one of the
   four schools were there any non-GYSL classes, and they were all
   taught by different teachers. However, since the main aim of the
   questionnaire was to detect changes that occurred during the year,
   this deficiency was not critical. Essentially, it was forecast
   that the attitudes of the GYSL classes would become more positive
   than those of the control class.

TABLE 1

TEST - RETEST, STOCKSBRIDGE (November-December 1978)

Pupil	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	%
1										x									x		x		3	14
2					x		x			x		x	x						x		x		7	32
3			x									x	x						x				4	18
4									x														1	4.5
5								x					x					x					3	14
6									x				x					x	x				4	18
7													x										1	4.5
8				x				x		x													3	14
9				x				x															2	9
10																							–	0
11																			x				1	4.5
12																					x		1	4.5
13			x				x		x			x	x					x					6	27
14					x			x							x					x			4	18
15					x			x	x	x		x	x						x		x		8	36
16			x							x						x			x				4	18
17																							–	0
18		x					x	x	x	x						x			x		x		8	36
19			x					x				x			x					x		x	6	27
20								x														x	2	9
21							x					x			x						x	x	5	23
22				x								x									x		3	14
23			x																x			x	3	14
24			x									x							x			x	4	18
TOTAL	–	1	8	3	3	–	4	8	5	7	–	6	7	–	3	2	–	2	11	2	7	4	83	
% of possible responses	0	4	33	12.5	12.5	0	17	33	21	29	0	25	29	0	12.5	8	0	8	46	8	29	17		

x = response which changed between November and December.

Total number of responses = 528   Total number of changed responses = 83
changed responses as % of total = 15.7% i.e. 84.3% of responses remain the same

a good deal both between questions and between pupils: five of the
pupils gave different answers to over a quarter of the questions, and
for six questions between $\frac{1}{4}$ and $\frac{1}{3}$ of the pupils had changed their
minds; equally, identical responses were given for five questions
and by two pupils. This seems generally satisfactory. Not surprisingly
changes occurred most often in those questions where there was already
a diversity of opinion , Whereas stability over the month-long
interval matches uniformity of perception.

1:4 THE HYPOTHESES

Three main hypotheses were set up.

**1. There would be no regularly occurring significant differences
between the control group and the four GYSL groups in the November
1978 questionnaire.**

The reasoning here was that the pupils had not yet had
sufficient experience of the Project to be deeply affected by it;
the courses which they had had further down the school would still
have a much greater impact on their attitudes. Only to the extent
that these earlier courses were related to GYSL, which, of course,
was not necessarily the case, would there be any consistent trend.

**2. The responses for the GYSL classes would differ, perhaps positively,
between November 1978 and July 1979; those for the control class
would show a less positive or more negative trend.**

Few of the differences were expected to be significant, however,
because of an anticipated highly favourable attitude in the earlier
questionnaire. The degree of contrast would be related to the
similarity between the Project and the courses which the pupils had
followed in the lower school; the greater the similarity the smaller
the change in the pattern of responses.

**3. By July 1979, there would be clear contrasts in attitudes between
the GYSL and the control classes.**

At the end of the fourth year, pupils' attitudes to geography
should be largely determined by their experiences of it during that
session. Since GYSL was planned to be both stimulating in its
approach and relevant in its themes,it was felt that GYSL pupils

TABLE 2

SUMMARY SIGNIFICANCE TABLE

Showing for each item, the number of significant inter-school
comparisons (a total of 10 comparisons)

ITEM	2 x 3 Matrix	2 x 2 Matrix
1	1	1
2	6	6
3	8	4
4	1	-
5	1	3
6	5	3
7	4	3
8	3	4
9	3	4
10	1	2
11	3	4
12	4	4
13	2	3
14	-	1
15	5	4
16	-	-
17	-	-
18	3	-
19	4	-
20	2	-
21	4	-
22	7	3
TOTAL	63	49

should have more favourable attitudes than the control class . Any
trend in the opposite direction would have worrying implications for
the Project, at least as far as it was being implemented in the
research schools.

Quite apart from these general hypotheses, individual questions
have given insights that have been referred to in the main body of
this thesis.

1:4:1 HYPOTHESIS 1   There are no consistent differences between
                        the control group and the four GYSL groups
                        in the November 1978 questionnaire.

This hypothesis was tested by comparing the responses between
each pair of schools, using chi-square tests to discover whether or
not the contrasts had occurred by chance.   A difficulty arises at
once, however, because of the mode in which the questionnaire was
administered in two of the classes.   There the teachers introduced
it themselves and encouraged the pupils to use the don't know column
if they were not completely sure of their position.   The result was
a far higher number of don't knows than in the other three classes.
It was felt that these higher values might artificially create signific-
ant differences and so two sets of comparisons were carried out -
firstly with the don't knows and secondly without them.   Table 2
gives a summary of the contrasts.

The first conclusion which can be drawn is that the number of
significant differences is considerably reduced when the don't knows
are eliminated.   However, beneath this simple fact lies a much more
varied pattern.   For nine of the items, the number of significant
differences is lowered, but for another seven it is increased.   The
matter begins to be clarified when inter-school comparisons are
considered in detail, because at this point further difficulties arise
with the 2x3 matrices (2 schools and 3 possible responses).   These
can be illustrated with item 22.   (In geography we should have to
draw a graph from a set of figures).   The five classes were ranked
according to the percentage of pupils agreeing with the statement:
Diplow, Hayslope, Lowick, Milby and Control.   On the basis of this
ordering, a significance matrix can be constructed.   It is shown in
Table 3.

TABLE 3

SIGNIFICANCE MATRIX FOR DIFFERENCES BETWEEN SCHOOLS

	DIPLOW	HAYSLOPE	LOWICK	MILBY	CONTROL
Diplow	-	Not sig	Not sig	2.5%	0.5%
Hayslope		-	5%	1%	0.1%
Lowick			-	not sig	5%
Milby				-	0.1%
Control					-

The pattern is quite intelligible horizontally, but vertically it is not. It fails to make sense that the control group, which in terms of agreement with the statement is more like Milby than Lowick should at the same time be more significantly different from Milby. This is repeated on several other occasions, always with the 2x3 matrices, and so for the remainder of this analysis, attention is concentrated on the straight yes-no situation.

The details of the inter-school comparisons are presented in Table 4 and with these it is possible to verify properly the hypothesis. It is fairly clear that the significant responses are not distributed evenly among the pairs of schools, although the pattern is far from straightforward. There is certainly the suggestion that Hayslope, Lowick and the control class are more extreme in their attitudes than the other two groups and this is confirmed in Table 5 where the same information is given in another, more concise form. These schools provide more than an average number of contrasts and in addition, as the last row indicates, they have most of the ones that are significant at 1% or more.

TABLE 5

FREQUENCY OF SIGNIFICANT DIFFERENCES FOR THE FIVE CLASSES

Level of significance	DIPLOW	MILBY	HAYSLOPE	LOWICK	CONTROL	TOTAL
Sig. at 0.1%	1	2	4	8	3	18
1%	3	4	6	5	8	26
2%	8	3	5	2	4	22
5%	5	6	8	6	7	32
Total	17	15	23	21	22	98
Total at ≥ 1%	4	6	10	13	11	44
% of total responses sig. at ≥ 1%	9.1%	13.6%	22.7%	29.5%	25%	

TABLE 4

SIGNIFICANCE OF INTER-SCHOOL COMPARISONS – NOVEMBER 1978

	DIPLOW/ MILBY	DIPLOW/ LOWICK	DIPLOW/ HAYSLOPE	DIPLOW/ CONTROL	MILBY/ LOWICK	MILBY/ HAY-SLOPE	MILBY/ CONTROL	LOWICK/ HAY-SLOPE	LOWICK/ CONTROL	HAYSLOPE/ CONTROL	TOTAL
1											1
2		1%			2%	5%		0.1%	5%	1%	6
3	2%	2%	2%	1%					5%		4
4											
5	5%		2%	5%						5%	3
6			2%					1%		2%	3
7	2%						0.1%			2%	3
8				2%			5%		1%	1%	4
9				5%			1%		1%	5%	4
10								5%			2
11		5%			1%	5%		0.1%	0.1%		4
12		0.1%			0.1%	5%		0.1%	0.1%		4
13				2%		5%				1%	3
14											1
15		5%						0.1%		1%	4
16											
17											
18											
19											
20											
21											
22	1%					1%		5%			3
TOTAL	4	5	3	5	3	5	3	7	6	8	

Thus, at a basic level, it can be concluded that the control class is often significantly different from the GYSL groups, but not any more so than two of the groups themselves. The Project cannot, at this stage, be said to have had an obvious general effect on pupils' attitudes to geography - at least not to the extent of over-riding the influence both of the way that it is being implemented by individual teachers, and of the nature of preceding courses.

The 22 items in the questionnaire cover a range of elements, however, and it may be useful to consider these on a group basis. Six groups can be identified.

GROUP 1   Liking for Geography   - Items 1, 2, 11, 14
GROUP 2   Areal Coverage   - Items 3, 8, 9, 16, 20
GROUP 3   Opportunities for thinking - Items 4, 17
GROUP 4   Size of work unit   - Items 7, 10, 13, 19
GROUP 5   Teaching Method   - Items 5, 6, 12, 15, 18
GROUP 6   Skills   - Items 21, 22

The contribution of these groups to the total pattern, and the contributions of the schools to each group are illustrated in Tables 6(a) and 6(b).

TABLE 6(a)

THE CONTRIBUTION OF EACH SCHOOL TO THE TOTAL NUMBER OF SIGNIFICANT DIFFERENCES (the school figures are given in percentages)

	Av.no. of sig. diffs. per question	DIPLOW	MILBY	HAYSLOPE	LOWICK	CONTROL
Total Questionnaire	2.23	17.3	15.3	23.5	21.4	22.4

TABLE 6(b)

THE CONTRIBUTION OF EACH GROUP TO THE TOTAL PATTERN, AND THE CONTRIBUTIONS OF THE SCHOOLS TO EACH GROUP (the school figures are in percentages)

	Av.No. of sig. diffs. per question	DIPLOW	MILBY	HAYSLOPE	LOWICK	CONTROL
GROUP 1	3	8.3	16.7	20.8	37.5	16.7
GROUP 2	2.4	25	12.5	12.5	12.5	37.5
GROUP 3	-	-	-	-	-	- -
GROUP 4	2	12.5	18.75	31.25	6.25	31.25
GROUP 5	2.8	21.4	10.7	28.5	25	14.3
GROUP 6	1.5	16.7	33.3	33.3	16.7	-

The first conclusion is that opportunities for thinking do not provide any significant differences - the control class feel that they have just as many opportunities as (but no more than) the GYSL classes. By contrast, groups 1 and 5 (Liking for Geography and Teaching Methods) provide over half of the significant differences between them. Within the first group, Lowick stands out by its unfavourable attitudes; a strikingly larger number of pupils than in the other schools feel that geography is both repetitive and worse than last year.

The position as regards areal coverage is more complex. The local area and problems associated with it are thought to be much more worthy of study at Diplow than elsewhere, but at the same time, significantly fewer pupils think that it is overdone in practice in the control class than in any of the others including Diplow. This is a slight paradox. The control class is also alone in having a large number of pupils who feel that the rest of the world is over-emphasized, but in view of its almost total neglect in GYSL, this is not in the least surprising. Teaching methods provide a whole series of contrasts. Briefly, these can be summarised as including a great hostility to worksheets at Lowick and to textbooks at Hayslope, and a feeling that Mr.Parry at Diplow talks too much. Many of these perceptions do in fact reflect the real state of affairs: the local area is covered more thoroughly at Diplow, Mr. Parry does speak a lot, and worksheets are the staple diet of Lowick, where lessons are considerably more repetitive than elsewhere.

In conclusion, then, the pattern in November 1978 fluctuates greatly and the first hypothesis, that there would be no regularly occurring significant differences between the control class and their GYSL counterparts seems broadly correct. There is a definite suspicion, however, that geography is less popular at Lowick than elsewhere and this seems to be a function of the form that it assumed, either in GYSL or in courses prior to that.

1:4:2 HYPOTHESIS 2   The responses for the GYSL classes would
                       differ, probably positively, between November
                       and July; those for the control class would
                       show a less positive or more negative trend.

The key point there is the difference between the trend for the control
class and for GYSL classes.

    This hypothesis was examined by carrying out a series of chi-
square tests for the November 1978 and July 1979 responses in each
school.   The results are shown in Table 7.

TABLE 7

SIGNIFICANTLY DIFFERENT RESPONSES BETWEEN NOVEMBER 1978 and JULY 1979
FOR EACH SCHOOL

	DIPLOW	MILBY	HAYSLOPE	LOWICK	CONTROL
Number of sig. differences	1	7	2	-	1
Items that were significantly different	12	1,9,10,12 13,15,16	2,15		7

    In general the figures indicate that little change has taken
place during the course of the year, except at Milby where significant
differences were obtained for almost $\frac{1}{3}$ of the items.   Such an
overall lack of contrast was only to be expected in view of the favourable
attitudes that were expressed in November, and in this respect the
situation at Milby, which occupied the least extreme position in
the earlier questionnaire is the more interesting.   The fluctuation,
which covers groups 1, 2, 4 and 5, suggests that the experience of
GYSL has considerably altered pupils' perceptions of geography,
although other variables may also be operating.   The most striking
and least agreeable conclusion is that there is a significant drop
in the number of pupils who like geography.   World topics have also
become less popular, although the statement that too much time is
spent on them hardly reflects the reality of Mr. Bcott's teaching.
A much greater number of pupils feel that they must work hard when
in groups, and a much smaller number feel this about individual
work.   Text books as a medium of learning have disappeared completely
from favour, and many more pupils find that they are given too many

TABLE 8

TRENDS (POSITIVE, NEGATIVE OR NO CHANGE) FOR EACH ITEM ARRANGED IN GROUPS BETWEEN NOVEMBER 1978 AND JULY 1979

	DIPLOW	MILBY	HAY-SLOPE	LOWICK	CONTROL
GROUP 1					
1 Geography is a subject that I like			-	-	-
2 I find that geography is better this year than last year		-	-	-	+
11 In geography lessons we keep doing the same thing	-	+	+	-	-
14 Geography lessons are a waste of time	-	-	+	+	
GROUP 2					
3 It is important in geography that we should look at the local areas and problems	+	+	+	-	-
8 In geography we spend too much time looking at our own area	-	-	-	-	+
9 In geography we spend too much time looking at the rest of the world	-	+	+	+	-
16 It is important in geography that we should look at world problems	-	-	-	-	-
20 Geography helps us to understand other people and their problems better	-	-	-	-	-
GROUP 3					
4 In geography I can work things out for myself	+	-	-	-	+
17 In geography I have to think during the lesson	-	-		-	+
GROUP 4					
7 We spend too little time working on our own in geography	-	+	+	+	-
10 When I am working in a group I don't have to work so hard	+	-	-	+	+
13 When I am working on my own I have to work harder	+	-	-	+	-
19 When I am working in a group I am more interested in the work	-	+	+	-	-
GROUP 5					
5 The teacher talks too much in geography	-	+	+	+	-
6 When I have finished a worksheet I think that I have learnt something	+	-	-	+	+
12 We have too many worksheets in geography	-	+	+	+	-
15 In geography lessons I like it best when we use a textbook	+	-	+	-	+
18 It is interesting when the teacher talks in geography	+	-	-	-	+
GROUP 6					
21 In geography we should have to work out what a graph shows	+	+	+	+	-
22 In geography we should have to draw a graph from a set of figures	+	+	+	+	+

N.B. The changes (+, -, or no change) have been calculated on the basis of the % of pupils agreeing with the statement

worksheets.   At face value, this last statement is difficult to understand, because although individual work formed the basic part of most lessons, worksheets themselves were hardly ever used.   This apparent contradiction may be resolved in terms of the different meanings ascribed to the word worksheet. For the pupils, worksheets may have included kit sheets which were composed entirely of photographs, diagrams and written text and which contained no questions, whereas in the questionnaire the term was used in a more restricted sense to refer to those sheets which essentially outlined a list of activities for the pupils to carry out.   The problem demonstrates how results which emerge from a questionnaire must always be treated with a certain scepticism.

Although these ideas are important and show the variations which have occurred in one of the GYSL schools, they do not really test the hypothesis that the control class will change in a less favourable direction than the Project classes.   In fact, since so few of the differences are significant, the hypothesis can never really be either proved or disproved.   We can only get a broad idea from the trends which emerged and these are illustrated in Table 8. It would be tedious, confusing and not very informative to consider the changes which were found for each of the items in turn. Accordingly, only a few of the more noteworthy characteristics will be discussed here.

The first conclusion which can be drawn is that the five classes can be divided into two categories on the basis of the changes that have taken place. in Diplow and the control class.on the one hand, Milby, Hayslope and Lowick on the other.   The following summary table gives the justification for such a statement:

TABLE   9

NUMBER OF ITEMS WHERE CHANGES ARE FOUND IN THE SAME DIRECTION BETWEEN
EACH GROUP OF SCHOOLS

Diplow – Control	15	Milby – Control	4	Milby – Hayslope	19
Diplow – Milby	4	Hayslope– Control	5	Milby – Lowick	15
Diplow – Hayslope	6	Lowick – Control	8	Hayslope– Lowick	14
Diplow – Lowick	9				

On the basis of this division, a number of interesting contrasts are revealed. The three GYSL classes show a decline in the following areas: attitudes to geography as a whole, coverage of the rest of the world, opportunities for individual thinking, individual work and liking for teacher talk, worksheets and textbooks. They are more favourable to local Studies, graphs and group work although Lowick disagrees in this last respect. With Diplow and the control class, almost the opposite pattern prevails; they have stable attitudes to geography, are more positive towards individual thinking, individual work, teacher talk, worksheets, text books and graphs. They reveal increasing hostility only towards group work, while their position as regards areal coverage remains unclear. Diplow are unchanged in feeling that both the local area and the rest of the world are worthy of study, and find even less than before that either is excessively dealt with in practice. The control class are increasingly negative about the local area and appear rather inconsistent about their study of the rest of the world.

These changes and the contrasts between the two categories of classes provide a series of important ideas. Firstly, there is the basic fact that Diplow and the control group show a more positive or at least stable attitude towards Geography, while Milby, Hayslope and Lowick have become less favourable. It should be repeated, however, that in neither case is the pattern statistically significant. This fact really answers and refutes Hypothesis 2 - the control class cannot be set apart from the remaining four GYSL ones and it does not show a more negative trend than they do. Instead, it allies itself with one of the GYSL classes against the other three and becomes better disposed towards geography during the course of the year. This does not represent a failure on the part of GYSL as opposed to traditional syllabuses, however; it reflects the specific manner of teaching rather than the basic character of the course. The fact that Diplow, where GYSL is being implemented more fully in accordance with the Project Team's ideals than in the other three schools, shows more favourable attitudes, proves this. Thus either GYSL or a more traditional course has the potential to maintain positive attitudes among pupils, depending on how the scheme is actually taught.

Incidentally, the generally positive change that was observed
in the control class and Diplow stands in constrast to the findings
of attitude measures that have been obtained elsewhere.   For example,
in her evaluation of Nuffield Secondary Science, Alexander (1974)
discovered that both trial and control pupils showed declining
attitudes towards various aspects of science and science teaching
between 1969 and 1970.   The pupils were in the Third and Fourth
forms, and covered a broad ability range.   There was a negative
trend in three of the five sub-tests in the trials schools and four
of the five sub-tests in the control schools, and these changes were
mostly significant statistically.   To this extent, at least four of
the teachers can feel satisfied that their pupils have not favoured
such a marked downward path.

In conclusioh, then, both parts of Hypothesis 2 can be
rejected.   The control class, far from showing regressive tendencies
has become slightly more favourable towards geography and in this it
closely parallels Diplow.   The other three classes were slightly
more negative at the end of the year than they had been at the
beginning, but only in the case of Milby were the changes more than
rarely significant statistically.

1:4:3 HYPOTHESIS 3 By July 1979 there would be no clear contrasts
                     in attitudes between the GYSL classes on the
                     one hand and the control class on the other.

From the preceding analyses, the outcome of this hypothesis
can readily be predicted.   It still requires rigorous testing,
however, and the procedure, using a series of chi-square tests, is
the same as before.   The pattern of inter-school comparisons is
shown in Table 10 and when it is compared with Table 3, quite dramatic
changes become apparent, both as regards the number of significant
differences between each pair of schools, and the items contributing
to this total.   Table 11, which parallels Table 4, summarizes the
information.

TABLE 10

SIGNIFICANCE OF INTER-SCHOOL COMPARISONS   —   JULY 1979

	DIPLOW/ MILBY	DIPLOW/ LOWICK	DIPLOW/ HAYSLOPE	DIPLOW/ CONTROL	MILBY/ LOWICK	MILBY/ HAY-SLOPE	MILBY/ CONTROL	LOWICK/ HAY-SLOPE	LOWICK/ CONTROL	HAYSLOPE/ CONTROL	TOTAL
1	5%	5%					2%		2%		4
2	5%	0.1%						1%	1%		4
3	5%	0.1%	2%	1%	5%						5
4											
5								5%			1
6											
7											
8		0.1%			1%			0.1%	1%		4
9											
10		5%			1%		0.1%	1%		2%	5
11		5%						2%	1%		3
12	0.1%	0.1%	5%		5%		0.1% 5%	0.1%	0.1%		8
13	1%		1%		1%	1%		1%			5
14											
15		5%		1%	1%	5%	0.1%			1%	6
16	5%										1
17											
18		5%					5%		5%		3
19											
208				2%						5%	2
21										5%	1
22				5%							1
TOTAL	(6)	(9)	(3)	(4)	(6)	(2)	(6)	(7)	(6)	(4)	(53)

TABLE   11

FREQUENCY OF SIGNIFICANT DIFFERENCES FOR THE FIVE CLASSES
July 1979

	DIPLOW	MILBY	HAYSLOPE	LOWICK	CONTROL	TOTAL
0.1%	5	4	2	7	4	22
1%	4	6	6	10	6	32
2%	2	1	3	2	4	12
5%	11	9	5	9	6	40
TOTAL	22	20	16	28	20	106
%	20.75	18.9	15.1	26.4	18.9	100
% of differences at 0.1% and 1%	16.7	18.5	14.8	31.5	18.5	100

These figures contrast sharply with the related ones for the first hypothesis in that Diplow, Milby and Lowick have become more extreme in their attitudes whereas the two Hayslope classes (one GYSL and one control) have moderated their positions.   The most relevant point at present, however, is that it is Lowick rather than the control class, which varies from the others.   This was already partly the case in November 1978, but the ensuing eight months have strengthened the difference.

As a further clarification, the contrasts between the schools for the six groups of questions may be considered.   The results are shown in Table 12.

TABLE   12

THE CONTRIBUTION OF EACH GROUP TO THE TOTAL PATTERN OF CONTRASTS,
AND THE CONTRIBUTIONS OF THE SCHOOLS TO EACH GROUP
(School figures in percentages)

	Av.no.of sig. diffs/question	DIPLOW	MILBY	HAYSLOPE	LOWICK	CONTROL
TOTAL	2.41	20.75	18.9	15.1	26.4	18.9
GROUP 1	2.75	22.7	13.6	9.1	36.4	18.2
GROUP 2	2.4	89.2	16.7	12.5	25	16.7
GROUP 3	0	-	-	-	-	-
GROUP 4	2.5	15	25	20	25	15
GROUP 5	3.6	16.7	22.2	16.7	25	19.4
GROUP 6	1	25	-	25	-	50

As before, opportunities for thinking provide no significant differences, and skills only two. Liking for geography remains a major discriminator and Lowick is distinguished by its unfavourable attitudes. The pupils of Diplow, on the other hand, view Geography more positively than their other contemporaries, and to a lesser extent this is true also of the control class. Diplow and Lowick provide the greatest contrasts in areal coverage too. These mostly lie in the local area; Diplow pupils attach significantly more importance to this than any others and Lowick significantly less. The pattern with teaching methods is more imprecise, but Milby and Lowick stand out in terms of finding that individual and group work respectively require little effort. Items 12 and 15, which produced the most varied answers in the whole questionnaire, provide the greatest contrasts in teaching methods. Milby and especially Lowick pupils feel far more than any others that they are given too many worksheets. Milby similarly has an unrivalled dislike of textbooks whereas, unlike any other, a majority of the control class preferred them.

Once again, therefore, the hypothesis receives little support. Contrary to what was predicted, the GYSL classes show just as much variation amongst themselves as they do with the control class, where attitudes seem to occupy a middle ground. It is Lowick which is isolated, having generally less favourable opinions than the other schools.

1:5 CONCLUSION

These attitude scales are no doubt excessively crude measures, but they have given some basic information about the pupil's reactions to geography. The first idea is that there is no such thing as a common position towards GYSL and the second is that perceptions remain highly stable throughout the year. In view of the different modes of implementation which were observed, this lack of unity concerning the Project might have been foretold. The pupils are in fact reacting to the version that they have received and this varied between Diplow on the one hand, and Milby, Hayslope and Lowick on the other, in terms of areal coverage, pupil groupings

and teaching methods.   The pupils' views closely match this distinction.   No knowledge is available about the course or strategies which the control class followed, but, whatever its nature, it seems to have been capable of producing similar attitudes to some GYSL versions.

The stability of responses is an interesting feature, because it suggests that GYSL, as it is being implemented, does not represent a radical departure from the pupils' previous experience. The content may be different, but the role that pupils are expected to perform, is not.   Such an interpretation is given support by the lack of change exhibited by the two Hayslope classes, one GYSL and one control.   They followed the same course in the third year and any striking divergence between that and the activities required in subsequent programmes would have been expected to be matched by changes in attitudes during the year.   That this did not occur indicates a basically consonant approach.   An alternative explanation would be that attitudes were so deeply ingrained by lower school geography that no amount of later innovation would make any difference to them. Such a view, however, is at least partly contradicted at Milby where significant modifications were recorded for almost one third of the items.   Geography at Milby had been traditionally oriented and GYSL , although it was implemented only to a limited extent, formed a sharp break with the past.   The pupils reacted quite favourably at first but disillusionment set in as the year progressed.   By contrast, at Diplow, where the pupils were expected from their first day in the Geography Department to display many of the learning activities which featured in GYSL, strongly positive attitudes were maintained, and even marginally advanced, throughout the year.

In conclusion, then, it may be said that GYSL can produce a great appreciation for Geography, but not much more so than other courses.   Much depends on the manner of teaching and the compatibility between the Project and Lower School Syllabuses.   This is perhaps a platitude, but it does reinforce the argument, presented in the main body of the thesis, that GYSL has to be seen by the teacher as a fully interlocking part of the geography curriculum.   A particularly striking result was that the control class felt least often that geography helped them to understand other people and their problems better,

while at Diplow there was almost uniform acceptance of this.   To the
extent that this was one of the aims of GYSL, such a response must
be a gratifying vindication of the Project Team's approach.

2. PUPIL RECORD — to measure pupil activity in the class
   (Based on Schedule of BOYDELL, 1975).

		25 secs.	50	75	100
1. PUPIL ACTIVITY	Involved on task set by teacher				
	Involved and co-operating on routine work				
	Involved and mobile work oriented.				
	Non-involved and distracted from work				
	Non-involved and disruptive				
	Non-involved and wandering (looks around, day-dreams)				
	Partially distracted and partially co-operating on task				
	Waiting to see teacher				
	Working on a task which is not approved				
2. TEACHER ACTIVITY	Teacher interacting with pupil, his group or class				
	Teacher interacting with other pupils				
	Teacher apart and not interacting				
	Teacher out of room				
3. PUPIL INTER-ACTING WITH TEACHER.	a) Interaction about a work matter				
	Interaction about a matter of classroom routine (Organization/Management)				
	b) Teacher gives individual attention to pupil				
	Teacher interacts with group which includes pupil				
	Teacher interacts with whole class				
	Teacher interacts with other child/group and pupil listens in				
4. PUPIL INTER-ACTING WITH PUPIL.	a) Interaction about a work matter				
	Interaction about non-work matter				
	b) Interaction with one pupil				
	Interaction with several pupils				
	c) Non-verbal interaction – physical contact, gesture etc.				
	Non-verbal interaction – materials, apparatus				
	Verbal (may also be accompanied by non-verbal				

1 & 2 always recorded; 3 and 4 where applicable.

3 TEACHER RECORD — to show cognitive level of work
(based on schedule of BOYDELL, 1974)

TEACHER TALK

TEACHER QUESTIONS ANSWERED
BY CHILD

TEACHER STATEMENTS

TASK   TASK SUPERVISION   ROUTINE   TASK   TASK SUPERVISION   ROUTINE
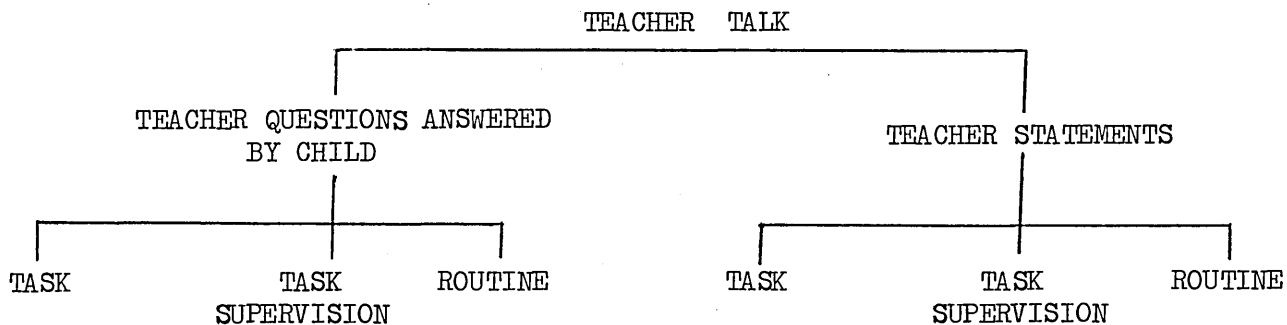
CATEGORY SYSTEM

	25 SECS	50 SECS	75 SECS	100 SECS	125 SECS	
TEACHER INTERACTING WITH. CLASS						
GROUP						
INDIVIDUAL PUPIL						
TEACHER QUESTIONS						
1. RECALLING FACTS AND IDEAS						
2. OFFERING IDEAS AND SOLUTIONS (CLOSED)						
3. OFFERING IDEAS AND SOLUTIONS (OPEN)						
4. MAKING VALUE JUDGEMENTS						
5. REFERRING TO TASK SUPERVISION MATTER						
6. REFERRING TO ROUTINE MATTER						
TEACHER STATEMENTS						
1. OF FACTS						
2. OF IDEAS, PROBLEMS AND EXPLANATIONS						
3. OF VALUES						
4. WHICH TELL CHILD WHAT TO DO						
5. WHICH PRAISE WORK OR EFFORT						
6. WHICH PROVIDE NEUTRAL/CRITICAL						
FEEDBACK ON WORK/EFFORT						
7. WHICH PROVIDE INFORMATION, DIRECTIONS						
8. WHICH PROVIDE FEEDBACK (POSITIVE OR NEUTRAL)						
9. OF CRITICAL CONTROL						
10. OF SMALL TALK						
SILENCE						

(left margin labels: TASK. / TASK PERVISION. / OUTINE / ASK / SK ER-SION / INE)

	(b)(i) Pupils work individually										
	(ii) Pupils work in groups										
	(a)(i) Designed fully by T.										
	(ii) Discussed by T. - few questions										
	(iii) Some discussion and? - few hints										
	(iv) Pupils work as they please										
	(b)(i) Pupils work individually										
	(ii) Pupils in groups										
	(a)(i) Designed fully by T.										
	(ii) Teacher discussion - few questions										
	(iii) Discussion and questions - a few hints										
	(iv) Pupils work as they please										
	(b)(i) Pupils work individually										
	(ii) Pupils in groups										
	(i) Pupils individually										
	(ii) Pupils in groups										

GENERAL SUMMARY OF CLASSROOM ACTIVITIES

OUTLINE

TEACHER TALK

(a) Teacher tells - pupil listens
  (i) whole class
  (ii) group
  (iii) Individual pupil

(b) T. talks - occasional questions
  (i) whole class
  (ii) group
  (iii) Individual pupil

(c) T. leads discussion
  (i) whole class
  (ii) group
  (iii) Individual pupil

(d) Pupils initiate discussion and mostly contribute. T. tells little
  (i) whole class
  (ii) group
  (iii) Individual pupil

(e) T. talks in response to question/statement of pupil
  (i) whole class
  (ii) group
  (iii) Individual pupil

DISCUSSION

(a) Small group of pupils
  (i) work activity
  (ii) non-work activity

(b) All/most of class
  (i) work activity
  (ii) non-work activity

BETWEEN PUPILS - TEACHER UNINVOLVED

TEACHER GIVES OUT INSTRUCTIONS

TEACHER NOT INTERACTING

TEACHER DRAW / WRITE

PUPILS DRAW/WRITE
(i) Designed fully by T. Pupils follow instructions
(ii) T. discussion - recall? only a few hints given
(iii) Pupils work as they please

A)   A set of questions based on sheet 3:7 in Cities and People.   The pupils

had been given the sheet, on traffic problems in Paris and Tokyo, to read.

The problems were described in the sheet and the attempted solutions of the

city authorities were outlined .

1.   What problems are created by the intensity of car movement?

2.   Why are things so much worse in Paris than in London?

3.   Why is the parking of vehicles chaotic?

4.   What have the authorities done about parking?

5.   Would parking metres solve the problem?

6.   What other measures are suggested?

B)   A set of questions from Diplow based on traffic in Sheffield.   The pupils

have a map for reference.   Certain features of the map have already been

discussed orally, but the questions are quite new.

1.   Describe and attempt to explain the distribution of car parking areas
        in the city .

2.   What affect will the closure of the Moor have on traffic in that area?

3.   It is proposed to build a large shopping precinct in the area bounded
        by Commercial Street and Sheaf Street.   What effects might that
        have on traffic flow in the area?

4.   What do you think is the purpose of Arundel Gate?; and what traffic
        problems does the presence of Arundel Gate create for motorists and
        pedestrians?

1. SHEFFIELD PARKS AND THEIR AMENITIES

1. Put the above title in your folder

2. Look at the resource sheet entitled SHEFFIELD PARKS AND THEIR RELATIONSHIP TO THE MAJOR RIVERS, then answer the following questions

   a) Draw the map from the sheet

   b) How many parks lie <u>along</u> or <u>adjacent</u> to the following river valleys

      SHEAF   LOXLEY   RIVELIN   DON

      MEERSBROOK   PORTER

   c) What other leisure attraction lies along the river SHEAF? (see map)

3. Look at the resource sheet entitled SHEFFIELD PARKS AND THEIR AMENITIES.

   a) Complete the TOTALS COLUMNS horizontally and vertically

      eg. Abbeyfield 4 amenities
          Basketball 1 Park

   b) Rank the parks in order of best amenities

   c) Rank the TOP TEN amenities
      Explain the popularity of the TOP FIVE amenities (Remember that a person's AGE affects the amount of leisure time available, and the type of activity possible).

   d) Why do you think that the parks classed as "specialist parks" are different from the other parks?

   e) What facts <u>other than amenities</u> affect the extent to which the public uses a park ?

2.   SHOPPING IN RUNCORN NEW TOWN

Read Sheet 3:5 about Runcorn New Town, then answer these questions:-

1.   Explain what a NEW TOWN is and why they were built .

2.   Where is Runcorn?   When and why was Runcorn established as a New Town?

3.   Look at the map of the roads and built-up area in Runcorn.

       Draw a diagram to show the EXPRESS way and the BUSWAY only (use two
           different colours) then mark shopping city .

4.   Why do you think this position was chosen to build shopping city?

5.   What is a BUSWAY? Why do you think busways were developed in Runcorn?

6.   Describe the main features of Shopping City.

7.   List (a) the advantages (b) the disadvantages of Shopping City.

8.   Shopping City is the main shopping centre for the whole of Runcorn.   What
           kinds of shops would you expect to find there?

9.   Name one of the local shopping centres in Runcorn, and list the sorts of
           shops you would expect to find at this centre.

10.   Explain why there is a difference between the shops in Shopping City and
           those in the local centre.

Interviews with the teachers, along with the observations,
schedules and informal classroom observation notes, provided
the main part of the data used in the research.   The inter-
views, which were semi-structured, were held throughout the
year and each lasted approximately thirty minutes.   The
teachers were all interviewed between four and six times
according to the amount of time which they had available and
according to the brevity of their responses, and in no case
had they seen the questions in advance.   This last fact
resulted in spontaneous conversations, the precise nature of
which were determined as much by the train of the teachers'
thoughts as by the previously prepared broad outline.   In
most cases, the key questions were asked in at least two
different interviews so that a balanced view could be obtained
of the teacher's position.

The interviews were tape-recorded and later transcribed by
hand to give the fullest record possible.   The transcriptions
averaged about ten pages in length and were not presented to
the teachers for verification afterwards.   Only on one occasion,
with Mr Parry, did this simple pattern break down.   Then, the
tape recorder did not work properly, and a summary, which was
subsequently checked by Mr Parry for accuracy and completeness,
was made from memory.

Once the transcriptions were made they were summarised to
about twenty per cent of their original length.   This process
was repeated so that each teacher's account was reduced to two
pages.   These two pages, together with the observation notes,
formed the basis of the analysis in Chapter 5.   Accordingly,
there was little opportunity - too little perhaps - to give
direct quotations from the teachers; and in any case, given
the sometimes hesitant responses of the teachers, resulting
from the fact that they had not seen the questions beforehand,
this presented certain difficulties.