

THE NATURE AND DEVELOPMENT OF
GEOGRAPHY TEACHING IN SECONDARY
SCHOOLS IN SCOTLAND

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SUMMARY

This study is concerned with the nature and development of geography teaching in secondary schools in Scotland. The changes in the structural organization of the subject that have occurred since the first public examinations in 1888 were analyzed from a study of the annual examination papers, official circulars and memoranda, and annual reports of the Scottish Education Department. A questionnaire was distributed to geography teachers in all secondary schools seeking information about their qualifications, professional activities and interests, and their views on the values of geography teaching, of teaching aids, field work, and textbooks. In addition, information was sought on the organization of content in school programmes, the frequency of use of aids and of field trips, and the titles of textbooks in use. The response to the questionnaire was 79.4 percent.

Changes in the nature of geography teaching in Scotland have been characterized by periods of activity interspersed by relatively long periods of quiescence. From about 1908 for about one decade major changes occurred; further changes occurred in the 1940's when geography became an independent subject in school programmes, and recently in the 1960's.

Influences affecting the structure of the subject can be identified as the professional educator, both academic and philosophical, contemporary social values and the pressure of traditional practices.

Except for Junior schools, the nature of the examinations has a marked influence on all aspects of work. This can be noted in the continental arrangement and regional description in programmes of study, the preferences for atlases and wall maps rather than photographic aids, the small amount of field work attempted, and the choice of textbooks. Teachers see little opportunity in school programmes to develop any teaching along the lines of their own academic specialization. There is little experiment taking place in geography classrooms.

Teachers view geography as a study of the relationships between the physical and human environments, yet when asked to state a preference they would choose to emphasize human geography. Overwhelmingly the opinion was that the main purpose of geography in schools is a social one.

An analysis of the principal textbooks in use revealed that almost all have a continental framework with a compartmentalized arrangement of content. The quality of the materials in the texts is indifferent and there is a general use of pictures for illustration only and of maps

for location only. There is little sequential arrangement of skills in textbook series and there is a paucity of varied textbook material on Scotland. A universal need was expressed for both quantity and quality of illustrations and maps in textbooks and for accuracy, conciseness and style in content matter.

Whilst the recent introduction of a Sixth Year Studies programme with its strong emphasis on analysis and methodology may eventually influence the lower levels of teaching, there is little evidence except in large-scale map interpretation activities, that the methodology of geography is being demonstrated to pupils in secondary schools.

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INTRODUCTION

Geography has had an independent place in secondary school programmes in Scotland since the end of the Second World War. Prior to that it was taught and examined first under English, and later under Science. Since 1888, when geography was first publicly examined under English, many changes have occurred in the structure of the subject, and numerous official reports, circulars and memoranda have appeared concerning syllabus changes, the quality and the standards of the annual examination papers, suggestions on teaching procedures and the organization of school programmes.

No survey of the nature and development of secondary school geography teaching in Scotland has been made. There is no information available as to why content is arranged as it is in school programmes, for what reasons any particular geographical approach is adopted, the values and the use of teaching aids, the titles of textbooks in use, field work undertaken, or teachers' views on the benefits of geography teaching. It was considered that such a survey would be opportune at the present time in view of a number of

developments in recent years.

With the institution of the Scottish Certificate of Education in 1961-62 new geography syllabuses were outlined for both Ordinary and Higher levels.¹ Under the new arrangements for the examination the Ordinary Grade proved more attractive to Fourth Year pupils than did the Lower Grade of the Scottish Leaving Certificate Examination, and much larger numbers of candidates now sit the examination.² A programme in geography at the Sixth-Year level, the Certificate of Sixth-Year Studies, is under implementation and three levels of achievement in the subject, instead of two, are now possible.

The 1960's also saw the appearance of several important publications concerned with the nature and practice of geography teaching, each of which in its own manner crystalized emerging viewpoints. One element is common to all these publications - a concern, expressed or implied in various ways, with the methodology of the subject in teaching.

Geography and Education appeared in 1960 and was described subsequently as "... a landmark in the development of

¹ Scottish Education Department, Scottish Certificate of Education Examination Arrangements, 1962, Edinburgh: H. M. S. O., 1961, pp. 45-48.

² Idem, Certificate Courses in Scottish Secondary Schools: Recent Developments, Edinburgh: H. M. S. O., 1965, pp. 1-2.

of the subject in schools in this country."^{3,4} Geography and Education is a philosophical discussion on the development of geography, the nature of geography, and geography at various levels of teaching in secondary schools. An empirical rather than a deductive method in geographical studies in schools is advocated.⁵ The same year Briault and Shave in the introductory remarks to their text Geography In and Out of School, stated that:

"... the geography taught in school must be the 'geography of geographers', based on the facts and using the principles and techniques of a discipline ..."⁶

In 1962 the Geographical Association published Sample Studies in which was outlined the methodology of the sample study approach, and five examples of studies were provided along with suggestions as to how to use them.⁷ The concept of the sample study as a field study in the classroom, and the process of enquiry inherent in it is the central theme in the statement.⁸ The philosophy and method of the sample

³ Ministry of Education, Geography and Education, Pamphlet No. 39, London: H. M. S. O., 1960.

⁴ Long, M., (ed.), Handbook for Geography Teachers, Institute of Education, Univ. of London, London: Methuen, rev. ed., 1964, p. 2.

⁵ Geography and Education, *op. cit.*, p. 31.

⁶ Briault, E. W. H., and D. W. Shave, Geography In and Out of School, London: Harrop, 1960, p. 11-12.

⁷ Geographical Association, Sample Studies, Sheffield: Geog. Assoc., 1962.

⁸ Ibid., pp. 5-7.

study approach had previously been discussed by Hickman in 1951, and by Roberson and Long in 1956.^{9,10}

In 1963, in the chapter on Geography in the Secondary School Examinations Council's publication, The Certificate of Secondary Education: Some Suggestions for Teachers and Examiners, the aims, content and methods of teaching the subject as they are pertinent to examinations were discussed.¹¹ Training in the use of a diversity of source materials and observation of the natural and human landscape in order that a search for explanations will be sought after are listed as two outcomes of geography teaching.¹² A later publication from the Schools Council presented the result of trial examinations in geography and a discussion and appraisal of the procedures.¹³ Abilities to interpret maps, photographs and statistical data, and to write imaginative

⁹ Hickman, Gladys M., "The Sample Study - A Method and its Limitations", Journal of Geography, XLIX, 1950, pp. 151-159.

¹⁰ Roberson, B. S., and M. Long, "Sample Studies: The Development of a Method", Geography, XLI, Nov. 1956, pp. 248-259.

¹¹ Secondary School Examinations Council, The Certificate of Secondary Education: Some Suggestions for Teachers and Examiners, Examination Bulletin 1, London: H. M. S. O., 1963.

¹² Ibid., p. 42.

¹³ Schools Council, The Certificate of Secondary Education: Trial Examinations - Geography, Examinations Bulletin 14, London: H. M. S. O., 1966.

prose, were considered to be important examinable aspects of geography teaching.¹⁴

The long established Handbook for Geography Teachers prepared by numerous specialists on geography teaching was revised and published in 1964.¹⁵ In the opening chapter, in a discussion on post-war changes in the subject, the emphasis on scientific analysis in geography teaching was referred to:

"The more scientific attitude, the increase in field work, and the more readily available supply of pictures and other geographical raw material have caused the change in the classroom approach to reality. Where in the past descriptive material was used to build up a vivid impression of a place, today it is used for a more scientific analysis. The facts are brought into the classroom as laboratory specimens rather than as the artist's colours."¹⁶

At the same time a review of research in geography teaching in Britain was made and one conclusion reached was that, "... method books elaborate as classroom principle much that researchers have been trying to evaluate more closely."¹⁷ Three of the publications mentioned above are listed as examples of the substantially similar stress of

¹⁴ Ibid., p. 3.

¹⁵ Handbook for Geography Teachers, op. cit., was first published in 1932.

¹⁶ Ibid., p. 3.

¹⁷ Long, M., "The Teaching of Geography: A Review of Recent British Research and Investigations", Geography XLIX, July 1964, p. 203.

of the researchers and authors on maps, pictures, field work and reality.¹⁸

The report of the Commission on the Teaching of Geography of the International Geographical Union was published in 1965.¹⁹ It contained practical suggestions on ways and means of improving teaching methods with a whole range of materials. One of the four basic principles listed at the conclusion of the chapter on the Nature and Spirit of Geography Teaching states:

"Geography must be regarded in teaching at elementary and middle level in just the same way as at higher education or research level, that is to say, a science that is both contemporary and practical - an applied science."²⁰

This continuing theme of methodology in teaching the subject could also be seen in Long and Roberson's Teaching Geography.²¹ This text incorporates a discussion on recent research findings, the techniques of analysis and problem solving, field teaching and the use of geographical materials. In Regional Geography: Theory and Practice, Minshull brought together in a thoroughly argued and documented discussion

18 Geography and Education, Geography In and Out of School, and The Certificate of Secondary Education: Some Suggestions for Teachers and Examiners are the three publications mentioned by Long, op. cit., p. 203.

19 UNESCO, Source Book for Geography Teaching, London: Longmans, Green, 1965.

20 Ibid., p. 35.

21 Long, M., and B. S. Roberson, Teaching Geography, Toronto: Bellhaven House, 1967.

the theoretical viewpoints of regional geography and the practical implementation of the method in classroom teaching.²² Finally, the importance of teaching geographic skills with the use of source materials, of local area and field work, and the use of sample studies are discussed, along with other matters, in a report on the implications for geography teaching of the Newsom Report.²³

All of these views represent a developing position concerning curriculum decision and strategies of teaching the subject. They illustrate, although in no way were they directly influenced by the position first outlined in 1960 by Jerome Bruner.²⁴ Bruner believes that pupils should be introduced to a discipline rather than to subject matter. He was largely responsible for introducing the idea of teaching for structure into educational discourse. By teaching for structure Bruner means teaching towards an understanding of the fundamental principles or generalizations of a discipline together with the particular process of enquiry employed in the subject:

22 Minshull, Roger, Regional Geography: Theory and Practice, London: Hutchinson, 1967.

23 Advisory Committee in Geography of the University of Nottingham Institute of Education, "Implications for Geography Teaching in the Newsom Report", Geography, 52, 1967, pp. 186-192.

24 Bruner, Jerome, The Process of Education, New York: Vintage Books, 1963.

"Mastery of the fundamental ideas of a field involves not only the grasping of general principles, but also the developing of an attitude toward learning and inquiry ... toward the possibility of solving problems on one's own."²⁵

Bruner identified four advantages of teaching the fundamental structure of a subject: understanding fundamentals makes a subject more comprehensible; unless detail is placed into a structured pattern it is rapidly forgotten; understanding fundamental principles and ideas appears to be the main road to adequate transfer of training; and, by constantly re-examining material taught in elementary and secondary schools for its fundamental character, one is able to narrow the gap between "advanced" knowledge and "elementary" knowledge.²⁶

Bruner's views were taken up by many others in North America. Schwab, for instance, discussed the "substance and syntax" of a discipline.²⁷ Many subject specialists looked closely at their respective disciplines with a particular concern for developing teaching procedures that would demonstrate fundamental structures. Geographers have discussed at length the nature of the discipline and how its internal

²⁵ Ibid., p. 20.

²⁶ Ibid., p. 23-26.

²⁷ Schwab, J. J., "The Concept of the Structure of a Discipline", The Educational Record, XLIII, July 1962, pp. 197-205.

structure can be ordered and presented in schools and colleges.²⁸

Purpose and Scope of the Enquiry

The purpose of the enquiry is, in the light of the recent developments discussed, to ascertain the nature and development of geography teaching in secondary schools in Scotland. All types of secondary schools will be considered.

It is anticipated that the results of the enquiry will be helpful to curriculum planners, research workers concerned with the extent to which various organizations of content and

²⁸ Some notable contributions to the discussion are: Pattison, W., "The Four Traditions of Geography", Journal of Geography, LXII, May, 1964, pp. 211-416; Thomas, Edwin N., "Some Comments about a Structure of Geography with a particular reference to Geographic Facts, Spatial Distribution, and Areal Association", in Clyde F. Kohn (ed.), Selected Classroom Experiences: High School Geography Project, Normal, Illinois; Nat. Coun. for Geog. Educ., 1964, pp. 44-60; Picker, Robert D., "Geography and the Learning Process: A Methodological Review", Journal of Geography, LXIV, Nov., 1965, pp. 340-345; Greco, Peter, The Structure of Geography, Social Science Education Consortium, 102, Lafayette: Purdue Univ., 1966; McNee, Robert, "An Approach to Understanding the current Structure of Geography", in Irving Morrisett (ed.), Concepts and Structure in the New Social Science Curricula, Lafayette: Social Science Education Consortium, 1966, pp. 57-63; Nostrand, Richard L., "A Model for Geography", Journal of Geography, LXVII, Jan., 1968, pp. 13-17; and, Johnson, Brian A., "The Use of Theoretical Models in Geography Teaching", Journal of Geography, LXVII, April, 1968, pp.237-240.

types of geographical approaches are used in schools, and to geography teachers interested in the opinions and problems of other teachers. Being the first survey of its kind on geography teaching in Scotland, it will provide a picture of the present situation in schools and any future surveys could refer to it as a basis for comparison. In this regard, the various categories of responses established in the analysis of replies to a questionnaire, used to gather teachers' opinions and details of their teaching, could serve as a framework for similar future research.

In order to assess the character of geography teaching, an analysis of its major components is necessary. An analysis of past changes in the organizational structure of the subject will assist in an understanding of current trends. The major components of the subject are considered to be: all aspects concerned with the organization of subject matter in programmes of study, the use of aids and the nature and frequency of field work, and the arrangement of content and the character of materials in textbooks in use. The reasons why teachers arrange content in programmes, the values they attach to, and the problems involved in, the use of aids and field work, and the merits of the textbooks in use are also areas of evidence useful in assessing the influences on teachers when they make decisions on curriculum organization. In addition, information concerning the academic and professional background and activities of teachers, and the

opportunities afforded in school programmes for the use of their academic qualifications provides evidence for an evaluation of the nature of the articulation between the universities and secondary schools. As Bryan pointed out there has been a tremendous surge in the subject in universities in recent years, and what is being taught in secondary schools has not kept pace with it.²⁹ Bruner too, sees this as being one of the central issues in teaching for structure.³⁰

Methods Adopted in the Enquiry

The trends and changes in the structural organization of geography were evaluated from an examination of the annual examination papers, and inspectors' and examiners' reports since 1888. These documents and the various circulars, memoranda and examination syllabuses issued by the Scottish Education Department and the Scottish Certificate of Education Examination Board over the same period, provided the primary source of evidence.

A questionnaire was used to gather information about school programmes, use of aids, field work, textbooks in use, and teachers' qualifications and opinions on aspects of their

²⁹ Bryan, P., "Geography in Schools", in Richard J. Chorley and Peter Haggett (eds.), Frontiers in Geographical Teaching, London: Methuen, 1965, p. 337.

³⁰ Bruners, op. cit., p. 26.

work. An open form of questionnaire was used as it provides opportunity for respondents to reveal their motives or attitudes, and to specify any provisional conditions or to qualify their remarks. The questionnaire was drawn up in consultation with Professor J. Wreford Watson, Head of Department, Department of Geography, University of Edinburgh; Dr. J. Gilbert, H. M. Inspector of Schools, Scottish Education Department; Dr. D. A. Walker, Director, The Scottish Council for Research in Education, and staff members of the Geography Department, Moray House College of Education. A pilot survey of fourteen schools in the Edinburgh area was conducted and proved to be valuable as a number of questions were re-worded and the format of the questionnaire was amended.

In its final form the questionnaire was submitted for approval to the Scottish Council for Research in Education and to the Association of Directors of Education, Scotland. Official recognition and approval for distribution was granted by both institutions. The questionnaire is shown in Appendix II.

As no definition could be found as to what constituted a geography teacher, a description had to be decided upon for the purposes of the survey. After consultation with Professor J. Wreford Watson, Dr. D. A. Walker, Dr. J. Gilbert and

correspondence with Mr. R. McNay, Convener of the Geography Committee, Education Institute of Scotland, it was decided that a geography teacher would be defined as a teacher who, irrespective of his qualifications, taught the subject for more than fifty percent of his school time.

Therefore, it was not possible, except by communication to each school, to determine the number of geography teachers in Scotland. Accordingly, every secondary school in Scotland was circulated to obtain the number of teachers qualified to complete both parts of the questionnaire (see Appendix I). Of the 718 secondary schools of all types circulated, 596 (83.0%) replied to the request. A reminder, sent five weeks later, drew a further 79 replies (11.0%), a total of 675 (94.0%). Of these schools, 434 (64.3%) indicated that one or more teachers on their staff qualified as geography teachers, as defined, a total of 535 teachers.

Questionnaires were sent to the teachers concerned and 362 replies were received (67.7%). A reminder, five weeks after the initial distribution, resulted in a further 63 replies (11.8%) for a total of 425 (79.4%). This very good response is attributed to the official approval given by the Scottish Council for Research in Education and the Association of Directors of Education, Scotland.

Analysis of the Questionnaire

With an open form of question a coding frame was necessary to organize the responses for evaluation. With each open question numerous answers were examined and as patterns of responses began to emerge a code was established. The code was finally adopted when, on further examination of answers, they were found to fall reasonably into the various categories of the code.

The problem of consistency in coding a very large number of open answers, over the period of several days necessary for the task, was met by the following procedure. The questionnaires were arranged in bundles of fifty. The codes for the first ten of the answers to be coded in each bundle were recorded on a separate sheet of paper. The remaining forty answers were recorded directly on the questionnaire. Before proceeding to the next fifty, the first ten answers were again coded, this time on the questionnaires, and then checked against the original coding. Where discrepancies were found the forty answers were re-checked. This procedure was found to be satisfactory because the knowledge of the periodic re-check was a constant reminder of the need for consistency, and the time lapse involved in coding forty answers was sufficient to give a sense of realism when the ten answers were re-checked.

Judgement had to be exercised in a number of instances in coding replies to open questions. Many replies were straightforward, falling into one or more categories. For example, in the question, "What do you consider to be the educational benefits of geography teaching?" answers which stated, "Appreciation of the world in which we live," could be readily classified in the category, World awareness or appreciation (see TABLE I, p.106). On the other hand, a statement such as:

"Pupils learn some of the basic facts about the world in which they live, especially those facts concerned with the environment and its relationship to man's activities; thus one hopes the foundation is being laid for a more appreciative and tolerant attitude to people in other parts of the world."

was classified into three categories: World awareness or appreciation, Societal values or citizenship, and Subject substance - the latter being included because of the reference to the environmental relationship to man's activities. In other instances, two and sometimes three separate statements were listed but only one category was coded, for example, in answer to the question above, one respondent replied:

- "1. Geography gives the pupil an awareness of the world in its many aspects.
2. Geography gives meaning to present-day problems of food and health.
3. Geography serves admirably to increase the understanding of most 'current events'."

Here, only one category was coded, World awareness or appreciation, yet the respondent probably had in mind three variations on the same theme. To ensure that all varieties of opinion were covered, a sub-analysis was undertaken of most of the categories shown in the tables.

Once the answers were classified each category coded was referred to as a "response". This term is used throughout the report and the percentage responses in answer to the various questions is shown in each table, and is used as a basis for the interpretation of the replies.

The information provided in the replies afforded an opportunity for a number of analyses. All the responses to each question were analyzed according to the type of responding school. The schools were divided into three types for the purpose: those offering a three-year programme in geography, referred to as Junior schools; those offering a four-year programme, referred to as Four-Year schools, and, those offering five or six year programmes, referred to as Five-Six Year schools.

The responses were also analyzed according to the university and the college of education attended, and the year of graduation of the respondent. In addition, the responses to the questions concerned with field work, question 12 in Pt. I and question 7 in Pt. II of the questionnaire, (Appendix II), were analyzed according to the

size of the urban area in which the respondent's school is located. The categories of urban size are shown in Appendix III.

The purpose of these analyses was to identify any possibly significant differences within each group. Where differences occurred the results are shown in table form and discussed. As will be seen in the report, significant differences principally occurred between types of school. Some differences of a minor nature also appeared according to the year of teacher graduation and according to the urban location of schools. No differences of any significance occurred in the other analyses.

Arrangement of the Report

Past changes and trends in the structural organization of school geography are discussed in Chapter I. Chapters II to VII are concerned with the interpretation of the information obtained from the questionnaire. The educational benefits of geography teaching as stated by respondents, and, the nature of geographical approaches and the views of teachers on the nature of geography are discussed in Chapters II and III respectively. The programmes of studies, organizations of subject matter, the sample study and thematic approaches, the use of the natural region concept and the study of the Southern Continents are outlined in Chapter IV.

Chapters V and VI are concerned, respectively, with teaching aids and their use, and, field work, its frequency and problems. The academic and professional background of responding teachers are discussed in Chapter VII along with their membership of geographical societies, attendance at conferences, teaching opportunities, classroom experiments, other subjects taught and their teaching preferences.

Chapter VIII sets out the principal textbooks in use in schools and also contains an analysis of the organization of the content matter in the books and an appraisal of the geographic quality of the maps, pictures and other graphic materials included. The map reading textbooks in use and the geography textbooks on Scotland are separately discussed. An analysis of the merits of an ideal geography textbook and the attributes of the textbooks in use in schools, as reported in the questionnaire, are also included in this chapter.

Finally, it is recognized that teachers in the course of their work arrange and present the substance of geography according to their own personal viewpoint, and introduce materials and concepts not covered in this study. Nevertheless, it is maintained that the analysis of their responses to the questionnaire, as well as the analysis of the textbooks in use, and the examination papers and official

publications, provides a useful indication of the way geography is presented to secondary school pupils and the direction in which school geography is going.

CHAPTER ONE

GEOGRAPHY TEACHING IN SCOTLAND AS SHOWN
IN PUBLIC EXAMINATIONS

THE EARLY YEARS

Reporting on an enquiry into geography teaching in Scotland, J. Scott Keltie in 1885, whilst finding "... the nominal position of the subject in elementary schools was, on the whole, satisfactory ..." could find little commendatory about the teaching of the subject in secondary schools.¹ Having visited "Middle-Class" schools in Edinburgh, Glasgow, Aberdeen and elsewhere he found in some a fairly satisfactory position, but overall he observed that:

"The higher one goes among our schools, the less do we find geography attended to; and in those great schools which educate boys for the Universities or for the professions, the subject, as a whole, has virtually no place at all. True, that in such schools as tolerate modern or science subjects, physical geography forms one of these. But this physical geography is generally what is known as Physiography, and indeed is largely Geology. What is known as Political Geography, when it is taught at all, is little more than a long string of names and figures; and it is no wonder, then, that masters and pupils are glad to get rid of it altogether - and this is what too often happens."²

¹ Keltie, J. Scott, "Geographical Education", Scottish Geographical Magazine, 1, Oct. 1885, p. 497.

² Ibid., pp. 499-500.

Keltie reported on the almost universal complaint of headmasters of the want of satisfactory textbooks and other appliances and concluded that the two great weaknesses in geography teaching are want of knowledge in the teachers and want of organization in the programmes and methods.³

What Keltie found in Scotland was amply substantiated in the annual reports of the Scottish Education Department subsequent to the commencement of public examinations in 1888. The examination questions also reflected the uncertainty and infancy of the subject and the very minor role it played in school curricula for at least twenty years following the first examinations.

Geography along with history, at both Lower and Higher Grades, was included in the English examination as a separate section. In the first report on the Leaving Certificate Examination and the inspection of "High-Class" schools, Henry Craik, of the Scottish Education Department, noted that the results in history and geography varied widely and that, "... the answers do not appear to show that these subjects enter very largely into the English teaching in most schools."⁴

³ Ibid., p. 504.

⁴ Secondary Education (Scotland), Report for the Year 1892, London: H. M. S. O., 1892, p. 4.

Craik reported on the examinations until 1904 and at no time did he comment favourably on the candidates' efforts in answering questions, his strictures however, being mainly directed at teachers and their lack of systematic instruction. In 1895, for instance, he found the geography answers to be generally faulty, with rarely any evidence that the subject was being taught in any methodical way, "... or presented to the pupils in such a manner as to make a vivid impression upon them."⁵ The following year he commented along similar lines and added, for both history and geography, that for the pupils, "... it is hard for them to put into writing the results of oral teaching."⁶ In both years, 1899 and 1900, Craik decried the uniformity of answers in the papers and he followed this further in 1902 by castigating "memorizing" as having little educational value, having noted in the Lower Grade history and geography papers the "... remarkable identity of phraseology that characterized whole sets of papers from particular schools ..."⁷

Craik's final report in 1904 pointed once more to the lack of systematic instruction in the many schools presenting

⁵ Idem, Report for the Year 1895, London: H. M. S. O., 1895, p. 10.

⁶ Idem, Report for the Year 1896, London: H. M. S. O., 1896, p. 9.

⁷ Idem, Report for the Year 1902, London: H. M. S. O., 1902, p. 15.

candidates for the Lower Grade paper, yet he considered it "... most undesirable to prescribe special periods or countries for study each year ..." but, he added, "... it may be necessary for inspectors to scrutinize the curricula more narrowly."⁸

The Higher Grade papers were also criticized for the similarity of answers and, commenting on the Chief Examiner's report for the year, Craik noted the overwhelming evidence that teachers were drilling pupils minutely in previous examination papers, and gave as one example the answers to a question in the geography section.⁹

The questions in the examination papers provided ample encouragement for the drilling and memorizing that was so much criticized in the annual reports. They also illustrated the lack of a structured organization and methodology in the subject during this early period.

There was a very heavy emphasis on the recall of factual knowledge in both Grades of the examinations. Questions were so worded as to elicit from candidates names of, or details concerning relief features, notably mountain systems, rivers and their courses; industrial manufactures; trade routes, and the location of resources, settlements and

⁸ Idem, Report for the Year 1904, London: H. M. S. O., 1904, p. 19.

⁹ Ibid., p. 20.

colonial possessions. Typically, pupils were directed to state the commerce or products of certain places, for example:

"State the chief elements of the commercial importance of Manchester, Glasgow, Sheffield, Birmingham, Leeds, Dundee."¹⁰

and,

"Name the principal centres of deep-sea fishery in Scotland, and the places in Scotland to which you would send for cotton goods, iron, whisky, coal, steamers, tweed, wheat."¹¹

Terms and definitions associated with physical and mathematical geography were asked for with vague, catch-all directives:

"State what you know of the following:-- Trade Wind, sirocco, monsoon, gulf stream, equinox, summer solstice, glacier, lagoon, cyclone, longitude."¹²

Sketch maps, a convenient medium for presenting factual information were consistently demanded in at least one question in each paper. Details such as, political boundaries, relief features, settlements and communication routes were popular features to be drawn in.

¹⁰ Scotch Education Department, Circulars and Papers: Examination for Leaving Certificates 1889, London: H. M. S. O., 1889, p. 11.

¹¹ Idem, Circulars and Papers: Examination for Leaving Certificates 1892, London: H. M. S. O., 1892, p. 16.

¹² Secondary Education (Scotland), Report for the Year 1897, London: H. M. S. O., 1897, p. 40.

In general, the content asked of pupils reflected and directed attention to the commercial and industrial prominence of Great Britain in the late nineteenth century. The Imperialistic mood of the nation was also apparent:

"What causes make the Atlantic Ocean more important to the civilized world than the Pacific?"¹³

However, as far as any systematic organization of knowledge or accruing body of geographic concepts was concerned there were only isolated instances. In 1899, for the first time since the commencement of departmental examinations, a simple arrangement for writing a descriptive account of a place was outlined:

"Write a short account of Australia, or of China, under the heads of (a) rivers, (b) climate, (c) vegetation, (d) minerals, (e) means of communication."¹⁴

but the idea was not followed up until much later.

More in evidence, although sporadic in its occurrence, was the attention given to the influence of the physical (non-human) environment on the actions of man:

¹³ Idem, Report for the Year 1894, London: H. M. S. O., 1894, p. 19.

¹⁴ Idem, Report for the Year 1899, London: H. M. S. O., 1899, p. 43.

"What are the physical and geographical conditions that determine the temperature, rainfall, general climate, and productiveness of any place? Give examples."¹⁵

Such a philosophy was also occasionally shown in questions on historical geography:

"Name, and indicate the position of the chief mountain ranges in Scotland and Wales. What influence has the physical geography of these two countries had upon their history?"¹⁶

Geography was however, a minor subject, serving somewhat as an appendage to the English curriculum and undoubtedly teachers saw it as such. Of the ten questions to be answered in either Grade of the examination each year only two were to be selected from the geography section. Furthermore, although the Higher Grade questions sometimes appeared to be more demanding intellectually, or in length of response, than the Lower Grade questions, there were no real differences demanded between the two in skills or concepts. In the years 1897, 1898 and 1899 there were only slight differences of wording in the questions and from 1903 to 1906 the papers for each Grade were identical.

¹⁵ Scotch Education Department, Circulars and Papers: Examination for Leaving Certificates 1892, op. cit., p. 25.

¹⁶ Secondary Education (Scotland), Report for the Year 1897, op. cit., p. 39.

THE FORMATIVE YEARS:

GEOGRAPHY TEACHING FROM ABOUT 1908 TO THE EARLY 1920's

The 1908 examination paper in Higher Grade geography represented a distinct break from the previous pattern of examination papers and included innovations that had implications for the organizational structure of the subject in secondary school teaching. In the following years many of the developments in the examinations were to become standard elements in the structure which finally emerged, and some of these elements can be discerned to the present day. Some developments appeared as trends reflecting contemporary social and pedagogic philosophies. The formative period spanned the years from about 1908 to the early 1920's, and these were undoubtedly the most important years in the emergence of an operative structure for teaching the subject when the history of geography teaching in Scotland is considered.

Prior to 1908 there had been unmistakable signs that change was coming. In 1905 the Education Department's annual report mentioned, for the first time, the availability of Ordnance Survey maps at minimal cost and commented on the powerful stimulus they might give to youthful minds.¹⁷ Two

¹⁷ Idem, Report for the Year 1905, London: H. M. S. O., 1905, p. 10.

years later the provision of these maps was, according to the report for that year, proving to be of the utmost benefit.¹⁸ The urgent need for specially qualified geography teachers was mentioned in 1906 and two years later in a discussion on the Higher Grade examination the annual report commented:

"Teachers who desire to keep in the forefront cannot rest content with the Geography they acquired at school or at college."¹⁹

Pointed comments appeared from time to time concerning the organization of content in the subject. There was particularly critical comment on the practice of teaching only facts:

"Mere catalogues of rivers and mountains and towns will remain meaningless lists so long as they are devoid of living association."²⁰

In the same report the

"... increasing interest in the scientific teaching of the subject, and a growing disposition to regard it in its true light as simply a form of nature study."

was also noted.²¹ Whilst the latter statement is open to question, it is nevertheless indicative of a concern for a focus or point of view for the subject.

¹⁸ Idem, Report for the Year 1907, London: H. M. S. O., 1907, p. 16.

¹⁹ Idem, Report for the Year 1908, London: H. M. S. O., 1908, p. 16.

²⁰ Idem, Report for the Year 1905, op. cit.

²¹ Loc. cit.

Finally, although the annual reports had been continuously critical of standards since the first examinations in 1888, it wasn't until the few years prior to 1908 that any commendatory remarks were made. Significantly, they were associated with comments about the need for qualified teachers of the subject. In 1908 the report noted "... unmistakable signs of an awakening interest in methods..." and mentioned that more specially qualified teachers had become available.²²

The 1908 Higher Grade examination heralded major changes in format and content for both Grades. Geography was now separated within the English paper, although the examination was still titled, English, and a time of one and a half hours allowed for it. For the first time, a compulsory question on an excerpt of a 1:63360 Ordnance Survey map was included. The following year the paper was divided into three sections, and in 1912 the time allotted was extended to two and a half hours, which was not changed again until the 1940's.

In 1910 the Lower Grade examination showed equally drastic changes, a geography section being separated within the English paper, and allotted a time of one and a half hours. A section on mapwork was included, and made

²² Idem, Report for the Year 1908, op. cit., p. 15.

compulsory, and outline sketch maps of national, continental or world scales, were provided for the purpose.

After an initial period of changes both examinations eventually settled on patterns of sectioning and number of questions to be answered. In the Higher Grade, from 1910, only three questions, including the mapwork question, and, in the Lower Grade, from 1913, only three questions plus the mapwork section were required to be answered. These new requirements, with the extra time made available for each paper, placed a greater emphasis than before, particularly in Higher Grade, on the essay answer. The effect of this, along with the innovation of compulsory mapwork sections in the examinations, undoubtedly led to more carefully structured and tighter school programmes, demanding more forethought and expertise than previously on the part of geography teachers.

Significantly, these developments in the examination were followed in 1913 by the first official suggestions on teaching the subject in secondary schools. A Memorandum, in mimeographed form, was drawn up for the guidance of school authorities presenting candidates for Leaving Certificates

in Higher Geography and was directed at post-intermediate courses.²³

The Memorandum revealed a philosophical and pedagogical viewpoint on the subject which in some respects mirrored the ideas expressed in the annual reports and the changed outlook in the examinations. Suggestive rather than prescriptive, it aimed to secure some measure of uniformity in the treatment of the subject as a Higher Grade study. Suggestions centred around timetables, selection of candidates, schemes of work, practical work, general principles and apparatus. In the discussion on practical work and general principles, the first official suggestions on a scheme for the subject were outlined.

In the section on practical work, attention was directed to mapwork, open-air excursions, weather study and surveying.²⁴ All schools, it was considered, should have a copy of the local one-inch map for each pupil, copies of one-inch maps of typical parts of the British Isles, and also have six-inch and half-inch scales and hachured maps available. Map study should not be confined to orographic features only, but include comparisons of distributions of vegetation,

²³ Scottish Education Department, "Suggestions on Post-Intermediate Courses in Geography leading to the Award of a Leaving Certificate," mimeographed, Memo. 230, Nov., 1913. n. p.

²⁴ Ibid., pp. 2-4.

population and commodities. Open-air excursions were considered essential as,

"Direct observation of natural phenomena is the starting-point of the whole science ... [and] ... continued practice in the field is necessary if the study of maps is not to remain merely abstract or unreal."²⁵

For teaching about weather there was a strongly implied theme of moving from the particular to the general, namely from studies of seasonal variations near schools to world climatic conditions.

The concern for studies in the local area was further emphasized in the section on general principles. In a discussion on studies of regions, it was stated that every scheme, "... should provide for a fairly detailed study of the various geographical aspects of the county or district in which the school is situated."²⁶ Regional studies were recommended in a pattern that started with detailed local geography, followed by studies of typical regions other than that exemplified by the home region, a "... pretty full..." study of the United Kingdom, and, for the rest, a selection of regions for the "... Historical or Commercial aspects of Geography."²⁷ This scheme of regional studies is still generally characteristic today. Concern about the method in the study of regions was implicit in the suggestion that:

²⁵ Ibid., p. 3.

²⁶ Ibid., p. 5.

²⁷ Ibid., pp. 5-6.

"Pupils should have practice in extracting first-hand statistical information from reliable publications and in making deductions from them."²⁸

The use of original sources was recommended in studies concerned with the history of geography. Concerning the history of exploration, it was pointedly stated that, "... the true 'atmosphere' of a foreign country is often more accurately obtained from a book of travel than from a text-book."²⁹

The final part of the Memorandum listed useful apparatus for teaching the subject - wall maps, Ordnance Survey and geological maps, admiralty charts, weather-recording and surveying instruments, photographs and lantern slides, statistical abstracts and a small library of travel books.

The suggestions in the Memorandum amply illustrate the degree to which thinking in the subject had progressed. The comments concerning the importance of local studies, use of original sources and literary descriptions and the purposeful selection of facts had been hinted at or implied in annual reports prior to 1913, and were themes repeatedly discussed subsequently in official memoranda. There is little reason to believe, however, that contemporary practice in schools was mirrored in the Memorandum. Rather, it was a series of guide

²⁸ Ibid., p. 6.

²⁹ Loc. cit.

lines designed at up-grading geography teaching in secondary schools. This aspect of official direction also underlay the newly emerged examination format in which the content demanded the perception and teaching of qualified personnel, particularly at the Higher Grade level. Examination questions pointed directly to aspects of the subject that were more consistent with its academic spirit and structure. This was most noticeable in the emergence of questions on regional studies and the analysis of large-scale maps, but was also evident in questions on local geography and the use of statistical data. In this respect the examination became an instrument of change as well as evaluation.

The Emergence of Regional Geography

The word, "region", was first used in a recognizable context in the Higher Grade paper in 1911, but it is possible to discern aspects of the concept of regionalism before then. From the commencement of examinations, political units, drainage basins, or mountain systems were common reference for questioning, but they were convenient only in so far as they delimited an area for the dominant places and product type of answer. In each of the Lower Grade papers for 1906, 1907 and 1908, questions concerned with contrasts between two areas first appeared and certain elements were specified for the purpose. Some notion of the areal entity underlies such

questions. The terms, "grasslands", and, "inter-tropical forest", appeared in questions in the 1908 and 1909 Higher Grade papers respectively. Such areal concepts had not previously been used. Then in 1911 the word, "region", was first used, but the following year a clear reference was made in a question which unmistakably reflected the influence of Herbertson's concept of natural regions:

"In studying the geography of the world it is better to consider the well-marked natural regions which do not change than political divisions which do."^{30,31}

In both 1913 and 1915 questions were framed around the natural region concept and thenceforth the framework was used, along with political and landform units, as a basis for questioning. In the Lower Grade examination, the pattern of development towards the natural region concept was similar to that of the Higher Grade but lagged behind by two or three years.

In questions concerned with area description or analysis, whether the areal unit was based on political, landform or natural regions, the arrangement of content in the answers

³⁰ Herbertson, A. J. "The Major Natural Regions: An Essay in Systematic Geography", Geographical Journal, 25, 1905, pp. 300-312.

³¹ Secondary Education (Scotland), Leaving Certificate Examination: Further Circulars and Examination Papers 1912, London: H. M. S. O., 1912, p. 35.

was increasingly directed into discrete compartments. Specific instances of this had occurred in the earlier years of examinations and the background to the places and products geography was inherent in this development. Questions concerned with the contrasts between two areas, usually directed pupils to examine such factors as configuration, climate, and natural resources, or, questions asking for a geographical description of an area required the answers to be arranged under such headings as structure, distribution of rainfall, vegetation or human occupations. The examples are many, varying in general from year to year only in so far as the word, "structure", was substituted for the words, "configuration", or "scenery", or the word, "vegetation", for "climate". All followed a sequence, in checklist style, from the physical to the cultural elements.

Along with the development towards a compartmentalization of content was the increasing use in questions of the terms, "geographical causes", "geographical characteristics", and "geographical conditions". In the contexts of the questions, the specific meaning of "geographical" was usually elaborated, and there was an implication that "geographical" was equated with physical or natural elements rather than with cultural elements, or with a combination of both. By about 1916 the use of these terms and what they were to mean had

become common in the examination. The Lower Grade paper for that year illustrated the development in a question:

"Give a short geographical description of the county in which your school is situated. Arrange your answer under the headings:- relief, climate, natural vegetation, crops and industries."³²

In this manner the word "geographical" appeared, by association, to be linked with the compartmented content arrangement, and both to be associated with the emergent regional geography.

Environmentalism in Examination Questions

The environmentalistic flavour of some essay questions prior to the turn of the century has been noted.³³ From 1908, many essay questions illustrated characteristics of environmentalism. Although environmentalism pre-dated in the examination questions, the appearance of the natural region concept, the natural region once it emerged as an organizing framework furthered its development, as it was conceptually oriented towards a physical-cultural approach with the physical (natural) environment viewed as an active causal element in the study of human life.

³² Idem, Leaving Certificate Examination: Examination Papers 1916, London: H. M. S. O., 1916, p. 12.

³³ See pp. 26-26.

A deterministic view was clearly apparent in a Higher Grade question in 1911 which asked candidates to show how in two regions, "... their life and industries are controlled by their physical features and climate ...".³⁴ Determinism in such terms was not as much in evidence as environmentalism however, where such words as, "influence" and "affect" tended to be used in directives rather than the stronger word, "controlled" as in the example quoted. In the Lower Grade examination in the same year, for instance, the more moderate environmentalistic approach can be noticed:

"Describe the effect of environment on the manner of life of any two of the following peoples:- The Eskimos, the Dutch, the South Sea Islanders, Australian aborigines, the Bengalese."³⁵

This question also illustrates another characteristic of environmentalism in evidence in the examinations, namely, the frequent use of technologically primitive peoples as examples to be discussed as a background to the concept. In such instances, first-approximation causal influences of the natural environment on man's actions could be readily discerned and described.

³⁴ Idem, Leaving Certificate Examination: Further Circulars and Examination Papers 1911, London: H. M. S. O., 1911, p.37.

³⁵ Ibid., p. 28.

More subdued or less direct forms of environmentalism appeared in later years. Noticeably, questions were phrased in a way which could lead a candidate fairly easily into an environmentalistic position. In 1918 in the Higher Grade paper a question asked for a description of the relief of the Pennines and directed the candidate to show how, "... their configuration determined the position of the coal-fields and affected the nature of the industries on each side."³⁶ The introduction of elements of human design as causal factors, in addition to the physical ones, thus blurring the physical-cultural distinction inherent in environmentalism, came more into evidence however, as time went by. In the Lower Grade examination in 1922 candidates were asked to:

"Name one Scottish county noted for cattle-feeding, one noted for dairy-farming, and one noted for wheat-growing. Describe each type of farming, and show in each case how it is determined by advantages of climate, soil, or access to markets, in the county named."³⁷

Both grades of examination questions revealed environmentalistic directives or undercurrents to a strong or lesser degree. Whilst many variations appeared, the approach was

³⁶ Idem, Leaving Certificate Examination: Examination Papers 1918, London: H. M. S. O., 1918, p. 23.

³⁷ Idem, Leaving Certificate Examination: Examination Papers 1922, London: H. M. S. O., 1922, p. 12.

consistently in evidence in most aspects of the examinations, although the strongly deterministic viewpoint became less and less noticeable.

The Important Role of Mapwork in the Examinations

The importance attached to the mapwork sections in both Grades can be gauged by the mark structures of each paper. Except for 1910 in the Higher Grade, when the mapwork question was an alternate choice to one on a local area, the sections were compulsory in both examinations each year. In the Higher Grade the section accounted for, in the early years, forty percent and from 1912 for thirty-six percent of the total marks. In the Lower Grade from forty to sixty percent of marks, depending on the year, was awarded for mapwork. The mapwork sections in both examinations were always at the beginning of each paper and from their introduction, appeared to dominate them.

The mapwork section in the Lower Grade examination was, from the beginning, almost entirely concerned with locational geography of the places and products type so dominant in examination questions since 1888. Except in rare instances, such as when candidates were asked to measure a distance between two places, there was no evidence of the need to apply learned skills of analysis or interpretation in answering the questions. The outline maps provided with the

section were largely the same from year to year - an outline of the British Isles and another of the world or a continent or sub-continent. The questions levelled at each map were similar in character. A good atlas knowledge appeared all that was necessary for successfully completing the section.

The Higher Grade questions on the Ordnance Survey maps were essentially concerned with map reading, description and measurement, with a distinct emphasis or reference to physical rather than cultural phenomena. The choice of maps reflected this emphasis. The one-inch to one mile map scale was consistently used. The maps invariably covered areas of predominantly physical landscapes. Written descriptions of areas were called for each year and the consistency of the reference, the physical landscape, left little in doubt as to how mapwork should be pointed in school preparation for this compulsory section of the examination. One example will suffice for many on the same theme, namely, in 1913 on being asked to describe the appearance of a mountain on a map, candidates were instructed to:

"Refer particularly to the general appearance of the whole mass, the presence or absence of a conical summit, narrow ridges, coires, precipices, contrasted types of valleys."³⁸

³⁸ Idem, Leaving Certificate Examination: Examination Papers 1913, London: H. M. S. O., 1913, p. 19.

Measurement, too, played an important part in the questioning. The measurement of distances, calculation of areas occupied by given features or places, and cross-section drawings were required almost every year.

This emphasis on the description of landforms was consistent and purposeful. As an objective for school map studies, it was commented on by the Chief Examiner in 1914:

"A high standard of map interpretation can never be expected from young students. It comes only from years of study of land-forms in the field and on maps."³⁹

The introduction of large-scale maps into the annual examination was an innovation with positive implications for improving the quality of geography teaching. Opportunities were presented for teaching skills, and for their application, consistent with elements in the structure of the subject, namely, the analysis of landscape patterns from documented evidence. The small area of reference, as illustrated on the maps, was also a new dimension for geography teaching allowing for a new perspective on the subject.

³⁹ Idem, Report for the Year 1914, London: H. M. S. O., 1914, p. 30.

Local Area and Field Study, Statistics and
Surveying in the Examinations

Local area study, field work or "outdoor work" as it was sometimes called had been mentioned from time to time in the annual reports as essential activities in school geography. The 1913 Memorandum had left no doubt about the urgent need for outdoor activities and for a "... fairly detailed study of the various geographical aspects of the county or district in which the school is situated."⁴⁰ But no attention had been given to local studies in examinations prior to the publication of the Memorandum.

The Higher Grade examination was the first to include questions on this aspect of geography teaching. In 1910 a question in a determinist slant, asked for a description of the physical features of the country "... within ten or a dozen miles around your school ..." and to point out how the road, rail and certain settlement features had been "... controlled by these features."⁴¹ In 1914 participation in field work was obviously necessary in order to answer a question which asked for a description of any regional survey

⁴⁰ Scottish Education Department, "Suggestions on Post-Intermediate Courses in Geography leading to the Award of a Leaving Certificate." *op. cit.*, p. 5.

⁴¹ Secondary Education (Scotland), Leaving Certificate Examination: Further Circulars and Examination Papers 1910, London: H. M. S. O., 1910, p. 2.

of a small area in which candidates had assisted, and to discuss the object of the survey, methods, scale of map, scheme of colouring or shading, and any deductions yielded.⁴² This question illustrated a feature in examinations very rarely seen at any time, namely, an emphasis on method in the subject. Further questions appeared in 1915 when a knowledge of the climate of "... any district with which you are personally familiar ..." was called for; and another in 1918 was concerned with a field excursion "... in which you have personally taken part ..." ^{43,44}

In the Lower Grade examination, local area studies were in no way as distinctly implicit in questions as in those of the Higher Grade, and no questions during this period pointed directly to field work. In 1916, a question asked for a short geographical description of the home county, and in 1918 and 1920 questions called for a knowledge of local climatic data for purposes of comparison with other regions. As in other developments from 1908, innovations in the Higher Grade examination preceded and more strongly indicated lines of change, than did innovations in the Lower Grade.

⁴² Idem, Leaving Certificate Examination: Examination Papers 1914, London: H. M. S. O., 1914, p. 22.

⁴³ Idem, Leaving Certificate Examination: Examination Papers 1915, London: H. M. S. O., 1915, p. 19.

⁴⁴ Idem, Leaving Certificate Examination: Examination Papers 1918, op. cit., p. 22.

As already discussed, the use of large-scale maps in questions represented a change in the scale of reference for geography teaching. Although the questions on local area and field studies were sporadic and minor compared with the consistency and importance of the mapwork questions, they nevertheless reinforced and supported this new perspective. In addition, small area studies either in the field or through the use of materials in the classroom, provided opportunities to demonstrate to pupils a methodology or process of enquiry consistent with that of the subject.

The underlying implication of a subject methodology is illustrated in examination questions when statistics are provided for interpretation. Such questions began to appear in both Grades with, somewhat strangely in view of the interpretation required, more varied statistics in evidence in Lower Grade questions. The Higher Grade questions, for instance, provided only climatic data in graphic form for interpretation - in 1912 line graphs of "Temperature Curves" and "Rainfall Curves", and the following year an isobar sketch map of Western Europe. Climatic data was provided in Lower Grade questions in 1907 and in 1916, and in 1914 a table of agricultural and climatic statistics, and in 1917 population statistics, were given for questioning. Being optional questions and occurring spasmodically, their impact

on school work may be assumed to be relatively minor. Yet their appearance along with the questions on large-scale maps, local study and field work, was indicative of a changing educational philosophy which placed emphasis on pupil-centred activity and enquiry.

This changing attitude towards pupil involvement is also shown by the appearance in the Higher Grade examination of a few questions concerned with surveying and mapping. In 1912 a question enquired how a map of the school would be drawn up, and in similar vein, in 1916, a description of how an Ordnance Survey map is constructed, was asked for. Questions which, for their answer required a working knowledge of a plane table and theodolite appeared in 1917 and 1918 respectively. These questions well illustrated the degree to which Higher Grade geography had advanced into specialized areas in some school programmes at least.

Improvement in Classroom Teaching

The many positive developments in the examinations from 1908 were paralleled by more favourable comments in the annual reports on the quality of teaching. The increasing number of better qualified teachers, better textbooks, and the emergence of local committees of the Geographical Association were mentioned at various times as contributory

factors in the changing situation. There was still much critical comment however, largely echoing the previous criticisms of lack of equipment and maps in classrooms, use of obsolete information from textbooks, and the reproduction of information in examination answers. Added to these were new strictures about lack of open-air excursions and inadequate knowledge of the local area, but the tone of each annual report was more consistently commendatory of teaching practice than anything before. Each year from 1909 to 1915, either the rising standard of work was reported, or considerable satisfaction with some aspect of teaching was expressed. In the beginning the reports suggested that Lower Grade work was perhaps improving more distinctly than Higher Grade to the extent that one Lower Grade revisor in 1911 commended:

"... the continuous progress in the scientific teaching of Geography towards a rising standard, which the Geographical Association has done so much to bring about and in which Scotland takes the lead."⁴⁵

With the many innovations in the examination, Higher Grade work appeared by 1913 still to be in a state of transition:

⁴⁵ Idem, Report for the Year 1911, London: H. M. S. O., 1911, p. 22.

"Higher Grade Geography, indeed, can hardly be said to have as yet emerged from the stage of experiment. One is more and more impressed with the desirability of strengthening its position by linking it closely with the Science teaching... Our Inspectors report that they are struck with the eagerness which the teachers display to gain acquaintance with newer methods."⁴⁶

By 1915 however, real advances in the quality of work seemed to have been achieved for the Chief Examiner in that year was prompted to report:

"Until quite recently it was very difficult for Scottish teachers to obtain advanced instruction in Geography, and consequently there were serious difficulties in the way of securing such a distinct raising of the standard as was necessary when Higher Grade Geography was separated from Higher Grade English. That this aim has been satisfactorily attained should be matter for congratulation..."⁴⁷

The copiousness of the annual reports during the period was evidence of official concern with raising the standards in every subject taught in schools. The reports on geography teaching and examination answers were full and detailed pointing out both strengths and weaknesses. The answers to examination questions were obviously carefully analysed and recommendations directed towards improving the quality of the work were made. In no comparable period have the annual reports been so instructive to teachers.

⁴⁶ Idem, Report for the Year 1913, London: H. M. S. O., 1913, p. 28.

⁴⁷ Idem, Report for the Year 1915, London: H. M. S. O., 1915, p. 25.

Secondary School Geography by the Early 1920's

By the early 1920's examination questions in both Grades were in marked contrast to those in the 1890's and 1900's. Higher Grade geography was clearly distinguishable from Lower Grade in depth and scope of work. Whereas Lower Grade work emphasized recall of knowledge, Higher Grade work, assuming certain skills, emphasized analysis and interpretation, and, in essay answers, showed a greater concern with the application of the principles of the subject. Specialist teachers were obviously now necessary to cope with the goals and greater complexities of the Higher Grade programmes.

A number of forces could now be seen as active agents in moulding school geography. These were: the subject specialist; the educational philosopher; contemporary social values and attitudes, and the continuous habit of doing things, which may be called traditional practice. These influences were inter-related in a complex manner and all had relevance to the development of a structural teaching entity.

As teachers with specialized training emerged, it was inevitable that their contact with academic work would eventually influence the curriculum. Herbertson's concept of world regions was very important in providing a framework for regional geography which had become prominent in

examinations from about 1910.⁴⁸ This regional concept presented an academically respectable approach for teachers at all levels and also a convenient framework for covering a geography of the world over a period of one or more years, a goal which had now become implicit for the subject. The natural regions conceptual framework could accommodate changing data about places and peoples without too much concern about boundaries, and the framework could be fitted neatly into school programmes without too much disruption of previous ones, if indeed, anything coherent had previously existed.

The use of Ordnance Survey maps may also be identified with the specialist influence affecting the character of geography teaching, but the practical work they afforded was also in favour with the more permissive child-centred approaches to learning of contemporary educational philosophers.

The influence of educators such as Froebel, Herbart, Montessori and Dewey, whose concern with the interests of children, led them to advocate learning situations in which activity methods or learning by doing were central, has been noted by Bramwell in his study of work in English elementary

⁴⁸ Herbertson, op. cit.

schools from 1900 to 1925.⁴⁹ Concerning school geography he commented:

"In the 'nineties educational-philosophic forces began to affect the shape of the geography syllabus. Heimatkunde via Froebel from Germany offered an approach to geography through neighbourhood studies and, at about the same time, Schulreise via Herbart from Germany introduced some English teachers to the value of school journeys as aids to geography teaching."⁵⁰

There were many examples in examination questions from 1908 onwards in which practical work in school would have been necessary before pupils could answer effectively. Mapwork is the most obvious and notable one but field work, excursions, local area studies, surveying and the use of statistics for interpretation all pointed to a much greater concern with pupil activities than anything that had gone before. Importantly, the introduction of such activities materially improved the stature of school geography elevating it from the places and products fact-recall approach, to a position closer to the spirit of the subject.

The greater permissiveness of the period had implications too, for teachers and their freedom of choice in what to teach. Although compulsory questions were introduced into both examinations there was a wide coverage of content and a

⁴⁹ Bramwell, R. D. Elementary School Work 1900 - 1925,
Durham: Univ. of Durham, 1961

⁵⁰ Ibid., p. x.



greater variety of questions, resulting in more options for teachers when devising their programmes. The compulsory questions had a number of sections, and the examination paper was sectioned with one, or at the most two, questions to be selected from each section. Many questions contained alternative choices. A teacher could choose areas for concentration and in this respect his specialized training or interests were given opportunity for expression.

Subjects like geography reflect social and economic changes in the content they deal with and the methods they employ. Before the turn of the century the imperialistic character of the time was reflected in examination questions as the example already quoted illustrates.⁵¹ Such attitudes had largely given way to a less nationalistically minded view and to a different world perspective. The Edwardian period and the years of the First World War were times of social change and reflection - an atmosphere conducive to experiment and innovation in education. Herbertson's concept of world natural regions was slow to find favour until the times were right.⁵² Similarly, the work of the educational philosophers like Froebel and Herbart, referred to by Bramwell, who had expounded their views before the turn of the century did not

⁵¹ See p. 25.

⁵² Herbertson, op. cit.

find expression in practical work in schools, as evidenced in the examinations, until immediately before the First World War.⁵³

One further element in the time-lag between ideas and their application, namely, the force of conservatism in education which ensures that one generation will pass on its ideas and values to the next, cannot be overlooked. Such a pervasive conservatism was not apparent in geography in this emergent period. Continuing practices from the early years can be noticed in the demand for factual, atlas-style knowledge in the Lower Grade examination and in the marked trend towards compartmenting facts in descriptive answers.

The 1913 Memorandum, brief as it was, presented ideas which were repeated in differing forms in other memoranda in later years.⁵⁴ A body of knowledge concerning the teaching of the subject in the form of appraisal of current practices had been built up over the years, somewhat unwittingly, in the extensive annual reports. Indeed, the examinations and the comments on the answer papers in these reports appeared to be the most dynamic elements guiding school practice and

⁵³ Bramwell, op. cit.

⁵⁴ Scottish Education Department, "Suggestions on Post-Intermediate Course in Geography leading to the Award of a Leaving Certificate," op. cit.

programmes towards an academically and pedagogically respectable subject structure in this period of change.

GEOGRAPHY IN THE INTER-WAR PERIOD

In marked contrast to the decade prior to 1918 there was little evidence of innovation and experiment in the examinations during the inter-war period. What had been established previously was continued with refinements, or variations on the same theme. This applied to the style of questioning, the distribution of marks for the various sections and the continual use of the same scales of Ordnance Survey and outline maps in the compulsory mapwork sections. The format of the Higher Grade paper remained the same, but there were some minor changes in that of the Lower Grade. Both levels of teaching became identified in the 1920's with science programmes in schools and in 1928 geography came under science in the examination. Compared with the decade from 1908 there was by the 1930's an element of stability and continuing practice reflected in the examination papers.

In 1924, the mimeographed Memorandum 230 was re-issued by the Scottish Education Department and Circular 30 dealing with the Leaving Certificate Examination was published at the

same time.^{55,56} In 1925, the Lower Grade examination was extended to two and a half hours and separated from the English paper.

The re-issued Memorandum 230 was largely a duplicate of the 1913 original as far as suggestions for Higher Grade work was concerned.⁵⁷ Notably, however, the little that was new was pointedly directed towards correlative work with science teaching or with phenomena popularly associated with science. For instance, in the section on open-air excursions it was recommended that, where geography was allied with other subjects, trips should be oriented in such directions, the examples given being geology and botany.⁵⁸ In the section on general principles, additions to the original were: a knowledge of the distribution of the chief types of plants and animals, and the teaching of the principles underlying the division of continents and countries into natural regions.⁵⁹ Such teaching was now to be biased by the branch of science taken in combination with geography.

55 Idem, "Suggestions on Courses in Geography Leading to the award of a Leaving Certificate," mimeographed, Memo. 230, July, 1924, n. p.

56 Idem, Leaving Certificate Examination, 1925, Circ. 30, (1924), London: H. M. S. O., 1924.

57 Idem, "Suggestions on Post-Intermediate Courses in Geography Leading to the Award of a Leaving Certificate," op. cit.

58 Idem, "Suggestions on Courses in Geography Leading to the Award of a Leaving Certificate," op. cit., p. 3.

59 Ibid., p. 5.

These directions outlined for geography in both Circular 30 and Memorandum 230 were in a sense a reflection of the period.^{60,61} Earth space was shrinking, as man conquered distance, consequent on the revolutions in transport and mass communications. Continuing re-appraisals of, and adjustments to, the environment were more necessary than formerly. Changes in the social and moral values of society and the accelerating changes in technology in the aftermath of the First World War turned man's attention increasingly to science. It is significant that in Memorandum 230 there was added to the section on general principles the statement: "In all these studies the effect of the environment on the life of man should be constantly kept in view."⁶²

Lower Grade work was discussed in Memorandum 230 for the first time. The use of Ordnance Survey maps, one-inch in particular, but also six-inch and half-inch, was recommended, but as it was not intended to examine such work it is not likely that it featured largely in school programmes.⁶³ Circular 30 outlined the examination content and format in general terms, confirming what had been done in

60 Idem, Leaving Certificate Examination, 1925, op. cit.

61 Idem, "Suggestions on Courses in Geography Leading to the Award of a Leaving Certificate," op. cit.

62 Ibid., p. 5.

63 Ibid., p. 1.

the examinations for many years, namely, a mapwork section on the British Isles and some other large region; World Geography with special reference to the British Empire, and, the British Isles in detail.⁶⁴

It wasn't until 1932 that a different examination pattern was outlined, somewhat belatedly in view of the new science direction for the subject.⁶⁵ In a section on general principles it was stated that some subjects for questioning might be:

"Weather and climate, vegetation belts, movement of the earth and their effects, latitude and longitude, earth sculpture, terrestrial magnetism, travel and exploration."⁶⁶

The focus of questioning generally kept pace with contemporary technological changes, and with developments significant to the subject. Refinements in questioning and in conceptual approaches, such as the natural regions framework, was also in evidence by the 1930's. But for all the variations and changing references which gave the examinations a fresh appearance from year to year, the basic pedagogical structure of the subject appeared relatively unchanged from that which had emerged by the early 1920's.

⁶⁴ Idem, Leaving Certificate Examination, 1925, op. cit.,
p. 11.

⁶⁵ Idem, Leaving Certificate Examination, 1933, Circ. 30
(1932), London: H. M. S. O., 1932.

⁶⁶ Ibid., p. 17.

Mapwork in the Inter-war Period

The mapwork sections in both Grades maintained approximately the same mark emphasis and continued to use the same map scales for description and analysis. As before, the Ordnance Survey maps used in Higher Grade depicted essentially rural areas, where relief features, routeway and rural settlement patterns were conspicuous. There were no maps, provided during the period, in which built-up or heavily industrialized areas were shown, and the constant use of the one-inch scale which blurs the detail of such areas was indicative of the continuing emphasis on the relief-routeways-landscape themes. The only deviation from the pattern was the provision in 1938 of a one-inch scale land utilization map, but the questioning of it followed the same pattern as with the others.

A slightly changing emphasis did emerge in the nature of the questions. There was more demand for landscape description, explanations of relief features and of simple relationships than previously. More in evidence too, by the 1930's, was an increasing emphasis on cultural phenomena - on population distribution, settlement location and the possible occupations of people. This marked a trend noticeable also in the essay questions in the examinations.

From 1925 the mark allocation for the mapwork section in the Lower Grade paper was reduced to forty percent, the

first time there had been any reduced emphasis on this type of recall or memory question. The kinds of outline maps and type of question, however, were the same as before, and in view of the extended time now available for the paper, the amount of preparation for this atlas-type memory work would presumably not have diminished.

Shifting Emphases in Essay Questions

Essay questions continued to dominate the remainder of both papers. As a consequence of the extended time, Lower Grade questions tended to become more involved, not in complexity, but in the range of material demanded in answers:

"What is meant by the localisation of industry, and what causes influence localisation? Illustrate by some account of the linen and the pottery industries of the British Isles."⁶⁷

The dominant character of the examination however, was the demand for descriptive information, questions usually commencing with, "Explain what is meant by ...", "Give some account of ..." or "Describe the country passed through on a journey from ... to ..."

Higher Grade questions too, called for much descriptive information, but there was a more conscious search for

⁶⁷ Secondary Education (Scotland), Leaving Certificate Examination: Examination Papers 1928, London: H. M. S. O., 1928, p. 80.

principles and causes than in Lower Grade. In both Grades, a reliance on learned material from textbooks appeared to be an important ingredient for effective answering.

The natural regions concept, the use of terms such as, "geographical conditions" and "geographical influences," and, environmentalistic viewpoints were all continuing characteristics of both Grades, but the frequency of their reference became less and refinements began to appear.

By the 1930's a system of major and minor natural regions had appeared. In 1934, for instance, Higher Grade candidates were asked to draw a sketch-map showing "... the natural regions of Southern England (south of a line between London and Bristol)." - an area which is considerably smaller than any previous examples used in the context of natural regions.⁶⁸ In 1939 the notion of a system of regions was first outlined in an unacknowledged quotation in a question:

"A major natural region exhibits certain broad geographical uniformities almost throughout its entire large area. It may be divided into minor natural regions. In each of these, important uniformities may be recognized and each is different, in some essential respect, from its neighbours."⁶⁹

⁶⁸ Idem, Leaving Certificate Examination: Examination Papers 1934, London: H. M. S. O., 1934, p. 90.

⁶⁹ Idem, Leaving Certificate Examination: Examination Papers 1939, Edinburgh: H. M. S. O., 1939, p. 99.

Candidates were asked to discuss this statement with reference to a very small region, the Central Lowlands. The statement carries with it the idea of a theoretical model in the concept of uniformities and differences and also in the underlying implication that studies of different areal scales will yield different results. The question illustrates the degree of refinement both in the thinking and in the content organization which had developed by 1939 with respect to regional geography. Whilst Lower Grade questions made continuous use of the natural regions framework, the degree of refinement was much less than that which had developed in Higher Grade.

The terms "geographical influences" and "geographical conditions" came to be used more guardedly and in different contexts from previously. Questions concerned with the localization of industry and explanations for settlement sites, which began to appear in the 1930's, sometimes gave occasion for the use of these terms:

"From a consideration of the sites of European capitals state what seem to be the essential geographical conditions that determine the site of a capital city."⁷⁰

⁷⁰ Idem, Leaving Certificate Examination: Examination Papers 1937, Edinburgh: H. M. S. O., 1937, p. 101.

Whilst in this instance, the strong word, "determine", is unmistakable in its impact, there were other examples in which a cautious attitude towards the full significance of "geographical conditions" may be discerned:

"'Industries are usually established where geographical conditions favour their success. They tend to persist even after these conditions become relatively less favourable.' Why should this be so? Illustrate your answer by making references to Great Britain or to European countries."⁷¹

The environmentalistic approach however, had, by the 1930's, an element of inertia in its perpetuation. In some instances the perpetuation of certain terms had become superfluous. The word, "natural", for instance, although it was still to be used for many years could have been omitted in references to regions without destroying the concept of regionalism. The word, "geographical", too, could have been omitted from some questions without impairing their meaning - the question quoted above being a case in point.

Geography now being combined with science, candidates were generally more proficient in mathematics, physical or biological science than formerly. The questions in the Higher Grade paper reflected this changed emphasis only to a small degree however, and not as obviously as may have been expected for this level. Questions tended to search more

⁷¹ Loc. cit.

for genesis and structure in landforms or for measurement techniques in surveying. Paradoxically, what was more noticeable was a shift in content away from the physical science area of reference.

The impact of social, political, and economic events was much in evidence in essay questions during the unsettled conditions of the 1930's. In the Higher Grade papers alone during this period, reference was made in 1932 to the increasing number of goods made in Czechoslovakia in the shops; in 1934 the flight of the squadron of Italian sea-planes from Italy to Chicago was mentioned; in 1938 the political boundaries in Central and Eastern Europe were referred to for discussion, and, in 1939, in a trend away from the mainstream of questioning in geography papers, the social and economic importance of the presence of a coloured population in southern U. S. A., the Union of South Africa, the absence of a coloured population in tropical Australia, overpopulation in Japan, and the settlement of Jews in Palestine were mentioned for discussion in one question. Never before had events or developments of such a contemporary nature appeared in questions. The influence of mass media and the speed of communication cannot be disregarded in searching for an explanation. For the geography teacher, a new dimension appeared to have been added to his work, that of keeping abreast of, and discussing with pupils, national and world

events which had geographical implications. This observation is supported by a report on geography teaching which appeared in 1937, for the Western Division of Scotland:

"The student of geography is dealing with human problems at home and in strange lands, and should learn not to jump to hasty conclusions or to make sweeping generalizations from insufficient data. His training should develop the type of judgment most needed by a good citizen in these unsettled times."⁷²

"Human problems ...", "judgment ..." and "good citizen ..." seemed to fit the social direction which geography was taking prior to the Second World War.

Outdoor Activities

The 1924 Circular 30 dealing with the Leaving Certificate Examination had referred directly to field work:

"In both Grades, but particularly in the Higher, book-work and mapwork in school or at home should be supplemented by field-work and geographical excursions adequately prepared. This aspect of the subject will be tested by oral and practical examination, to the results of which full weight will be given in the final assessment."⁷³

The spirit of this statement did not appear to pass into the examinations. Questions in both Grades on field work, field excursions or local area study were few during the inter-war

⁷² Education (Scotland), Education in Scotland: General Reports, 1933-36, Edinburgh: H. M. S. O., 1937, p. 21.

⁷³ Scottish Education Department, Leaving Certificate Examination, 1925, op. cit., p. 11.

years. The earlier questions on field study at about the time of the First World War which pointed to a development of methodology in the subject seemed not to yield comparable developments during this period. What field work was taking place in schools was not given the authoritative recognition and direction that examination questions could provide. Some concern was expressed in 1934 at the lack of outdoor study: "Map-reading cannot be learned from maps alone. A good deal of field work is necessary before the subject becomes real ..."⁷⁴ Later, further comment was along the same lines:

"Increasing emphasis is being laid on field work and excursions. On the whole, hardly enough attention is paid to the home district and the opportunities it offers not only for direct observation, but also for comparisons and contrast with other countries."⁷⁵

Signs of Change

During this period when geography was identified with science there had been little growth in the number of pupils studying the subject to advanced levels. The small number

⁷⁴ Education (Scotland), Education in Scotland: General Reports 1930-33, London: H. M. S. O., 1934, p. 54.

⁷⁵ Idem, Education in Scotland: General Reports 1933-36, op. cit.

of pupils preparing for the Leaving Certificate examination was mentioned in the General Reports for 1930-1933, and again in 1933-1936.^{76,77}

Developments which were to lead to a reversal of this situation, to establish geography, finally, as a separate subject, and to give the subject a humanistic bias more in keeping with history than with science occurred in the late 1930's. Circular 111 (1937), announced important changes to take effect in 1940 governing the award of the Senior Leaving Certificate and in Circular 30 (1939), a detailed outline of the new programme was presented.^{78,79} The Second World War prevented its implementation, and although examination changes occurred in the immediate post-war years along the lines of the outline in Circular 30 (1939), it wasn't until 1951 that an explanatory Memorandum, Geography in Secondary Schools, was published.⁸⁰ In 1947, the Report of the Advisory Council on Education in Scotland contained many ideas concerning

76 Idem, Education in Scotland: General Reports 1930-33,
op. cit.

77 Idem, Education in Scotland: General Reports 1933-36,
op. cit.

78 Scottish Education Department, Geography in Secondary
Schools, Edinburgh: H. M. S. O., 1951, p. 4.

79 Idem, Senior Leaving Certificate Examination, 1940, Circ.
30 (1939), Edinburgh: H. M. S. O., 1939.

80 Idem, Geography in Secondary Schools, op. cit.

geography teaching and also a long discussion on the role and effect of examinations on teaching.⁸¹

The Report of the Advisory Council on Education in Scotland, 1947, and the Influence of Geography Examinations on the Development of the Subject in Schools

During the inter-war years the role of the examination in relation to geography programmes had taken on a different character. That the character of the examination vis-a-vis school programmes does change was discussed in the Advisory Council's Report. At one period, it stated, examinations may dictate a curriculum for the good of the subject and for teaching:

"When standards are still insecure and a supply of teachers adequate in scholarship and in professional training has to be built up slowly over one or two generations, a wisely dictated external examination may be a potent instrument for good. Its defined syllabuses, its proper balance of emphasis, the consistency of its level - all these exert a steady influence and a salutary stimulus on the teachers ..."⁸²

Geography during the decade from 1908 exemplified this observation. The examination was then a beneficial factor, although not the only one, in the emergence of a coherent organizational structure for the subject. Yet an examination

⁸¹ Idem, Secondary Education: A Report of the Advisory Council on Education in Scotland, Edinburgh: H. M. S. O., 1947.

⁸² Ibid., p. 43.

once established to test the products of many schools, must maintain over the years an even standard and make reference to the same general content of study. As a consequence, as the report stated:

"... this involves a defined syllabus which the teachers concerned may or may not have had some share in framing, and once laid down, the syllabus must in great measure determine what is taught in all the schools and where the stress is laid."⁸³

For geography in the inter-war years, the issues of Circular 30 in 1924 and 1932 and the re-issue of Memorandum 230 in 1924 had presented, in prescriptive form as far as Circular 30 was concerned, a syllabus which, although couched in general terms, was sufficiently defined for classroom implementation.^{84,85} But a syllabus in itself is not the only influential factor on school programmes. The Report observed:

"There is a further stereotyping factor in the influence which previous papers exert on the examiner himself. His close scrutiny of them and his proper concern not to deviate from the standard insensibly incline him to keep his own questions true to type. Hence the familiar fact that in every examination successive papers tend to take on the recognizable cast and that the same questions occur, thinly disguised, at almost calculable intervals."⁸⁶

⁸³ Ibid., pp. 42-43.

⁸⁴ Idem, Leaving Certificate Examination, 1925, op. cit., and idem, Leaving Certificate Examination, 1933, op. cit.

⁸⁵ Idem, "Suggestions on Courses in Geography Leading to the Award of a Leaving Certificate", op. cit.

⁸⁶ Idem, Secondary Education: A Report on the Advisory Council on Education in Scotland, op. cit., p. 43.

By about 1912 the format of examination papers in geography had been set. Subsequently, there was little significant change in their various sections. By about 1918 the introduction in examinations of questions on aspects of geography not previously considered had ceased. From that date on questions had indeed, the same recognizable cast from year to year which, in addition to the compulsory-optional character of the papers, provided ample opportunity for teachers to plan courses, materials and textbooks for two or three years ahead without too much fear of wrong emphasis. Attempts to achieve balance of emphasis and standards appeared to inhibit experimentation. No different map scales were introduced into either examination since maps were first provided, and data for analysis and interpretation was little in evidence.

The changes that had occurred in the inter-war years were in content, and here the influence of contemporary social economic and political developments were important in deciding what content to deal with. But as long as change was associated with changes in content detail only, the basic philosophy and structure of the subject, as it had been exemplified in the examinations by about 1918, remained the same.

THE POST-WAR YEARS:
GEOGRAPHY AS AN INDEPENDENT SUBJECT

In the three publications, Circular 30 (1939), the Report of the Advisory Council on Education in Scotland, and Geography in Secondary Schools, an outline of the new examination syllabus, an appraisal of the purpose of geographical studies, and an extended discussion of the nature, aims, methods and content of geography in schools were presented.^{87,88,89} Their appearance in the early years of the subject's independence augured well for its future development. A well argued philosophical framework along with an elaboration and exemplification of the pedagogical principles ensuring therefrom, is a logical and necessary step for a new teaching design.

In their tone the publications reflected the contemporary concern for man's social condition and relationships which marked the immediate pre- and post-Second World War years. This concern was reinforced by the growing influence of educational psychologists, whose interest in how children learn was reflected in the greater weight placed on child interests in deciding what to teach.

87 Idem, Senior Leaving Certificate Examination, 1940,
op. cit.

88 Idem, Secondary Education: A Report on the Advisory
Council on Education in Scotland, op. cit.

89 Idem, Geography in Secondary Schools, op. cit.

In Circular 30 (1939) human geography was strongly emphasized: "The density distribution of man is the central fact and its explanation is the central problem of Geography."⁹⁰ The natural region concept was retained, however, in this humanistic approach, in what now appeared to be a dualism:

"The examination of the density of population throughout any area involves study in terms of the two primary geographical units, namely, the human community and the natural region."⁹¹

Circular 30 (1939) also placed greater weight than previously on the technique of geographical study. Studies of the home region, for instance, described as the "... most fundamental units of community and environment ..." were meant to illustrate in a detailed manner "... the characteristic technique of geographical study ..." and serve as a basis for comparing and contrasting less familiar regions.⁹² The aim of practical work was outlined as, "... the illumination of theoretical study and the development of geographical technique ..." ⁹³ This was to be developed through a very considerable study of different types of maps, the representation on base maps of varied phenomena, and the use

⁹⁰ Idem, Senior Leaving Certificate Examination, 1940,
op. cit., p. 10.

⁹¹ Loc. cit.

⁹² Loc. cit.

⁹³ Loc. cit.

of relevant statistics including the selection of material from source books.⁹⁴

The topical note which had appeared noticeably in examination questions during the 1930's was strongly in evidence in the suggested world regional outline. A country's prominence in world affairs was recommended as a criterion in the selection of areas for study.⁹⁵

The outline of the Higher Grade examination was, however, vague and phrased in generalities. Two papers, each of two and a half hours duration, were to be given, but no detail of how the increased time would be used was outlined except that greater depth and expertness were expected in regional studies, the teaching of geographical principles and mapwork.⁹⁶

The recommendations contained in Circular 30 (1939) were re-stated and greatly expanded in the Report of the Advisory Council on Education in Scotland.^{97,98} The Report stressed the need for a human emphasis in geography teaching - "... we consider geography below Vith Form a social and humanistic, not a scientific, study ..." - and the importance of

94 Loc. cit.

95 Loc. cit.

96 Ibid., p. 11.

97 Idem, Senior Leaving Certificate Examination, 1940,
op. cit.

98 Idem, Secondary Education: A Report on the Advisory
Council on Education in Scotland, op. cit.

relating studies to everyday life.⁹⁹ It recommended that the subject, social studies, replace the separate teaching of history and geography in the first three years of secondary school and in so doing noted that the "... heavily factual textbook treatment of history and geography is a failure ..."¹⁰⁰ The local survey was seen as the focal point in geography (and social studies) programmes: "In a real sense geographical study is only an extension of such local survey."¹⁰¹ The use of visual aids and school visits were strongly advocated and a plea was made for more and better textbooks.¹⁰²

The advice and recommendations offered in the Advisory Council's report were taken into account in the preparation of Geography in Secondary Schools and the spirit of the report, if not the letter, is clearly evident in it.¹⁰³ Neither before nor since has such a vigorous, yet reasoned, comprehensive statement appeared on the subject from the Scottish Education Department. Its reprinting in 1966 is indicative of its continuing importance.

⁹⁹ Ibid., p. 75.

¹⁰⁰ Ibid., p. 73.

¹⁰¹ Ibid., p. 74.

¹⁰² Ibid., p. 75.

¹⁰³ Idem, Geography in Secondary Schools, op. cit.

The work covers all aspects of geography teaching. It can be divided into two parts: a discussion on the definition of geography, and a discussion on the aims, content and method of school geography. Geography is defined in almost identical terms to the definition in Circular 30 (1939).¹⁰⁴ The coherence or unity of geographical studies is argued and, in a long discussion, the relationship of the subject to other school subjects is outlined.¹⁰⁵ Geography teaching in school is viewed as having a humanistic focus, but is scientific in its concern with the discovery and application of principles.¹⁰⁶ The aims of school geography are stated in terms of the values derived from a study of the subject - the geographical aspects and understanding of life in familiar and unfamiliar places; and also in societal terms - the role of the subject in developing ideals of citizenship.¹⁰⁷ Content, in school geography, is first discussed around what are considered to be the two fundamental units and their interrelationship: the natural region, and the community.¹⁰⁸ Aspects of content of major concern to teachers are discussed at length - the extent of territorial content in courses and

104 Idem, Senior Leaving Certificate Examination, 1940,
op. cit., p. 10.

105 Idem, Geography in Secondary Schools, op. cit., pp. 5-13.

106 Ibid., p. 7.

107 Ibid., p. 14.

108 Ibid., pp. 16-18.

the degree of emphasis, the order of territorial studies, the criteria for selecting facts, and suggestions for teaching home area studies.¹⁰⁹ Similarly, in the section on teaching methods, there is a careful explanation through argument on how to relate principles to territorial studies, the approaches to territorial studies, the use of textbooks, pupils' notes and map making, practical work, revision of work, and exercises and examinations.¹¹⁰ Final sections deal with the space and equipment in a geography room, the library and visual aids, various arrangements for different courses, and model answers to examination questions.¹¹¹

Geography in Secondary Schools presents a philosophical discussion and practical teaching guide for teachers and sets out a coherent viewpoint and approach from both academic and pedagogical angles. It incorporates much of the advice offered in official reports and memoranda since geography teaching was first instituted in schools.

The View of Geography in the Examination Papers

In 1946 both Lower and Higher Grade examinations appeared for the first time under the title, Geography,

109 Ibid., pp. 21-28.

110 Ibid., pp. 28-35.

111 Ibid., pp. 36-47.

independent of any other subject. From that date, changes in the format of the examinations, the further development of certain trends, first discernible in the 1930's, and changes in the balance of various parts of the examination can be seen. By the 1950's an image of the subject had emerged that was different from that of the pre-war period.

The Lower Grade Examination

The most important development in the Lower Grade examination was the introduction of a scale perspective different from that used before. This was done through the use of large-scale maps in the compulsory mapping section of the paper. The development can be traced from 1938. In that year in the compulsory section of the paper, candidates were asked to draw a "pressure map" from a series of plotted barometric readings at weather stations. This innovation was followed in 1939 with the provision of a contoured sketch map of a small island and a description of its shape, size and relief was asked for. After the Second World War and until 1961, with only one break in 1955, a contoured sketch map of an area varying in scale from, initially, four miles to one inch, to one inch to one mile by the 1950's, was provided for questioning. Since 1962 the contoured sketch map has been substituted by an Ordnance Survey map excerpt.

From their introduction these compulsory map questions carried a mark value which increased from ten percent of the paper in 1938 and 1939, to fifteen percent between 1946 and 1961, and twenty percent from 1962. This degree of concern with the use of the most recognized source document in geography teaching represented a distinct departure from previous attitudes towards the subject at this level. It introduced a balance in the mapwork section of the paper alongside the traditional place and product type of questioning with small-scale outline maps.

From their inception, the questioning of the sketch maps was dominantly concerned with the identification of relief features, relief description, and the recognition of simple relationships between relief or drainage patterns and communications or settlement sites. In this respect the questioning was similar to that used with Ordnance Survey map excerpts in the early years of their introduction in the Higher Grade examination, except that, in the latter case, mathematical calculations had also been demanded.

In questions concerned with relationships between features, two recurring themes were noticeable: the locational factors of settlement sites, and, the delimitation of regions for the purposes of description. The questioning was elementary, yet, in the long perspective, new geographical

perceptions were gradually being introduced into the Lower Grade teaching structure.

The pattern and type of questions concerned with the location of places, products, routes and distributions of phenomena on the outline maps in the remainder of the compulsory mapwork section, remained very similar to that of the pre-war years. The importance attached to this largely recall type of information had shown some change over the years. Following 1912, a percentage value of between forty and sixty percent had been awarded for this work; following 1925 it was stabilized at forty percent; in 1938 it was reduced to thirty percent, and in the post-war years to twenty-five percent. With the introduction of the Ordinary Grade examination in 1962 it was further reduced to twenty percent. Clearly, this de-emphasis of the recall of factual type information on outline maps allowed for more time to be spent on other work, and the introduction of large-scale map questioning, coincidental with the reduced emphasis in the post-war years, improved the image of geography at this level.

Apart from the changes in the mapwork section of the Lower Grade examination, there were no changes that materially affected the structure of the subject. For the remainder of the examination, much of what had gone before was continued into the post-war period. The paper continued to be divided into three sections: the compulsory mapwork

section, a section on the principles of the subject, and the world geography section sub-divided into the British Isles, Europe and the Rest of the World. Essay answers continued to be asked of pupils and these followed traditional styles, particularly with the beginning directives of, "Explain ...", "Describe ...", or "Give an account of ..."

The changes that can be discerned were subtle rather than in bold contrast to previous practice. There was a shift away from the habit of directing pupils to divide their descriptive answers into sections or paragraphs under such headings as relief, climate, occupations or towns. There was more emphasis on regional description, on the economic activities in an area, and on population distributions and settlement patterns. Environmentalism, whilst still evident as a continuing tradition, appeared to play a less obvious role, although there were occasional lapses into what appeared to be a deterministic stance, as in 1951 when candidates, asked to discuss their home area were directed to show "... how far the agricultural activities of the area are controlled by climate."¹¹²

Some topics appeared infrequently in the examination, or after appearing regularly, then appeared spasmodically.

¹¹² Idem, Scottish Leaving Certificate Examination: Examination Papers, 1951, Edinburgh: H. M. S. O., 1951, p. 16.

Questions concerned with home area studies, for example, were almost entirely confined to the optional part of the paper, and except for the years from 1947 to 1951, appeared irregularly. The provision of statistical data for questioning was also infrequent, and the data used was, in most instances, climatic data.

There were a few questions that followed the long developed practice of asking for a description of the lives of people such as the Bedouin, Eskimo, or Kirghiz steppe dweller. As a developing trend, and approaching closer to the sample or spot study approach, the references were extended to include farmers or factory workers in technologically advanced societies. The appearance of a question directly concerned with a small area study however, occurred in 1948, for the first time, but it was not followed up in the ensuing years:

"Suppose that you had recently spent a whole year at a farm in one of the following areas:- The Lake Peninsula of Canada; Southern Manitoba; a valley of western Nova Scotia; the Australian Riverina; the eastern coast plain of North Island, New Zealand; the south-western part of Cape Province, South Africa. Write a geographical essay describing your impressions in regard to the scenery, climate, occupations, farming activities, and population of the area visited."¹¹³

¹¹³ Secondary Education (Scotland), Senior Leaving Certificate Examination: Examination Papers 1948, Edinburgh: H. M. S. O., 1948, pp. 17-18.

The Higher Grade Examination

With the introduction in 1946 of two papers of two and a half hours each duration, the balance of the respective parts of the Higher Grade examination was changed. The map-work section, compulsory in the first paper, now came to represent twenty-six percent of the overall mark value compared with thirty-six percent previously. In addition, with the introduction of a question in this section on factual knowledge, using as reference an outline map of the world, the importance attached to the reading and interpretation of Ordnance Survey maps was reduced. This section had in the past been exclusively devoted to the examination of Ordnance Survey maps. The section of the examination concerned with the principles of the subject remained almost the same in mark value but the second paper now represented one-half of the value of the examination.

These proportional changes illustrated a greater concern than previously with world geography in continental or regional settings, in which as emerged in the examinations, reference to the British Isles, Europe and North America was the most dominant.

The questioning of Ordnance Survey map extracts continued the tradition of emphasizing landscape description, particularly relief and drainage features, using exclusively the one-inch to one mile scale. A pattern of questioning

became established in which candidates were asked for either descriptive accounts of an area or two contrasting areas; descriptions of routeways or views from vantage points, or, sketch maps of an area showing relief and drainage features. Also, the practice of asking candidates to search for relationships or influences between relief and cultural features was maintained. Upwards of one-half of the marks in this question was regularly awarded for these landscape descriptions.

One trend, discernible in the 1930's emerged strongly in the post-war period reflecting the humanistic bias in the subject. From 1946, in each year, at least one question on the large-scale maps focused on the cultural features, either settlement patterns, site or locational characteristics, population distribution, possible occupations in the area, or land utilization. The award of marks for these questions was invariably less than those awarded for landscape description, but nevertheless the questions represented a recognition of what in many instances was a more analytical and interpretative approach to map study than landscape description.

The introduction in 1946 of an outline map of part of the world, for questions of a mainly factual character, placed an emphasis on such global knowledge for the first time in the Higher Grade examination. In some respects this development reflected the general concern with the world

coverage in geography teaching in the post-war years. The factual knowledge asked for in answers followed a similar pattern from year to year: names of towns and cities, rivers, routes, latitude or longitude lines, or products at their place of production; the boundaries of vegetation or rainfall areas, or the insertion of directional arrows for ocean currents or winds. This type of questioning continued until 1962 and although representing only eight percent of the overall mark value, it was a part of the compulsory section, and may be taken as indicative of a concern that a knowledge of facts should be considered a small but essential aspect of geographic study.

Questions in the remainder of Paper A and all of Paper B were formed mainly around essay type answers. In Paper A, concerned with the principles of the subject, two clear developments emerged. Firstly, in each year from 1946, statistics were provided in questions for analysis and interpretation. In the years from 1946 to 1951, and in 1953, there were two such questions in each paper, one concerned with the analysis of climatic data, the other with economic or population statistics. In other years one such question was included.

The other development was the questioning of techniques, although such questions were not as consistent in their appearance as those concerned with statistical analysis:

"Assuming that you could obtain, in respect of each farm in a particular Scottish county, all the statistical information for a particular year that you would require, describe carefully what you would do in order to translate the statistical information into a map of the county showing the varying intensity of potato cultivation. (Assume that you are given an outline map, area about 5 square feet, of the county.)"114

Other questions were concerned with different topics. On four occasions between 1951 and 1960 questions on field work or the home area were asked, and in the years 1953, 1954 and 1955 oblique aerial photographs were provided for analysis for the first time in examinations.

These developments, although in an optional section of the paper, required a background of pupil activity in the analysis and interpretation of source materials, and also a knowledge of techniques, for effective answering. They illustrated a scientific direction for the subject much more clearly discernible than during the pre-war years when the subject was included in science programmes.

In the extended examination, the second paper was devoted entirely to regional geography with the paper sectioned by continents. A number of minor trends emerged, but basically the traditions already established continued to dominate the structure of questioning. In the immediate

114 Ibid., p. 20.

post-war years questions on the home area appeared frequently enough to suggest an expansion of such studies in schools, but for a decade after 1953 no further questions on this topic appeared in this paper. Statistical data, usually economic or population, appeared periodically in questions which called for descriptive answers, and in 1950 and 1952 small-scale sketch maps were provided for descriptive accounts of the information they portrayed.

Other trends were of a more lasting nature, particularly the greater emphasis on human geography. Questions concerned with population densities and distributions, settlement sites and patterns, economic, political and social geography became common within the general framework of descriptive geography. The general concern with social and political problems in the immediate post-war period provided a favourable climate for this trend to become established. As a consequence, the subject had broadened its reference to an extent illustrated by the following question:

"'The Roman Catholic meatless day, the Jewish attitude to unclean animals, the Mohammedan law concerning strong drink and the Hindu attitude to cattle are all examples which show that religion may be a factor in economic geography. Similarly, national habits and the social outlook and ideals of a people are matters which the commercial geographer cannot ignore.' Explain and illustrate this statement."¹¹⁵

The emphasis on human geography and the broadening of the subject's reference appeared to affect other aspects of the subject. The search for relationships and geographical influences was still asked for but there appeared to be more reservation in the wording of the questions. Two questions, one appearing pre-war and the other post-war both concerned with the political geography of eastern Europe, illustrate the shift in the wording of questions and in viewpoint, in the subject. In 1938:

"Give an account of the frontiers of one of the undermentioned countries, showing how far they are geographical, and note particularly any respects in which the boundaries seem to you to be unsatisfactory. Illustrate your answer by a sketch map. Austria, Czechoslovakia, Germany, Poland, Rumania."¹¹⁶

and in 1946:

¹¹⁵ Idem, Senior Leaving Certificate Examination: Examination Papers, 1946, Edinburgh: H. M. S. O., 1946, p. 38.

¹¹⁶ Idem, Leaving Certificate Examination: Examination Papers 1938, Edinburgh: H. M. S. O., 1938, p. 95.

"Czechoslovakia was created, Poland was recreated and Rumania increased as a result of the Great War, 1914-18. The frontiers of these states were difficult to delimit, partly for reasons of geographical structure, partly because of minority problems,' Select two of the above states and indicate the main difficulties to which this quotation refers."¹¹⁷

Finally, the use of the natural region as a conceptual, organizing device for descriptive accounts was much less in evidence in the post-war period, as was the practice of directing candidates to describe an area under certain specified headings. The relative absence of both these approaches illustrate again the changing perspective of the subject.

Reports on the Post-war Period

The annual reports of the Scottish Education Department provide a number of insights into the problems and achievements of geography teaching in the post-war period. Comments in the reports range from the qualifications of teachers, to the strengths and weaknesses in examination answers.

One concern was the lack of teachers with appropriate qualifications for teaching the subject. This was noted in 1952 in Junior Secondary Schools and in 1954 in both Junior

¹¹⁷ Idem, Senior Leaving Certificate Examination: Examination Papers 1946, Edinburgh: H. M. S. O., 1946, p. 44.

and Senior Secondary Schools.^{118,119} Even by 1957 when the immediate post-war teacher shortage problems might be expected to have been solved, the situation was regarded as "... only fairly satisfactory ..." with great variations from area to area and even from school to school within the same area.¹²⁰ This official concern had been expressed on a number of occasions since Keltie mentioned it in 1885, a fact which is probably symptomatic of the subject's secondary role in school curricula.¹²¹

Other concerns expressed in the annual reports had also been mentioned for many years. The lack of equipment and facilities, such as a suitable geography room or a supply of map or visual materials, was noted in Junior and Senior Secondary Schools in 1952 and again in Junior Secondary Schools in 1954.^{122,123} Some improvement had, in general, been made by 1957 but some older schools and even some new

118 Scottish Education Department, Education in Scotland in 1952, Edinburgh: H. M. S. O., 1953, p. 30.

119 Idem, Education in Scotland in 1954. Edinburgh: H. M. S. O., 1955, p. 25, and ibid., p. 33.

120 Idem, Teaching of Geography in Secondary Schools, Edinburgh: H. M. S. O., 1958, p. 1.

121 Keltie, op. cit., p. 504.

122 Scottish Education Department, Education in Scotland in 1952, op. cit., p. 30, and ibid., p. 35.

123 Idem, Education in Scotland in 1954, op. cit., p. 26.

schools lacked facilities, and in Junior Secondary Schools the accommodation left much to be desired.¹²⁴

A frequent comment on teaching the subject referred to the absence of, or a need for improvement in practical work, including field work. In 1950 in Senior Secondary Schools, "... a carefully planned scheme of practical exercises is the exception rather than the rule" was reported, and again in 1952, practical work was, apart from map study, "... probably the branch of geography most neglected in school."^{125,126} The lack of attention devoted to the study of the local area was noted in 1949 in Senior and in 1952 in Junior Secondary Schools.^{127,128} In 1954 in Senior Secondary Schools the lack of field work, except in certain schools, was mentioned.¹²⁹ However, by 1957 the annual report, in discussing classroom practices in general, and whilst noting some shortcomings, commented without too much criticism on the use of maps, notebooks and visual materials, and the practical and field work being conducted.¹³⁰

124 Idem, Teaching of Geography in Secondary Schools, op. cit., pp. 2-3.

125 Idem, Education in Scotland in 1950, Edinburgh: H. M. S. O., 1951, p. 19.

126 Idem, Education in Scotland in 1952, op. cit., p. 35.

127 Idem, Education in Scotland in 1949, Edinburgh: H. M. S. O., 1950, p. 21.

128 Idem, Education in Scotland in 1952, op. cit., p. 31.

129 Idem, Education in Scotland in 1954, op. cit., p. 33.

130 Idem, Teaching of Geography in Secondary Schools, op. cit., pp. 4-6

By about the mid-1950's the standard of work in examinations was being reported as generally satisfactory although this was more noticeable at Higher Grade rather than Lower Grade level. A constant criticism particularly at the Lower Grade level, but also on occasions at the Higher Grade level, was the general inability to select and arrange factual knowledge.¹³¹ The 1961 report on the Lower Grade papers commented on the reproduction of textbook materials and of memorized notes in answers.¹³² This criticism almost echoed the comments in the annual reports sixty years previously.¹³³

RECENT DEVELOPMENTS: THE STRUCTURE OF
SECONDARY SCHOOL GEOGRAPHY IN THE 1960's

With the introduction of the Scottish Leaving Certificate in 1962, a new syllabus came into being for Lower (now called Ordinary) and Higher Grades. At the same time the numbers of pupils presenting themselves for the new certificate increased considerably. In 1968 the new sixth year

131 Idem, Education in Scotland in 1960, Edinburgh: H. M. S. O., 1961, p. 24.

132 Idem, Education in Scotland in 1961, Edinburgh: H. M. S. O., 1962, p. 24.

133 Secondary Education (Scotland), Report for the Year 1902, op. cit.

programme, Certificate of Sixth Year Studies was introduced, probably the most significant development in the subject since the major changes in its teaching structure fifty years ago.

The New Syllabus

The issues of Circular 30 by the Scottish Education Department during the 1950's had shown little change from the one issued in 1939.¹³⁴ The new syllabus had basically the same structure and viewpoint as before, but it was more descriptive and detailed.¹³⁵ A clearer distinction was outlined between the two levels of examination. The syllabus has remained the same since then except for a re-sectioning of the first paper of the Higher Grade examination in 1966.

In the Ordinary Grade examination in 1962 an Ordnance Survey map excerpt was provided for reading and interpretation for the first time, and the practice has been continued since then. The mark value for this was increased to twenty percent from fifteen percent when the large-scale contoured sketch maps were used, and at the same time the mark value

134 Scottish Education Department, Senior Leaving Certificate Examination, 1940, op. cit.

135 Idem, Scottish Certificate of Education: Examination Arrangements, 1962, Edinburgh: H. M. S. O, 1961, pp. 45-48.

for world map knowledge was reduced from twenty-five percent to twenty percent.

In the remainder of the Ordinary Grade examination, regional geography continued to be emphasized. The aim at this level, according to the Syllabus, is to provide for a balanced world picture and a broad understanding of man in both physical and social environments, an awareness of differing living standards, and an appreciation of the growing interdependence of mankind.¹³⁶ As in the previous syllabus, the greatest regional emphasis is placed on the British Isles, and the home region, and studies are also to be made of the major world powers and the production of and trade in principal products.¹³⁷ The post-war focus on human geography was continued. In these terms, geography at this level is seen as a subject projected into education for social purposes.

In the syllabus for Higher Grade, details were given of the many examinable aspects in the field of general geography, from statistical mapping to a knowledge of population geography, stress being placed on physical and human

¹³⁶ Scottish Certificate of Education Examination Board, Scottish Certificate of Education Examination: Conditions and Arrangements 1969, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1968, p. 44.

¹³⁷ Loc. cit.

relationships, interdependence of communities, and distributional patterns.¹³⁸ In regional geography the syllabus was largely repetitious of the issues of Circular 30 during the 1950's: the density distribution of man and its explanation, and the study of man's activities, social and economic, in relation to his physical environment.¹³⁹ The areas to be examined follows the same pattern as that outlined for Ordinary Grade - the greatest detail in the home area and the British Isles, with in addition, a knowledge of Europe and lands of important to Britain, and in world affairs, given prominence.

At the Higher Grade level, geography is thus seen as more of a discipline, particularly in its emphasis on general geography, than at Ordinary Grade level. The social purpose is still clearly evident however, with the humanistic and economic focus in general geography and the density distribution of man in regional studies.

Numbers of Candidates in Geography Examinations

With the initiation of the Scottish Leaving Certificate in 1962, the number of candidates increased considerably as

138 Ibid., p. 45.

139 Ibid., p. 46.

Fourth year pupils became eligible to sit the newly named Ordinary Grade examination.¹⁴⁰

The number of candidates presenting themselves at this level had increased steadily during the latter years of the 1950's, from 2,657 in 1954 to 4,107 in 1961.¹⁴¹ In 1962, the number jumped to 13,596 and since then has fluctuated at slightly less than that number.¹⁴² Higher Grade presentations increased from 1,545 in 1961 to 2,229 in 1962 and by 1967 was 5,617.¹⁴³

Numbers such as these place pressures on examining techniques that were developed at times when numbers were considerably lower. Recently, interest has been shown in devising multiple-choice tests that facilitate objective scoring of large numbers of candidates.¹⁴⁴ Such tests have educational merits in their potentials for greater

- 140 Scottish Education Department, Certificate Courses in Scottish Secondary Schools: Recent Developments, Edinburgh: H. M. S. O., 1965, pp. 1-2.
- 141 Idem, Education in Scotland in 1954, op. cit., p. 40, and idem, Education in Scotland in 1961, op. cit., p. 23.
- 142 Scottish Certificate of Education Examination Board, Report for 1967, Tables 7a, 7b and 8a, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1968, pp. 41-42.
- 143 Scottish Education Department, Education in Scotland in 1961, op. cit., and, Scottish Certificate of Education Examination Board, Report for 1967, op. cit.
- 144 The Godfrey Thomson Unit for Educational Research, "An Experimental Test of Geography at the Ordinary Grade of the Scottish Certificate of Education", mimeographed, Edinburgh: Univ. of Edinburgh, 1968.

discrimination and wider and more representative sampling of course content, than the traditional, essay-structured examination. Their construction allows for a rigorous examination of educational objectives, and in this context the compiler of the examination is brought to a consideration of the goals of the subject.¹⁴⁵ The adoption of a multiple-choice examination format for all, or even for a part of the examination, would have implications for teaching the subject. The traditional practice of preparing pupils for an essay style examination in which geographical descriptions are common would come under critical review.¹⁴⁶

The Character of Examination Questions

In the large-scale mapwork section of the Ordinary Grade examination the questioning pattern that had developed in the 1950's was continued into the 1960's with the newly introduced Ordnance Survey map excerpts. The greatest emphasis was still placed on the description of relief features and to

¹⁴⁵ Ibid., p. 3.

¹⁴⁶ The traditional style of questions demanding descriptive answers are well presented, with model answers, and a marking guide in, Scottish Education Department, Scottish Leaving Certificate Examination: Memorandum for the Guidance of Teachers on the setting and marking of school tests and examination: Geography, Edinburgh: H. M. S. O., 1963.

a lesser degree on relief-cultural relationships. Questions about settlement patterns and locational factors also continued, and by the end of the 1960's this area had become an important part of large-scale map interpretation.

With the introduction of specially designed answer booklets, as well as a book of reference maps, it became the practice by about the mid-1960's to refer increasingly to, and seek explanations of, sketch maps showing distributions of, for example, economic and population data. Sketch maps also came to be used more frequently for testing place and product type knowledge in individual questions. In addition to this use of sketch maps, there was a provision in one question almost every year of statistical data, either economic or population, for analysis and interpretation.

These innovations aside, the remainder of the examination followed previous patterns. Large regions continued to be referred to in questions, and descriptive answers were dominantly required.

Changes in the Higher Grade examination were of a similar order. The factual type of map knowledge, characteristic each year during the post-war period, was dropped from the compulsory mapwork section in 1963, and a question on statistical mapping was substituted. This question was largely concerned with the methods of mapping statistical data, but in some years was also concerned with statistical

interpretation, and in 1969 and 1971 an oblique aerial photograph was provided for analysis. In addition, while the Ordnance Survey map provided was still the one-inch to one-mile scale, there was an increasing emphasis on measurement, by way of cross-section drawing, and also on man-land relationships and land utilization in landscape description.

The remainder of the first paper on general geography continued the pattern of questioning and the analytic emphasis that had developed in the 1950's. Statistical data was regularly provided in questions for analysis, home area knowledge was implicit or was called on directly for answers, and from 1963 onwards, the questions relating to physical and cultural geography were separated and one question from each section had to be chosen.

The second paper also continued along the lines established in the 1950's. The continental framework for questioning, and the focus on human geography being clearly apparent.

Comments in the Examiners' Reports

The reports of the Chief Examiner referred to various aspects of the answers, but the use, or mis-use, of factual knowledge was the most recurrent topic. In 1963 and 1967 for Ordinary Grade and in 1967 for Higher Grade evidence of

rote learning or remembered answers was noted.^{147,148} In 1964 and 1967 for Ordinary Grade and in 1965 and 1967 for Higher Grade the use of out of date or imperfectly understood information was commented on.^{149,150} In 1966 for both levels the geographical application of factual knowledge was reported as weak.¹⁵¹ The quality of sketch map drawing, or the use of sketch maps, also came in for criticism at both levels in almost every report, as did the quality of answers to regional questions.

These comments were similar in tone to what had been said before. They pointed, either directly or by implication, to the lack of analytical skill and to an over-emphasis on memorized knowledge.

The Sixth Year Programme

The implementation of a sixth year course in geography in 1968, the Certificate of Sixth Year Studies programme, is

- 147 Idem, Education in Scotland in 1963, Edinburgh: H. M. S. O., 1964, p. 33.
- 148 Scottish Certificate of Education Examination Board, Report for 1967, op. cit., p. 15.
- 149 Scottish Education Department, Education in Scotland in 1964, Edinburgh: H. M. S. O., 1965, p. 29, and Scottish Certificate of Education Examination Board, Report for 1967, op. cit.
- 150 Idem, Report for 1965, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1966, p. 9, and idem, Report for 1967, op. cit.
- 151 Idem, Report for 1966, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1967, p. 12.

one of the most important developments in geography teaching in Scotland since examinations began in 1888. In the course, as stated in the preamble to the syllabus:

"... the student should develop a geographical approach through methods of survey, analysis and synthesis by his work in the field, in the geographical laboratory, in the library, and in the tutorial room."¹⁵²

Three areas are assessed in the course: a selected field study topic in an area roughly equivalent in size to the area depicted on an Ordnance Survey six-inch sheet; a dissertation on a study of a specified area in the world, and a written paper, in the proportion 2:2:1 respectively.

The emphasis on method and original enquiry, both in the field and in the library, is of considerable importance for the future of the subject. In the past important changes have started at the higher level of geography teaching and subsequently filtered down to the lower level. For example, this was the case with the introduction of large-scale map-work into the examinations, and also with the general trend towards a de-emphasis of the importance of factual type information in answers.

¹⁵² Scottish Certificate of Education Examination Board, Certificate of Sixth Year Studies 1968, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1967, p. 35.

CONCLUSION

Changes in the structure of geography teaching as reflected in public examinations since 1888, have been characterized by periods of activity interspersed by relatively long periods of quiescence. From about 1908, for about one decade, major changes occurred in all aspects of the subject. Although less dramatic, further changes occurred during the 1940's when geography became independent of science in school programmes. A humanistic focus was developed in the subject and a well argued philosophical statement on the principles and practice of teaching the subject was published and is still in use today.¹⁵³ In the 1960's with the introduction of the Scottish Certificate of Education, the large increase in the number of candidates at both Higher and Lower levels, and the development of a senior level of achievement, the Sixth Year programme, another period of change began and appears still to have momentum.

Various influences can be identified as affecting the structural character of the subject - the professional educator, at both the academic and philosophical level, contemporary social values and attitudes, and once established the force of traditional practices. Innovations, indicative

¹⁵³ Scottish Education Department, Geography in Secondary Schools, op. cit.

of lines of change, have appeared at the Higher level of teaching rather than the Lower. In this respect the introduction of the Sixth Year programme with its emphasis on method and inquiry may have a beneficial influence on the other levels in the future.

The image of geography as a teaching subject is that of a subject applied in education for social purposes. Its humanistic focus is exemplified in descriptive procedures with a global reference. Such procedures have dominated the subject since the last century.

The descriptive geography called for in the examinations has been largely regional in organization with systematic organizations having some importance at the Higher level. The magnitude of the scale of regional studies tended not to deviate from established patterns: physical, usually relief or climatic, political, or natural regions being the most common. References to the site and function of major cities and sporadic references to local area studies have been the only notable deviations from these patterns. As a consequence of continual use, the regions referred to in examinations have tended to appear as permanent structural patterns in the countries or continents of the study. In the recent past, with the emphasis on population distribution as a central organizing theme in geography teaching, descriptive explanations of

distributions have been called for, but here pupils have been referred to either political, physical or natural regional frameworks for their answers.

Analytical and interpretative aspects of geography teaching, although gaining in importance, have played a minor role as evidenced in the mark structures and the optional nature, apart from mapwork, of these areas in the examination papers. Improvements in the academic image of the subject can be discerned in mapwork, the analysis and interpretation of data, and in local area and field activities. There has been a recurring criticism in annual reports by examiners and school inspectors, of the general lack of development of analytical skills and abilities to use factual material in geographical contexts. The background to the criticisms is the concern about the over-emphasis on memorizing procedures that are developed in schools in order to meet requirements of descriptive answers in examinations.

The emphasis on the influence of elements of the physical environments, particularly relief and climate, on the actions of man, and more noticeably in recent times the emphasis on the relationships between the physical and human environments, have been dominant themes in geographical descriptions since the turn of the century. These approaches,

given support in statements in official memoranda and circulars on the nature of the subject, have influenced all aspects of geography teaching. For instance, the one-inch to one-mile map has been the only scale used in examinations down to the present although there have been suggestions in official memoranda that larger scales should be used as well for practical work in schools. The one-inch scale presenting as it does bold landscape patterns is an ideal tool for questions concerned with measurement, landscape (physical) description and the identification of physical influences of cultural phenomena. Such map sheets while bearing no indication of cause and effect relationships or environmental determinism may be made to yield quite regularly, by pointed questioning, apparently simple but direct links between black and red communication symbols and contoured valley forms.

The examination, the tone of examiners' reports, and memoranda on geography teaching are the instruments of change in the school programmes, but their role changes depending on contemporary climate of opinion. Changes in the proportions of mark values, in the style of questioning and the provision of source material for analysis are all indicative of changing emphases. During the years following 1908 examinations were a beneficial factor in improving the image

of the subject. During the 1960's and particularly in the Sixth Year Studies programme, the examination appears once more to be pointing the way to change. Method and analysis appear to be assuming greater importance than the assimilation of content matter.

CHAPTER TWO

THE EDUCATIONAL BENEFITS OF GEOGRAPHY TEACHING

Of all the responses to the questionnaire, those to the question about the educational benefits of geography teaching were the most verbal (question 14, Pt. I of the Questionnaire). On a topic such as this many differing viewpoints might be expected, but whilst this was the case, the responses fell into three broad categories. The analysis is shown by type of school in TABLE I.

Clearly outstanding in the responses were those that pointed to the social benefits of geography teaching, the subdivision of which is: World awareness or appreciation; Environmental awareness or appreciation, and, societal values or citizenship. Teachers in Junior and Four Year schools placed more emphasis on these benefits, more particularly in the areas of environmental awareness and citizenship, than did teachers in Five-Six Year schools. However, upwards of one-third of respondents in each type of school identified the awareness or appreciation of the world as an important outcome of geography teaching.

Next in order of importance were the benefits inherent in the subject itself. Of the two groups of responses identified in this category, knowledge of the substance of the

TABLE I
EDUCATIONAL BENEFITS OF GEOGRAPHY TEACHING

Educational Benefits	Type of School					
	Junior		Four Year		Five-Six Year	
	Percentage of responses					
Social:						
World awareness or appreciation	38		39		36	
Societal values or citizenship	19		18		13	
Environmental awareness or appreciation	<u>14</u>	71	<u>9</u>	66	<u>8</u>	57
Subject:						
Subject substance	8		12		14	
Subject methodology	<u>3</u>	11	<u>7</u>	19	<u>7</u>	21
Pupil:						
Motivation of interest and curiosity	7		6		8	
Skills acquired	<u>7</u>	14	<u>5</u>	11	<u>6</u>	14
Integrates subjects	4		4		6	
Lesson management	<u>-</u>		<u>-</u>		<u>-</u>	
	100		100		100	
Number of responses	75		162		799	
No response to question (%)	3		-		3	
Number of respondents	35		65		325	

subject, was considered to be of greater significance than its methodology.

A group of responses pointed specifically to the development of interest and curiosity on the part of pupils and also to the motivational qualities in the subject. These responses and those that referred to the acquisition of skills, were grouped under the heading, Pupil benefits, although all the benefits were obviously concerned with the pupil. The analysis shows that except in Junior schools this category had a subordinate place to the other two.

Outside these categories the responses were few in number. Some pointed to the integrative quality of geography and a very few noted the variety of approaches which might be developed because of the breadth and complexity of the subject.

In addition to the analysis by type of school, the responses were analyzed according to the year of graduation of the respondents, and also by the five categories of urban size. No significant differences emerged between the groups in each analysis.

The group of responses included in, World awareness or appreciation had, as a concept common to all, the world scene as a focus of attention. Approximately forty-five percent of these responses were couched in general terms:

"... appreciation of the world and its problems ...". The remainder were only a little more specific, either as: "... world economic and political problems", "world population and food problems ..." or, "... differences between places ...". Almost entirely, the appreciation of the world was mentioned in terms of the human, social, economic or political scene, and where essentially physical environments were mentioned there was frequently a connecting link justifying such studies as a means towards the better understanding of man, his place, or his problems.

In the second group of responses included under Social values, were those concerned with the improvement or development of qualities of citizenship. This group as a common element saw socially desirable attitudes as an important outcome of geography teaching, expressed by one respondent as, "... the faith of geography teaching." Apart from the terms, "citizenship" and, "international understanding", which were commonly used, phrases such as, "tolerance of others", "brotherhood of man", "reduce prejudice", and "sympathy for less favoured nations", were much in evidence.

The final group in this category showed a concern for environmental appreciation on a national, regional or local scale. Underlying many statements here was the idea of improvement in the environment:

"Geography develops an appreciation of the environment and the need to cherish it. This should lead to an interest in town planning and the preservation of the countryside."

The idea of enjoying the environment was also expressed:

"To be able to interpret the countryside, the city, the weather, the occupations and the history of the environment, in order to live a fuller life."

The second largest group of responses, under the heading, Subject benefits, in the analysis, did not specify outcomes or transferable benefits of geography teaching to the same degree, but saw the greatest importance in a knowledge of the subject itself. Those respondents who pointed to the substance of the subject, for instance, identified attributes generally regarded as being unique to the nature of geography. These attributes were: the adaptation or relationship of man to his environment; the synthesizing of knowledge; landscape perception; appreciation of location; spatial concepts and regional explanations; a knowledge of geographical distributions, and map interpretation. This group was the larger one. Methodology, the sub-heading of the other group of responses, was considered important because of its assumed uniqueness by way of developing such abilities as: powers of observation; logical enquiry; processes of inductive and deductive reasoning, and the interpretation of data.

Of the statements which outlined beneficial results for the pupil, grouped under, Pupil benefits, in the analysis, those referring to the acquisition of skills tended to be the most specific of all responses, but as a group were amongst the least in number. The most numerous skills mentioned were, the better understanding of weather patterns, statistics and maps, and, the better appraisal of mass media information. The other group of responses, included under, Motivation of interest and curiosity, fell into two broad areas: the stimulation of pupil questioning about why things are where they are, and, the more utilitarian benefit of learning about a place or activity in order to enrich subsequent leisure activities. In responses outlining the latter benefit, travel was often in the mind of respondents, as one commented:

"With the increasing ease of travel, and the more widespread use of speedy travel facilities, geography becomes, increasingly, a more valid and beneficial study."

The question concerning the benefits of geography teaching asked for a rank order listing of the benefits as teachers visualized them, and an analysis was made of the rank orders submitted. Only fourteen percent of the respondents stated one benefit only, and of these sixty-eight percent gave a benefit in the group category of World awareness or appreciation. Responses in this group were placed

first in forty-seven percent of the replies, a high response in a rank order.

The next groups of responses were each listed first in eleven percent of the replies: Societal values or citizenship; Environmental awareness or appreciation; and, Subject substance.

Of all the groups of benefits of geography teaching presented and ranked by teachers, the most outstanding characteristic was again the dominance of the responses in the group, World awareness or appreciation, as they were included in seventy-five percent of all groupings. In rank order, Societal values: citizenship, was included in thirty-six percent of all groupings; Subject substance in thirty-one percent; Environmental awareness or appreciation in twenty percent; and Pupil motivation, Skills acquired and Subject methodology, in eighteen percent for each.

The social values of developing a deeper appreciation of the world and its problems, of inculcating ideals of citizenship, and broadening the awareness of the environment, are the most outstanding of the benefits of geography teaching as described by teachers. The world reference of geography dominated teachers' views, a perspective that is traditional in the subject. Geography, therefore, is clearly seen by teachers as a subject applied in education for social

purposes. The benefits of geography teaching were described by teachers in general terms. Only a small percentage specified benefits in a manner that might have operational implications for teaching procedures. A small percentage of teachers, significant in Four Year and Five-Six Year schools, saw the benefits of studying the subject as ends in themselves. Even here, the benefits described had implications for social outcomes: orderly thought processes and deeper perception of relationships; areal differences, and distributions of phenomena.

CHAPTER THREE

THE NATURE OF GEOGRAPHICAL APPROACHES

The responses to the question concerning the geographical approaches adopted by teachers provided comprehensive data for analysis, only four percent failing to answer the question (question 13, Pt. I of the Questionnaire). Opportunity was provided for the addition of further approaches but all that were submitted corresponded with one or more of the nine approaches listed. Very few respondents identified only one approach, the majority, seventy-eight percent, selecting two or more. The responses were analyzed for each year and are shown separately for each type of school in TABLE II. Some approaches have been grouped according to common elements, and sub-totals have been extended, for comparative purposes.

The three parts of TABLE II show the dominance of either the study of the relationships between the physical and human environments; the geographical factors that influence the actions of man, or, the human response to the physical environment. As a common element they each assume a duality existing between the physical and human environments. Together these approaches dominate each year in each

TABLE II
GEOGRAPHICAL APPROACH: EMPHASIS BY TYPE OF SCHOOL AND YEAR

1. Junior Schools

Approach	Year		
	1	2	3
	Percentage of responses		
Relationships - Physical/Human	17	19	15
Geographical factors that influence man	15	19	16
Human response to the physical environment	<u>17</u>	<u>18</u>	<u>16</u>
How People Live	27	17	13
Description of:			
Habitat, Economy, Society	10	10	10
Relief, Climate, Agriculture, etc.	<u>8</u>	<u>12</u>	<u>10</u>
Analysis and description of:			
Regional differences	2	2	6
Natural regions	<u>2</u>	-	<u>3</u>
Analysis and interpretation of materials	<u>2</u>	<u>3</u>	<u>11</u>
	100	100	100
Number of responses	94	101	93
No response to question (%)		4	
Number of respondents		35	

TABLE II (cont'd)

2. Four Year Schools

Approach	Year			
	1	2	3	4
	Percentage of responses			
Relationships - Physical/Human	18	18	16	13
Geographical factors that influence man	20	19	15	11
Human response to the physical environment	18	18	13	9
How People Live	23	16	6	1
Description of:				
Habitat, Economy, Society	5	7	5	4
Relief, Climate, Agriculture, etc.	7	11	18	19
Analysis and description of:				
Regional differences	3	5	9	13
Natural regions	3	2	7	11
Analysis and interpretation of materials	3	4	11	19
	100	100	100	100
Number of responses	170	171	186	175
No response to question (%)			3	
Number of respondents			65	

TABLE II (cont'd)

3. Five-Six Year Schools

Approach	Year					
	1	2	3	4	5-6	
			Percentage of responses			
Relationships - Physical/Human	19	20	17	16	17	
Geographical factors that influence man	16	17	13	11	11	
Human response to the physical environment	16	18	14	12	12	
How People Live	51	55	44	39	40	
Description of:	27	19	6	3	3	
Habitat, Economy, Society	6	5	5	5	6	
Relief, Climate, Agriculture, etc.	8	10	19	19	12	
Analysis and description of:						
Regional differences	1	2	6	9	11	
Natural regions	2	3	12	10	10	
Analysis and interpretation of materials	5	6	8	15	18	
Number of responses	100	100	100	100	100	
No response to question (%)	807	820	1030	1160	1003	
Number of respondents			3			
					325	

type of school. Approximately thirty-five percent of respondents selected one of these approaches and fifty-two percent selected two or all three.

There are marginally different emphases from year to year between each of these approaches. The relationships approach is slightly more emphasized than the other two, and overall is the most consistently emphasized. Each approach is relatively less emphasized the more senior the year. The most striking feature revealed, however, is the relative balance and the consistency of the responses in favour of these three approaches, for each year, when compared with all other approaches.

The approach listed as, How People Live, is principally used in Junior schools and in junior years in Four Year and Five-Six Year schools. At these levels it is the single most important framework for organizing content, but in senior years its use is negligible. As an introductory approach with its strong human factor, it is the only one consciously oriented towards pupil interest.

The analysis also reveals the greater emphasis, in total, placed on the itemized, descriptive approaches compared with the analytic, descriptive and interpretative ones. The two descriptive approaches, of which the description of habitat, economy and society is more favoured in Junior schools, are

together, most popular in the Third and Fourth Years, and are as important as any other single approach in senior years. The approach in which content is itemized under headings, such as relief, climate, vegetation, agriculture, etc., is clearly favoured at the time of examination preparation for both Ordinary and Higher levels. To some degree this is illustrative of teachers' appraisal of these examinations. At the examination levels the itemized, descriptive approaches and the more challenging analysis and description of regions approach, have an approximately equal emphasis. However, the analysis and interpretation of materials, largely interpreted by respondents as map study, does assume some significance from the Fourth Year on, and together with the emphasis on regional analysis, represents firm evidence of a greater depth of study in senior years.

Considered overall, each school type illustrates similar trend patterns in the approaches analyzed. There is the consistent emphasis each year on all the physical-human dualistic type approaches. The approach, How People Live, is characteristic in the First Year with some attention also paid to itemized regional description which, in the Second Year is developed more strongly. The Third and Fourth Years show a noticeably different pattern with the itemized regional description dominant, and regional analysis appearing strongly in the Fourth Year. The senior years of

Five-Six Year schools show these trends continuing with regional analysis and materials interpretation in an important position. Not unexpectedly, the Junior school pattern differs the most from these trends, but surprisingly, the differences are small, the approach, How People Live receiving slightly more favour, the analytic and interpretative approaches slightly less.

Reasons for the Choice of Approaches

In addition to naming the reasons for their choice of particular approaches, approximately eight-three percent of the respondents submitted comments in elaboration of their choice. The analysis in TABLE III incorporates both the reasons named and the comments submitted.

The reasons given fell into three broad groups: the interests of pupils, the nature of public examinations, and, a desire to demonstrate the nature of the subject. Other reasons of very small significance fell outside these groups. Comparing the analysis according to school type, there is a close similarity between Four Year and Five-Six Year schools. Respondents from Junior schools attached more importance to the interests of pupils and less to the nature of the public examinations.

TABLE III
REASONS FOR GEOGRAPHICAL APPROACHES:
BY TYPE OF SCHOOL

Reasons for Approach	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Interests of pupils	50	35	31
Nature of public examinations	11	23	27
To demonstrate nature of subject	32	37	36
Textual arrangement of content in textbooks	5	4	4
Inability of pupils to understand more complex approaches, or, inadequacy of facilities or materials	<u>2</u>	<u>1</u>	<u>2</u>
	100	100	100
Number of responses	98	197	951
No response to question (%)	5	4	3
Number of respondents	35	65	325

Of the responses concerned with the interests of pupils, sixty-two percent referred to the use in junior years of the approach, How People Live. Where comments were added in support of their choice, respondents frequently referred to this approach being linked with either, local studies, the sample study or thematic approaches, or the use of visual aids. The other responses in this group were related, in roughly equal proportions, to regional analysis in the middle years, and to the analysis and interpretation of materials from the Fourth Year onwards.

The influence of the examination was an important consideration of respondents from Four Year and Five-Six Year schools. It was also mentioned by a number of respondents from Junior schools. Comments from teachers in these schools reported this influence on their work with Second Year pupils, some of whom were likely to be transferred to examination streams in other schools. Of the responses in this group from Four Year and Five-Six Year schools, eighty-seven percent adopted either, the itemized description approach, the regional analysis approach, or, the analysis and interpretation of materials approach, because of the nature of the examination. The approach most popular of all was the itemized description, chosen by sixty-seven percent of respondents teaching Years Three, Four and Five. Next, and roughly equal in choice, were the regional analysis

and the analysis and interpretation of materials approaches, principally by teachers of Years Four and Five.

Almost invariably, respondents who noted the influence of the examination in their choice of an approach, and who commented on it, were critical or resentful of the pressure. Of these, fifty-eight percent stated that their choice was made because they felt it necessary to teach towards successful completion of examinations. The remainder noting the restricting influence of the examination in their choice, commented on either, the need to teach material quickly, to cover too many regional topics, or to lecture in order to complete the programme. The tone of the comments clearly showed that these respondents would have chosen other approaches had they felt the examinations to be more permissive in this regard.

Approximately one-third of respondents in each school type felt a need to demonstrate the nature of the subject. Of these, nearly seventy-five percent pointed to either the study of relationships, the influence of geographical factors, or, the study of human response to the physical environment. Of the respondents who commented on their choice, almost two-thirds stated their belief that geography must be concerned with the human element in its studies. Of the remaining twenty-five percent of the responses, nearly all pointed to

either a descriptive or an analytic approach, most to the regional analysis. An almost negligible number of respondents considered that the approach, How People Live, or the itemized regional description were illustrative of the nature of geography.

The arrangement of content in textbooks appears as an insignificant influence on the choice of an approach. Of the very few responding positively that it is an influence, the majority pointed to the itemized description as an outcome of this influence. The number of respondents reporting that pupils could not cope with more complex approaches was also negligible. A further small number of respondents noted that other approaches would be adopted if more materials or better facilities were available. Together however, these three groups of responses were of relative insignificance.

THE VIEWS OF TEACHERS ON THE NATURE OF GEOGRAPHY

There was no direct question concerning teachers' views on the nature of geography in the questionnaire. It was found however, that many teachers had presented a viewpoint in responding to a number of questions, particularly in support of statements made in connection with the values of fieldwork, the geographical approaches from year to year, the

educational benefits of geography teaching, and, the aspects of geography they most enjoyed teaching. These statements were numerous enough for an analysis to be made. Not every statement was sufficiently specific for a definite categorization, but in many of the instances where they were not, it was possible to group them into broader categories. The resulting analysis, for each type of school, is shown in TABLE IV.

The first three items in the analysis, geography as a study of relationships, geographical factors that influence man, and, human response to the physical environment, included statements that could clearly be included in one or the other. For example, the clarity of the statement, "... the core of geography is the human response to the physical environment," as one respondent noted, is typical of those grouped in these items. There was also a large group of responses, shown as the fourth item in the table, of sufficient clarity to be clearly identified with the view that assumes a dualism between the physical and human environments. The most common responses here were those from teachers who, in answer to the question concerning their geographical approach, indicated that more than one of the three approaches of, relationship, geographical factors, and human response, were given emphasis in all years taught, and had further

TABLE IV

GEOGRAPHICAL APPROACH: VIEWS OF TEACHERS
CONCERNING THE NATURE OF GEOGRAPHY: BY TYPE OF SCHOOL

Geography as a study of:	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Relationships - physical/ human, man/land	12	16	19
Geographical factors that influence man	11	18	14
Human response to the physical environment	6	9	14
Differing views but in con- formity with more than one of the points listed above	22	10	12
Analysis or description of regional differences	6	11	10
Habitat, Economy and Society	6	--	1
Differing views but mainly the study of 'relation- ships' or 'regional differences' (as outlined above)	6	16	15
Not possible to distinguish any viewpoint	<u>31</u>	<u>20</u>	<u>15</u>
	100	100	100
Number of respondents	35	65	325

indicated in their reply that they believed this to be the nature of geography (question 13, Part I of the Questionnaire).

Specific statements only were included in the two headings, Analysis or description of regional differences, and, Habitat, Economy and Society, but the viewpoints shown as, Differing views: mainly 'relationship' or 'regional analysis', included statements that pointed to any one or more of the three dualistic-type approaches described above, and also to one of the analytic approaches - again in every instance, with the additional indication that this was believed to be the nature of geography. Of the returns in which no clear viewpoint was distinguishable, those from Junior schools were the most numerous, an indication to some extent of the lesser commitment to academically ordered programmes.

The evidence revealed in TABLE IV cannot entirely be assumed to represent teachers' views on the nature of geography as no direct question was asked. It is not unreasonable to suggest however, because many teachers volunteered a definition of geography, that the results of the analysis would broadly correspond with respondents' views on the nature of the subject.

With this qualification in mind, the analysis reveals that the dualistic viewpoint of geography is held by more

than fifty percent of respondents and that the regional view, either of analysis or description, is held by a relatively small minority. Of all the viewpoints specifically identified, the one that sees geography as a study of relationships between the physical and human environments or as man-land relationships is slightly more favoured than the other two dualistic type approaches, but each of the three stand out as being more popular than the regional view.

Of all the viewpoints analyzed, the ones that indicated a differing viewpoint, of geography as a study of relationships and regional analysis, whilst possibly revealing a somewhat confusing dichotomy of approach, might also be seen as a sound approach in which both a philosophical basis and a methodological process are identified. Apart from Junior schools, the number of such viewpoints was significant in the total pattern.

CONCLUSION

The analysis of the geographical approaches adopted by respondents, the reasons for their choices, and of their views on the nature of geography, show that the majority clearly favour one or more of the physical-human type

approaches. A majority of respondents see this concept of geography as being central to its purpose, and most of those who consider it important to demonstrate the nature of geography in their teaching named one or more of these approaches as suiting this purpose. This concept is dominant in all years in each school type, but there is no evidence to suggest that one or other of its themes is more difficult or more acceptable in any one Year, or that there is a sequence of complexity from Year to Year.

The evidence also shows that the examinations exert a significant influence in the adoption of the itemized, descriptive approach to regional geography, but that the two approaches of, regional analysis and description, and the analysis and interpretation of materials, are of interest to pupils, although examination pressure is again acknowledged as one reason for their development in later years. The interests of pupils as a factor in the choice of an approach is comparable to the degree of influence of examinations, but such influence exerts itself much more strongly at junior levels in the choice of a dominantly human type of geography. There is some evidence to suggest that human geography is more acceptable as an emphasis in all programmes in each school type.

A reasonably clear sequence can be discerned in the analyses, of a descriptive interest-centred geography in junior years to analytic and interpretation approaches in senior years. This sequence however, appears to be blurred in the middle years of both Four Year and Five-Six Year schools by a strong emphasis on itemized, descriptive, regional geography.

CHAPTER FOUR

PROGRAMMES OF STUDIES AND ORGANIZATIONS
OF SUBJECT MATTER

PROGRAMMES OF STUDIES

The response to the request for the programmes of studies along with the reasons for the sequence of topics was high and sufficiently detailed for a thorough analysis (question 3, Pt. II of the Questionnaire). The information obtained fell into three major groups of studies or topics: regional studies, systematic or world survey type studies, and practical work. Within each group a uniformity of topics was also apparent and the full analysis is shown in three parts, one for each school type, in TABLE V.

Under the heading, Regional studies, in the tables, the list of countries and continents does not necessarily imply that the particular areas were studied in entirety. The replies usually indicated that selected areas only were examined, for instance, in studies of Southern Continents, South America was frequently not included; in Asia - India, Pakistan, China and South East Asia were the most popular studies; and in North America - the prairies, California, and the cotton belt were the most frequently mentioned. However, selected studies were much more noticeable in the

TABLE V

PROGRAMMES OF STUDIES:
BY TYPE OF SCHOOL AND YEAR

1. Junior Schools

Area or Type of Study	Year					
	1		2		3	
	Percentage of responses					
Regional studies - selected studies in:						
Local Area	22		3		5	
Scotland	11		2		4	
British Isles	13		8		18	
Europe	2		13		18	
North America	3		16		7	
Southern Continents	14		10		5	
Asia	1		14		7	
The Commonwealth	<u>1</u>	67	<u>3</u>	69	<u>2</u>	66
Systematic studies or General World Surveys:						
Human or Natural Regions	10		17		21	
Physical or Geographical Principles	<u>13</u>	23	<u>6</u>	23	<u>3</u>	24
Practical work:						
Mapwork studies	7		7		9	
Atlas work or world mapping	<u>3</u>	<u>10</u>	<u>1</u>	<u>8</u>	<u>1</u>	<u>10</u>
		100		100		100
Number of responses	230		184		182	
No response to question (%)			3			
Number of respondents			86			

TABLE V (cont'd)

2. Four Year Schools

Area or Type of Study	Year			
	1	2	3	4
	Percentage of responses			
Regional studies:				
Local Area	24	2	2	--
Scotland	9	4	3	4
British Isles	13	7	16	17
Europe	1	16	14	14
North America	3	20	6	8
Southern Continents	12	6	5	2
Asia	3	14	4	1
The Commonwealth	<u>1</u> 66	<u>2</u> 71	<u>--</u> 50	<u>--</u> 46
Systematic studies or Generals World Surveys:				
Human or Natural Regions	8	10	7	7
Physical or Geographi- cal Principles	<u>10</u> 18	<u>3</u> 13	<u>15</u> 22	<u>12</u> 19
Practical work:				
Mapwork studies	14	14	26	24
Atlas work or world mapping	<u>2</u> 16	<u>2</u> 16	<u>2</u> 28	<u>3</u> 27
Revision	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u> 8
	100	100	100	100
Number of responses	169	149	192	216
No response to question		4		
Number of respondents		54		

TABLE V (cont'd)

3. Five-Six Year Schools

Area or Type of Study	Year									
	1		2		3		4		5-6	
	Percentage of responses									
Regional studies:										
Local Area	21		3		1		2		--	
Scotland	8		2		2		3		--	
British Isles	10		11		11		16		9	
Europe	2		14		13		16		10	
North America	2		17		11		7		9	
Southern Continents	14		5		7		2		6	
Asia	4		11		5		2		4	
The Commonwealth	<u>1</u>	62	<u>1</u>	64	--	50	--	48	--	38
Systematic studies or General World Surveys:										
Human or Natural Regions	13		14		4		5		19	
Physical or Geographical Principles	<u>10</u>	23	<u>5</u>	19	<u>18</u>	22	<u>16</u>	21	<u>16</u>	35
Practical work:										
Mapwork studies Atlas work or world mapping	12		15		25		23		19	
	<u>3</u>	15	<u>2</u>	17	<u>3</u>	28	<u>4</u>	27	--	19
Revision	--		--		--		--	4	--	8
		100		100		100		100		100
Number of responses	521		480		661		721		841	
No response to question (%)					4					
Number of res- pondents					173					

in the programmes of studies for the first two years than in later years.

The analysis for each school type shows clearly that regional studies are the most dominant element in all programmes. This is particularly striking in Years One and Two where approximately two-thirds of all topics reported were regional in character. In Years Three and Four in Four-Year and Five-Six Year schools regional topics accounted for approximately half, and in the senior years they still accounted for almost two-fifths of the responses. This reducing emphasis is matched by a commensurate increase in practical work and in systematic studies in Years Three and Four. In Junior schools on the other hand, regional studies continue to dominate programmes into the Third Year.

The first two years in each school type bear a close resemblance to each other. In the first year, local area study was almost universally reported as the beginning study. The study of Scotland, by comparison with local study, was much less reported and was significantly less popular than the study of the British Isles. However, these three topics considered together as a home region study, represent the outstanding study in the First Year. This is a justifiable beginning for a study of world geography for pupils taking the subject for two or more years.

Set alongside home region studies in the First Year, the Southern Continents was commonly reported, the response percentage being much greater than for any other region. The apparent lack of continuity or connection between the home region and the Southern Continents has been analyzed and discussed separately (see p. 184 following).

Of other topics reported in the First Year, some attention is given to certain aspects of physical geography, such as world climates and wind systems, ocean currents, landforms and erosion, and also to topics in mathematical geography, such as, earth shape and time zones. This area of study was generally referred to as, General Principles. Studies in human geography were dominantly approached with the theme, How People Live, as the central focus. In these studies there was an emphasis on occupations, products and peoples examined in such environments as, Hot Wet Lands, Desert Lands and Arctic regions.

In the final group of responses elementary map reading was the important element under the heading, Practical work. Reading conventional signs and contours were the most outstanding activities reported. In addition, atlas work and mapping physical features were reported, but the percentage response for these was relatively insignificant.

In the Second Year in all school types, local area work and the teaching of General Principles diminished markedly in importance and regional studies marginally increased their already dominant position in programmes. In regional work, continental areas not studied in Year One were generally reported and the high response percentages for Europe, North America and Asia are evidence of this.

The similarity of programmes between school types ceases from the Third Year. In Junior schools in the Third Year there is a heavy emphasis on regional studies of the British Isles and Europe and an increased emphasis compared with the previous years, on human geography studies. Overall, Junior school responses showed a regular proportion in each Year of regional, systematic and practical work. Clearly, there is an attempt to teach a world geography on a regional, continental-type framework over the three-year period with the greatest concentration on the British Isles and Europe.

The Third and Fourth Year programmes of both Four-Year and Five-Six Year schools show a much greater emphasis on mapwork studies than in the first two years. Also noticeable is the greater attention paid to physical geography, apparently at the expense of the theme, How People Live, in human geography studies. The pattern of regional studies shows a decided shift in emphasis from a loosely structured

world regional survey in the first two years to a concentration, beginning in the Third Year, on the British Isles and Europe, and to a lesser extent on North America. Studies of the local area, of Scotland, the Southern Continents and Asia are almost ignored in both years. With the greater involvement in mapwork and physical geography, regional studies occupy less importance than earlier and this trend carries through to the senior years of Five-Six Year schools. Finally, in the Fourth Year, the pressure of the public examination is noticeable in the time set aside for revision purposes.

The programmes reported for senior classes were not distinctly different from the other years. A rough balance can be noted between regional and systematic studies, and practical work is entirely concerned with mapwork including statistical mapping and map projections. The regional studies reported show a heavy concentration on the British Isles, Europe and North America, which in many instances repeat earlier studies. In systematic studies, human geography is developed more than in previous years with world surveys of resources being popular, and in physical geography, landforms and climate are the most common areas of study.

Of the respondents reporting from Five-Six Year schools, 114 reported on programmes conducted over a six-year period.

A separate analysis of the Sixth Year in such schools was made and is shown in TABLE VI.

A variety of programmes were reported illustrating in some respect the uncertainty of teachers in deciding on a terminal course after a sequence of work over several years. Thirty-five percent of schools, for instance, extend the Higher Grade programme through the Fifth and Sixth Year, whilst twenty-nine percent reported the development of a miscellany of studies, principally private study or directed reading, in the post-Higher Grade Sixth Year. A further twenty-one percent develop an Advanced Level, General Certificate of Education, programme in preparation for that examination. The fact that only twelve percent reported the adoption of the Sixth Year Studies programme must be considered against the evidence that a further thirty-two percent of schools reported an intention to take up the new programme as soon as possible.

Reasons for Programmes of Studies

The reasons given by teachers for the particular arrangement of studies from Year to Year were grouped together in two-year sequences. The analysis, shown in TABLE VII, is divided into four parts: one for Junior schools where responses had a distinctly different pattern from the others,

TABLE VI
 PROGRAMMES OF STUDIES:
 TYPES OF PROGRAMMES IN THE SIXTH YEAR IN
 SCHOOLS WITH SIX YEARS OF GEOGRAPHY PROGRAMMES

	Percentage of Responses
Higher Grade programme continued from Fifth Year	35
Sixth Year studies programme	12
Miscellaneous programme, including private study	29
Ordinary Grade or Higher Grade programme repeated	3
Advanced Level (G.C.E.) programme	<u>21</u>
	100
Number of respondents	114
No response to question (%)	2

TABLE VII

PROGRAMMES OF STUDIES:
REASONS FOR PROGRAMMES: BY TYPE OF SCHOOL AND YEAR

1. Junior Schools

Reasons for Programmes	Percentage of responses	
	1 and 2	3
Pupil interest and involvement important consideration:		
a. In general	15	20
b. In introductory local area studies	30	--
c. In choice of study areas and topics	<u>7</u> 52	<u>35</u> 55
External influences on programmes:		
a. Previous work in Primary School	2	--
b. Work in other subjects	7	11
c. Textbook material and organization	4	--
d. Senior School programmes	<u>6</u> 19	<u>--</u> 11
Basic geographical principles an essential beginning	6	--
Studies important for future life and work	<u>23</u>	<u>34</u>
	100	100
Number of responses	178	83
No response to question (%)		5
Number of respondents		86

TABLE VII (cont'd)

2. Years One and Two of Four Year and Five-Six Year Schools

Reasons for Programmes	Type of School	
	Four Year	Five-Six Year
	Percentage of responses	
Pupil interest and involvement important consideration	7	4
External influences on programmes:		
a. Previous work in Primary School	2	1
b. Work in other subjects	3	--
c. Textbook material and organization	6	1
d. Examination (Ordinary Grade)	<u>4</u> 15	<u>10</u> 12
Basic geographical principles an essential beginning under topics:		
a. Mathematical and Physical (General) Geography	6	12
b. Varied, easily comprehended, regional studies	18	20
c. Local area studies	<u>23</u> 47	<u>19</u> 51
Illustrates human response to environment or simple relationships	4	6
World coverage attempted	<u>27</u> 100	<u>27</u> 100
Number of responses	124	337
No response to question (%)	6	4
Number of respondents	54	173

TABLE VII (cont'd)

3. Years Three and Four of Four Year and Five-Six Year Schools

Reasons for Programmes	Type of School	
	Four Year	Five-Six Year
	Percentage of responses	
Influence of Ordinary Grade Examination:		
a. Strong influence on whole programme in:		
Years Three and Four	52	56
Year Four	4	5
b. Factual emphasis in regional studies: cramming	10	7
c. More complex regions studied prior to examination	13	13
d. Previous work (Years One and Two) repeated and emphasized	11	5
e. World coverage attempted for greater question choice	<u>7</u> 97	<u>6</u> 92
Emphasize sequence from description and explanation to analysis and relationships	<u>3</u> 100	<u>8</u> 100
Number of responses	68	227
No response to question (%)	14	7
Number of respondents	54	173

TABLE VII (cont'd)

4. Years Five and Six of Five-Six Year Schools

	Percentage of responses	
Influence of Higher Grade Examination:		
a. Strong influence on programmes	74	
b. Factual emphasis in regional studies: cramming	10	
c. Previous work repeated and emphasized	<u>9</u>	93
Emphasize sequence from explanations and analysis to principles		5
Areas not previously studied included in programme		<u>2</u>
		100
Number of responses	198	
No response to question (%)	4	
Number of respondents	173	

and, one part each for Years One and Two, Three and Four, and Five and Six in both Four Year and Five-Six Year schools.

A comparison of the table for Junior schools with those for Years One and Two of the Four Year and Five-Six Year schools illustrates the fundamentally different approaches. In Junior schools, the interest of pupils and opportunities for their involvement are over-riding considerations in the selection of content in introductory local area studies, and in the choice of regional studies in the Third Year. In addition, respondents were keenly aware of the social utility of the subject and the relevance of geographical studies to future life and work. The responses grouped under the heading, External influences on programmes, were relatively small, and of these, the most numerous were concerned with work in other subjects and suggested that attempts are made to correlate activities. Finally, the only response group that can be identified with teaching the essence of the subject, namely, basic geographic principles, was insignificant in the response percentage, and for the Third Year, no reason was offered.

The reasons given for the choice of studies in the first two years of Four Year and Five-Six Year schools were organized around a different group of objectives. Pupil interest and involvement in studies were considered to be of

small significance, whilst the need to teach basic geographic principles in all topics, systematic, regional and local area studies, was strongly emphasized. External influences on teachers' choice of topics were, in most respects, reported in similar response patterns to those of the Junior schools, but the influence of the Ordinary Grade examination was given as an additional reason. There is no doubt from this evidence that the programmes for these beginning years are subject oriented and any reasons of a social nature for the inclusion of topics appear to be subordinate to this. The attempt to achieve a world coverage might be construed as a social purpose but the responses regarding this were not specific enough for even a tentative supposition.

After the first two years, the programmes for both Four Year and Five-Six Year schools are almost completely influenced by the Ordinary or Higher Grade examinations. This can be clearly seen in the analysis in parts three and four of TABLE VII.

In the Third and Fourth Years, a majority of teachers reported in general terms that the Ordinary Grade examination was either a "strong" or "dominant" influence, or that it "dictates" or "determines" the programme or choice of teaching topics. In addition, specific statements pointed to certain consequences of the examination's influence:

undesirable teaching methods, such as "cramming"; a heavy reliance on factual content; revision of work covered in previous years; attempts to cover the world scene in order to provide pupils with greater question choice, and, the study of more factually complex areas, such as Europe and the British Isles, at the end of the programme when examination preparation is at its peak. A very small number of respondents showed a concern in the choice of teaching topics for demonstrating a methodological sequence from description and explanation to analysis and relationships.

A very similar pattern of comments emerged in the analysis, part four the TABLE VII, for the Fifth and Sixth Year, the latter year including only those schools reporting a Higher Grade examination programme. Again, the strong influence of the examination on programme study topics was reported, in this instance, in seventy-four percent of the replies. The emphasis on factual material in regional studies, felt by teachers to be necessary because of the character of the examination, was again reported, as was also the need to repeat and emphasize previous work. Only seven percent of the responses outlined concerns not related to examination pressures, these being either a desire to demonstrate a methodological process or to open up new areas of study.

ORGANIZATIONS OF SUBJECT MATTER

In order to obtain a comprehensive assessment of the emphasis teachers place on various organizations of subject matter the responses to the questions concerned with the use of the sample study and thematic approaches, (questions 5 and 6, Part II of the Questionnaire) were also analyzed with the responses to the question specifically concerned with geographical approaches emphasized by teachers (question 4, Part II). The overall analysis is shown in three parts, one part for each type of school in TABLE VIII. In the analysis only definite statements were accepted, and responses which stated that an approach was used "on occasion" or "only occasionally" were disregarded and were treated as "no response". In the interpretation of the results the emphasis for each Year can only be regarded as relative as eighty-eight percent of all respondents reported more than one approach through the school, and in forty-two percent of the responses more than one approach was reported in at least one Year.

The analysis shows clearly and supports the evidence and findings already presented that the regional organization is the one most consistently used in schools. It is the dominant organization in each Year in Junior schools and in Third and Fourth Years in both Four Year and Five-Six Year schools.

TABLE VIII
 PROGRAMMES OF STUDIES:
 ORGANIZATIONS OF SUBJECT MATTER:
 BY TYPE OF SCHOOL AND YEAR

1. Junior Schools

Organization emphasized	Year		
	1	2	3
	Percentage of responses		
Regional	39	41	38
Systematic	11	11	12
Sample Study	19	19	15
Thematic	19	19	26
How People Live	5	4	3
Various organizations	<u>7</u>	<u>6</u>	<u>6</u>
	100	100	100
Number of responses	159	169	156
No response to question (%)		7	
Number of respondents		86	

TABLE VIII (cont'd)

2. Four Year Schools

Organization emphasized	Year			
	1	2	3	4
	Percentage of responses			
Regional	31	33	42	42
Systematic	11	9	27	31
Sample study	36	37	10	8
Thematic	12	13	16	14
How People Live	4	3	--	--
Various organizations	<u>6</u>	<u>5</u>	<u>5</u>	<u>5</u>
	100	100	100	100
Number of responses	124	126	125	117
No response to question (%)			5	
Number of respondents		54		

TABLE VIII (cont'd)

3. Five-Six Year Schools

Organization emphasized	Year					
	1	2	3	4	5	6
	Percentage of responses					
Regional	25	29	48	42	35	30
Systematic	15	15	25	31	36	34
Sample study	40	33	7	7	3	7
Thematic	10	13	13	14	19	25
How People Live	3	2	--	--	--	--
Various organizations	<u>7</u>	<u>8</u>	<u>7</u>	<u>6</u>	<u>7</u>	<u>4</u>
	100	100	100	100	100	100
Number of responses	395	403	391	424	457	340
No response to question (%)				2		
Number of respondents			173			

In the senior years of Five-Six Year schools it is approximately equal in emphasis to the systematic organization of subject matter.

The marginal importance of the systematic organization in the first two years of each school type changes to one of major importance in the upper years of Five-Six Year schools. In Third and Fourth Years of Four Year and Five-Six Year schools it gains recognition as an organizational technique and its increased importance at this level is in contrast to the markedly decreased emphasis of the sample study method which is one of the principal approaches in the first two years. In the dominantly regionally organized programmes in Junior schools the sample study method appears as only one of a number of others.

Thematic studies are consistently adopted in every year in each school type, but the emphasis is limited when compared with the regional and systematic organizations. In Junior schools they are emphasized as much as the sample study method. There is a noticeable tendency towards a greater use of the thematic study the more senior the year and in the Sixth Year one of three major organizations of subject matter.

Reasons for the Use of Various Organizations
of Subject Matter

The reasons for the use of particular organizations of subject matter were analyzed in three categories: regional organization; systematic organization, and emphasis on various organizations. Of a total of 711 responses, approximately one half related to the regional organization and approximately one quarter each to a systematic organization, and an emphasis on various organizations. The reasons for the use of the sample study and thematic study were analyzed along with other information concerning those techniques and will be discussed under separate headings. TABLE IX shows the analysis in the above three categories.

In the first part of TABLE IX the analysis of the reasons for the use of the regional organization shows that the nature of the Ordinary and Higher Grade examinations are an important influence. This is particularly true of preparation for the Ordinary Grade examination, for which, as many respondents noted, the regional organization best serves the examination purposes. However, it is not necessarily true that respondents agree that such an influence is a desirable one. Fifty-eight percent commented adversely on the factual nature of the Ordinary Grade examination and the fact that, as a consequence, they were obliged to adopt the regional

TABLE IX

PROGRAMMES OF STUDIES:
REASONS FOR ORGANIZATIONS OF SUBJECT MATTER
IN TYPES OF SCHOOL: BY TYPES OF ORGANIZATION

1. Regional organization

Reasons for regional organization	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Years Three to Six - influence of examinations:			
Ordinary Grade	--	37	43
Higher Grade	--	--	16
Serves increasing complexity of subject	6	19	13
Regional location and distribution readily assimilable in lower years	32	25	15
Textbooks so arranged	16	4	3
Full appreciation of area gained	6	9	6
Appropriate for comparison with local area	25	3	1
Time insufficient for other approaches	<u>15</u>	<u>3</u>	<u>3</u>
	100	100	100
Number of responses	40	64	240
Percentage of responses concerned with regional organization		48	

TABLE IX (cont'd)

2. Systematic organization

Reasons for systematic organization	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Years One and Two:			
Evokes interest and response	33	15	14
Affords teaching of basic principles	33	15	10
Years Three to Six - influence of examinations:			
Ordinary Grade	--	29	10
Higher Grade	--	--	29
Depth of understanding gained	34	41	34
Affords world coverage	--	--	3
	100	100	100
Number of responses	16	37	124
Percentage of responses concerned with systematic organization		25	

TABLE IX (cont'd)

3. Emphasis on various organizations

Reasons for various organizations	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Evokes interest and response	68	27	27
Years One and Two - varied approaches important	19	19	19
Years Three to Six - Influence of examinations:			
Ordinary Grade	--	45	18
Higher Grade	--	--	28
Better appreciation of subject	<u>13</u>	<u>9</u>	<u>8</u>
	100	100	100
Number of responses	25	35	130
Percentage of responses concerned with various organizations		27	

organization which is better suited for such purpose. In these comments there was an implication that other types of organization of subject matter would be more acceptable if any changes in the examination structure might facilitate this.

Reasons supportive of the regional organization could be construed as suggesting a flexibility in the approach. One group of responses, for instance, reported specifically on the way the regional organization serves the increasing complexity of the subject as pupils acquire more skills and deeper understanding. On the other hand, a larger group, significant in all types of school but particularly in Junior school, indicated that location and distributions of phenomena are better understood by younger pupils through the study of regions. A major characteristic of the regional organization, the study of all significant phenomena in an area, was acknowledged by a surprisingly low percentage of respondents. Also, only a small number outside Junior schools saw regional studies as a useful organization of subject matter for making comparisons with local area studies. The only other influence reported, the content arrangement of textbooks, is, except for Junior schools, of little account.

In contrast to the concerns expressed about the regional organization, no negative comments were made about the systematic studies. The second part of TABLE IX shows the analysis of these responses and whilst the influence of the examinations is a significant element in the comments, no doubts were expressed about the usefulness of this organization. In fact, all types of schools reported positive values by way of pupil interest and response, depth of understanding achieved and the opportunity afforded to teach the basic principles of the subject. These three values might be joined in a common attribute: achieving insights into the subject with the resultant evocation of pupil interest.

Similarly positive comments were made by respondents who adopt various approaches in their programmes. The third part of TABLE IX shows again that the influence of examinations is a considerable factor, but comments were not expressed in the same negative manner as with the regional organization. The advantage of using various organizations of subject matter is obvious and this was clearly acknowledged for junior pupils. The greatest benefit reported, however, was the interest and response of pupils.

Overall, there is little doubt that some concern is felt by teachers about their use of the regional organization, in spite of its acknowledged usefulness from Year to

Year. A good proportion feel influenced by the examination in their choice of this approach and would try other organizations if the examination format were changed. Of all responses from Four Year and Five-Six Year schools, approximately forty-eight percent of respondents reported that the examination influences their choice of organization of subject matter. This percentage appears high and places the examinations' structural organization firmly in the forefront of all influences on school programmes.

The systematic organization and the use of varied approaches found favour with approximately one half of all respondents. Outstandingly, the concern of teachers was with pupil response and understanding. Only a small percentage of respondents in discussing any organization commented on any inherent methodological attribute..

THE SAMPLE STUDY IN SCHOOL PROGRAMMES

The sample study is not universally accepted as a teaching technique in schools. This fact emerges from the responses to the question concerning its use. The percentage of schools in which the approach is used in any year is given in TABLE X.

TABLE X

PROGRAMMES OF STUDIES:
USE OF SAMPLE STUDY APPROACH: BY TYPE OF SCHOOL AND YEAR

Year	Type of School		
	Junior	Four Year	Five-Six Year
A. Positive responses (%)	61	79	83
	Percentage of positive responses		
Approach used in:			
Year One	38	40	41
Two	34	44	35
Three	28	10	8
Four		6	8
Five-Six			8
	<u>100</u>	<u>100</u>	<u>100</u>
B. Negative responses			
Not used in any year (%)	39	21	17
Total number of responses	86	54	173
No response to question (%)	6	9	6

The percentage of Junior schools, thirty-nine percent, not using the approach, in any year is very high considering that one of its primary characteristics is the concern with the development of pupil interest by the use of vivid detail in the study of the life and activity of peoples in varied settings. The percentages for both Four Year and Five-Six Year schools, twenty-one and seventeen percent respectively, are also high considering that geography courses in these schools span from four to six years of teaching.

Examining the Year by Year use of the approach, the pattern for both Four Year and Five-Six Year schools is very similar. In the first two years there is a considerably greater acceptance than in the later years. Of the schools using the approach in the examination years, from Year Four onwards, only a small percentage usage is reported. Considering the overall response, including the negative responses, the approach finds very little favour in these senior years.

In Junior schools, the response pattern shows that the sample study approach is more evenly used over the three years, but even here there is a noticeably diminishing trend after the first year.

Merits of the Sample Study Approach

The reported merits of the sample study approach fell into three broad categories: the opportunity afforded for variety in lesson organization; the pupil orientation of the approach, and the opportunity for the development of subject substance. Of the categories, lesson organization and development of subject substance gained the most numerous responses, but there were significant differences in respondents' views between types of school and between different years. An analysis of the responses is shown in TABLE XI.

Within the category of lesson organization, the possibilities afforded for varied approaches gained the most numerous responses irrespective of year or type of school. The dominant advantage reported was the possibility of flexible uses of source materials, as a consequence of which greater pupil response and interest is obtained. In this respect, many respondents contrasted the approach to the regional technique, which as one teacher pointed out, "... lacks the basic reference sources for the pupil to use and identify with."

Comments concerned with the relationship of the sample study approach to local area study were also grouped under the heading, Lesson Organization. Here, the junior years

TABLE XI

PROGRAMMES OF STUDIES:
MERITS OF THE SAMPLE STUDY APPROACH BY TYPE OF SCHOOL AND YEAR

Merits	Type of School									
	Junior			Four Year			Five-Six Year			
	1-2	3	1-2	1-2	3-4	1-2	1-2	3-4	5-6	
	Percentage of responses									
Lesson Organization:										
Varied approaches possible	23	33	14	13	21	23	27			
Facilitates local to unknown area sequence	5	--	5	13	11	9	--			
Complements radio and TV programmes	12	40	--	19	26	--	32			27
Subject Substance:										
Affords studies of real people and places	12	8	24	25	19	31	27			
Facilitates world coverage of studies	23	8	34	13	20	7	12			
Appreciation of geographical principles	8	43	6	64	11	50	14	52	7	46
Pupil Oriented:										
Pupil involvement	12	25	12	--	9	9	7		7	
Compatible with pupil capacities	5	17	5	6	7	7	16	20	27	100
		100	100	100	100	100	100	100	100	
Number of responses	73	32	77	42	275	56	8			
No response to question (%)	8		12							

where local area study is commonly undertaken were more generally mentioned as a time when the sample study, with its flexibility and interest appeal, can more readily assist the process of moving from observable local conditions to studies of unknown areas. The similarity of both the scale dimension and the type of details studied co-identifies the two studies in the minds of pupils. In Years Three and Four the same organizational advantages were also reported with, in addition, the relative ease with which comparative analysis can be made between the local area and sample studies.

The greater use of audio-visual supplementary services, both radio and television, in Junior schools probably accounts for the high response from these schools concerning the complementary character of the sample study and the programmes offered through those media.

Three types of responses were grouped together under the heading of, Subject Substance: the opportunity afforded for the study of real peoples and places; the opportunity for a world coverage of studies, and the chance to appreciate geographical principles. For Four Year and Five-Six Year schools this response-group was by far the largest of the three categories, shown in TABLE XI.

The emphasis in sample studies on real situations, a factor of scale as well as a purposeful selection of content, was seen as a major advantage except by teachers in Junior

schools. Once again, the approach was contrasted with the regional approach in the minds of most teachers who commented on this aspect. One comment, typical of many, stated:

"The sample study gives concrete understanding of real situations during the years when impressions are being forced and counteracts the superficial impression gained from "doing" a country by the regional method."

The desire to arrange a world coverage of studies in the first two years of geography courses in schools is clearly reflected in the response pattern in this section of the analysis. The very favourable disposition of teachers towards the sample study as a device to serve this end - the size of the response for Years One and Two for each type of school is very high compared with all other responses - clearly shows that the sample study framework for world coverage has emerged as a major alternative to a world regional organization.

The final group of responses under this heading pointed to the opportunities in the approach for teaching geographical principles. Teachers in Four Year and Five-Six Year schools commented on this with Years Three and Four in mind, although the actual number of responses pertaining to those years was considerably less than for the first two years.

The total number of responses under the heading, Subject Substance, indicate that the teachers who use it

consider the sample study to be academically respectable in that the basic tenets of the subject can be developed along with a pupil-interest orientation of content.

The third category of responses are listed under the heading, Pupil Oriented, in TABLE XI. Here, the percentage of responses from Junior schools was greater than that from other schools, reflecting the concern at that level for pupil activity. The possibilities of flexibility in content matter in the sample study can be noted in the range of percentage of responses, from Year One in Junior schools to senior years in Five-Six Year schools, in the section,

Compatible with pupil capacities. In this regard, a challenge to the achievement of pupils underlay the comments of teachers, expressed by one as:

"The sample study is rather like a field trip - details can be observed from photographs and statistics, and deductions can be made. The degree of sophistication depends on the ability of pupils."

Considered in total, the number of favourable responses indicate that the sample study approach is a useful device with various opportunities for its development from Year to Year and in each type of school. In Junior schools its value is seen more for its flexibility in lesson organization and content arrangement, particularly in the Third Year, than in the development of subject substance. In Four Year and Five-Six Year schools the reverse of this is clearly the case.

Very few respondents pointed specifically to the method inherent in the sample study technique of developing concepts from basic detail. If, however, the percentage responses under the headings, Pupil involvement, and Appreciation of geographic principles, are taken to infer a method, there is a definite acknowledgement of this in both Four Year and Five-Six Year schools.

Problems of the Sample Study Approach

Of the total number of responses to the questions about the merits of and problems in using the sample study approach, 384 or nearly forty percent, described problems. This would appear to be a large number for an approach which is widely recommended for geography teaching. An analysis of the problems reported is shown in TABLE XII.

Teachers identified two problems with an approximately similar response-percentage emphasis for each type of school: the amount of preparational and teaching time involved in the approach, and the difficulty of obtaining source materials. The problem of the amount of preparation time spent in assembling and structuring materials is linked with the reported scarcity of materials. A greater supply of the latter, dependent to some degree on the availability of funds, as many teachers pointed out, will undoubtedly reduce preparational time.

TABLE XII
 PROGRAMMES OF STUDIES:
 SAMPLE STUDY: PROBLEMS ASSOCIATED WITH ITS USE:
 BY TYPE OF SCHOOL

Problems	Type of School					
	Junior		Four Year		Five-Six Year	
	Percentage of responses					
Time consuming:						
In preparation of materials	6		5		6	
In teaching	<u>23</u>	29	<u>17</u>	22	<u>15</u>	21
Source material not readily available		28		22		25
Studies difficult to integrate into regional patterns		9		6		14
Fragmentary knowledge results: world picture not clear		6		25		15
Transfer from particular to general difficult for children		28		16		11
Examinations not oriented towards approach		<u>--</u>		<u>9</u>		<u>14</u>
		100		100		100
Number of responses		56		74		254
No response to question (%)		9		10		7

What is more significant to the underlying philosophy of the approach is the number of teachers, upwards of twenty percent of the responses for each school type, who consider that using sample studies is too time consuming. The reasons for this vary between school types. In Junior schools, teachers expressed their concern in one of two ways: either the study has to be re-taught in a regional setting, or, pupils fail to make the connections between the detail and the regional generalizations. These two concerns are somewhat inter-related and are well expressed in two quotations from the replies:

"Sample studies consume too much reading time. The fragmented knowledge that pupils acquire means that the whole region has to be re-taught again,"

and,

"There is a danger that pupils will fail to make connections between individual studies and have only a kaleidoscope of unrelated impressions. There is a need to teach 'systematic' topics, e.g., the seasons, climate, erosion, etc., at suitable intervals. This is time consuming."

These statements suggest either a weakness in the sample study technique itself, or, in the manner in which it is taught. Similar comments were offered by teachers in Four Year and Five-Six Year schools but with the notable difference that the teaching time factor was almost invariably linked with the pressure of examination preparation. Again, quotations from the replies illustrate this view:

"While I agree with the approach and feel it increases the reality in geography teaching, it does not always pay as far as time is concerned as an examination preparation. The fault here may well be in our examination system or technique,"

and,

"Sample studies can take up too much time. The 'O' level examination unfortunately demands a rapid and superficial coverage of a mass of facts widely scattered over the globe."

The percentage of responses specifically mentioning this lack of common orientation of sample studies and examinations are shown in TABLE XII. The figures are sufficiently high to warrant some concern particularly as such comments were volunteered by teachers and not prompted by any directive in the questionnaire.

However, assuming that examinations can be adjusted to cater for the particular method of the sample study, there remains the problem referred to in the discussion of the time factor, namely, that of transfer from particular detail to general concepts. Teachers saw this problem from different viewpoints and these are listed in TABLE XII as, the difficulty of integrating studies into regional patterns, the fragmentary nature of studies when the world scene is considered, and, the particular to general transfer process. Although these viewpoints were analyzed separately, the central problem is clear and the total percentage responses for the three items for each type of school is substantial -

between forty and forty-seven percent. Teachers' comments are illuminating for their perceptiveness of the problem. In addition to the quotations above, the following comments were made:

"Sample studies especially in earlier years tend to give fixed ideas that all studies are exactly typical and that no variation from them is possible,"

and,

"The more intelligent pupils call this 'jumping about' geography. It is easy to lose the overall picture amidst the samples."

It appears from these responses that there exists a teaching problem inherent in the approach. The sample study demands that concepts be developed out of the examination of factual matter found in source materials. Effective teaching along such lines demands either experience and expertise in the person of the teacher, or, the supply of carefully structured programmes which are organized conceptually and are operationally designed for pupil involvement. The responses suggest that teachers are not fully aware that the sample study is a different technique from the regional approach, and in the absence of structured sample study programmes that could act as teaching models it is likely that some disquiet about the approach will continue.

Considering all the responses, both positive and negative, the sample study approach does appear to be an

integral part of the first two years of programmes in many schools. Its further use in upper years, at present not very extensive, appears to be conditional on changes in the character of the examinations. The more positive nature of the total response suggests that teachers generally would adopt it more wholeheartedly if well structured programmes, along with source materials, were available. If such was the case the problem of transfer would in some sense be met but it would appear that the skill of the experienced geography teacher would still be necessary to exploit fully the approach.

THE THEMATIC APPROACH IN SCHOOL PROGRAMMES

The use of a thematic approach in geography teaching is neither widespread nor is it consistently used from Year to Year. There are also differences between types of schools in attitudes towards the approach and in the type of topics developed.

In TABLE XIII the percentage of responses reporting no use of thematic studies is high for each type of school, particularly for Junior and Four Year schools. This is surprising in view of the overall commendatory remarks by those respondents who do adopt such studies in their

TABLE XIII
PROGRAMMES OF STUDIES:
USE OF THEMATIC APPROACH: BY TYPE OF SCHOOL AND YEAR

Year	Type of School		
	Junior	Four Year	Five-Six Year
A. Positive responses (%)	61	56	73
Percentage of positive responses			
Approach used in:			
Year One	25	17	14
Two	31	21	15
Three	44	36	21
Four	--	26	20
Five-Six	--	--	30
	100	100	100
B. Negative responses			
Not used in any Year (%)	39	44	27
Total number of responses	86	54	173
No response to question (%)	9	16	8

programmes. The approach, because it is organized with similar purposes to the sample study method as far as pupil interest and involvement are concerned, might reasonably be expected to find favour in a majority of schools. Respondents did perceive many qualities in thematic studies. The analysis in TABLE XV shows clearly that pupil involvement gained significantly greater numbers of responses for each school type than any other category.

The percentage of responses of use of the thematic approach for each school type follow a similar pattern. In each, reported usage increases to a high point in the Third Year followed by a decline in the examination year. In Five-Six Year schools this is followed by a marked increase in the senior years. The availability of time is conceivably an important factor in this use pattern. In the first two years with only two periods per week, there is a common urge to concentrate on global content coverage. Where time pressures are relaxed, such as during post-examination periods, the approach finds greater favour. An additional factor in its use pattern is that teachers consider the approach as being more appropriate for pupils who have acquired some background skills and geographical concepts. Comments such as: "The approach is excellent for more mature pupils who can see that many factors have to be taken into account and

that solutions are not hard and fast," were typical of many responses.

Types of Thematic Studies of Most Interest
to Teachers and Pupils

The replies to the question on the types of topics of most interest to teachers and pupils were not as complete as most other replies. However, the total number of responses from each school type was sufficient to justify an analysis which is shown in TABLE XIV.

The outstanding feature of the responses was the very small number of themes primarily concerned with the physical environment. Nearly all the topics had human or social interests firmly in focus, and even where studies were concerned with man in his environment the approach was culturally oriented.

The two most popular groups of themes were those concerned with population and resources, and studies of commodities and occupations. The former group found most favour with teachers of senior pupils in both Four Year and Five-Six Year schools. These themes were mainly about population pressures, management and exploitation of resources, and the spectre of hunger in the under-developed world.

Studies of commodities and occupations were most favoured with younger pupils in all schools, but particularly

TABLE XIV
PROGRAMMES OF STUDIES:
THEMATIC APPROACH: TOPICS OF MOST INTEREST
TO TEACHERS AND PUPILS: BY TYPE OF SCHOOL

Topics	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Population and resources - under-developed areas	9	30	33
Socio-economic problems	3	--	6
Commodities and occupations	59	48	16
Regional themes	14	9	25
Systematic (physical) themes	--	4	5
Local area themes	12	9	9
Teacher-pupil interest- centred topics and current events	<u>3</u>	<u>--</u>	<u>6</u>
	100	100	100
Number of responses	68	46	248
No response to question (%)	28	22	27

in Junior schools, and often were reported as, "project-topics". Descriptions of these studies showed a common pattern in their study procedures, in that they concentrated on one staple commodity - oil, coal, sugar or rubber, for example - and traced its production from the raw material stage to the finished marketed product. In the case of occupational studies, a social purpose was frequently given for their adoption in Junior schools, namely they would be useful to pupils leaving in the Third Year.

Themes concerning an area which had previously been studied in regional studies in the geography programme were popular in Five-Six Year schools, again with senior pupils and during post-examination periods. Examples of such themes reported were : The effect of water shortage on agriculture in Australia, Difficulties of development in Arctic Canada, and Highland depopulation. Of the remainder of the responses, themes associated with the local environment were not numerous but those reported were frequently associated with fieldwork. There were a few themes of a socio-economic nature, such as the problem of racialism, and some teachers reported in general terms on themes motivated by current events.

Of all the themes reported there was a noticeable global spread with a majority of studies concerned with areas or problems outside the British Isles. The under-developed

world, as noted, was one major focus of interest, the Commonwealth countries was another. Outside these areas however, there was little thematic study reported except for the commodity studies which by their nature cut across many areas. Overall, there was a traditional element in many themes, the three studies quoted above being cases in point. Apart from the study of the under-developed world, only a small number of studies were reported on current issues, such as, planning and re-design of urban environments, or pollution problems, many aspects of which could have been studied in the context of the local environment.

The Merits of the Thematic Approach

The analysis of the reported merits of the thematic approach are shown in TABLE XV. The analysis is divided into type of school only, as the nature of the responses, mainly blanket statements of use in "senior" or "junior" years, precluded any meaningful analysis Year by Year.

The reported merits followed roughly the same response pattern as those reported for sample studies, except that they differed proportionally. The categories shown in TABLE XV, lesson organization, subject substance and pupil orientation, were readily discernible in the responses.

Teachers considered the pupil orientation of thematic studies as of significantly more importance than that of

TABLE XV

PROGRAMMES OF STUDIES:
MERITS OF THE THEMATIC APPROACH: BY TYPE OF SCHOOL

Merits	Type of School					
	Junior		Four Year		Five-Six Year	
	Percentage of responses					
Lesson Organization:						
Varied approaches possible	10		9		5	
Facilitates co-ordination of varied sources and aids	16		9		3	
Affords post-examination activity	--	26	<u>4</u>	22	<u>2</u>	10
Subject Substance:						
Contemporary and meaningful studies possible	13		22		11	
Appreciation of geographical principles and methodology for older pupils	--		9		12	
Facilitates world coverage of studies	<u>4</u>	17	<u>4</u>	35	<u>6</u>	29
Pupil Oriented:						
Affords pupil involvement	46		30		53	
Interest and appreciation for less able pupils	11		9		5	
Facilitates depth of understanding	--	<u>57</u>	<u>4</u>	<u>43</u>	<u>3</u>	<u>61</u>
		100		100		100
Number of responses	71		66		285	
No response to question (%)	22		22		14	

sample studies. More than one-half of the responses from Five-Six Year schools considered this attribute of outstanding significance, a typical response being: "Pupils can become involved in a meaningful study which demands their active study and discussion for results." In Junior schools, too, the same endorsement was evident, and for all schools the usefulness of the approach with less able pupils was noted.

The advantage of using the approach as a means of developing the substance of the subject, noted by teachers in each school type, but particularly Four Year and Five-Six Year schools, drew attention to an important aspect of the technique, namely, the grouping together of geographical regions which would not otherwise be considered as having any geographical relationship. This matter of methodology was only rarely commented on by teachers in replies to any questions on geographical approaches in their teaching. Generally, as in this instance, such comments were made with older pupils in mind.

A small proportion of responses mentioned the facility with which a world coverage could be undertaken, but most responses in the category, Subject Substance, in TABLE XV, were directed at the contemporary and meaningful nature of the approach. Most of these replies could be summed up in the statement made by one teacher:

"It is important to relate the study of geography in school to the real world. Some children like to exclude external things and keep within the confines of a book. The thematic approach helps to stimulate interest in real happenings and makes them see the need to think. It brings home to children the relevance of geography to the world of today."

This social purpose as against an academic one was more in evidence in responses concerning junior pupils in Junior and Four Year schools.

The usefulness of thematic studies in facilitating lesson organization was clearly an important attribute for teachers in Junior and Four Year schools. The principal aspects of this are, the variety of approaches made possible in lesson procedures, and the possibilities of co-ordinating various sources and aids. The use of supplementary materials in a non-text organized study was frequently referred to in elaboration of such comments.

Finally, there is no doubt that teachers endorse the thematic approach as engaging and beneficial for pupils and interesting for themselves, but examination and time pressures appear to preclude more widespread adoption of it. Teachers tend to see thematic studies as being more appropriate for more mature pupils but there is good evidence that pupil involvement in studies may be obtained at all levels.

THE CONCEPT OF THE NATURAL REGION IN
PROGRAMMES OF STUDIES

The concept of the natural region has long been a useful organizational framework for world survey-type geography courses. The reasons given by respondents for the sequence of studies in their schools revealed that the concept is still in use, particularly in the beginning years of geography programmes. An analysis was made to ascertain how widespread is the use of the concept, and with which regions or continents it is associated. TABLE V shows that the response percentage for Human/Natural Regions in each of the three parts of the table is high in the early years in all schools and also in Years Five and Six in Five-Six Year schools. This response however, also includes studies in human geography which account for almost all the responses beyond Year Two, so the analysis was confined to those responses referring to natural regions in all Years One and Two and in Year Three of Junior schools.

The analysis in TABLE XVI shows that the natural regions concept is still adopted in schools where a world coverage is attempted in the first two years, in Junior schools as a framework for thematic studies of commodities or products, and elsewhere with studies of the Southern Continents. Whilst the number of respondents reporting the use of the concept is proportionally small, approximately twenty-eight

TABLE XVI

PROGRAMMES OF STUDIES:
 AREAS OR TOPICS ASSOCIATED WITH THE NATURAL REGIONS
 APPROACH IN THE JUNIOR YEARS OF EACH TYPE OF SCHOOL

Areas or Topics	Type of School and Years		
	Junior	Four Year	Five-Six Year
	Years 1-3	Years 1-2	Years 1-2
	Percentage of responses		
Southern Continents	--	10	15
Commonwealth	--	--	3
World	80	90	82
Commodities or Products	<u>20</u> 100	<u>--</u> 100	<u>--</u> 100
Number of respondents who commented on the Natural Regions Approach	10	18	60
Total number of respondents	54	86	173

percent, it is nevertheless significant that the majority of pupils exposed to geography teaching in secondary schools are in these first two years, and that many of them not continuing with geographic study may well leave school with a notion of the subject which is based on a philosophical framework first outlined over fifty years ago.

The association of the natural regions concept with studies of the Southern Continents in the Junior years might be explained by the ease with which the concept can be applied to such large regions. As one respondent stated:

"In the Southern Continents there are plenty of examples of fairly primitive communities with a straightforward connection between environment and man and a very clear link between altitude, climate and vegetation, and between distance from the Equator, climate and vegetation."

Such reasoning was common in the replies. Three integral aspects of an environmentalistic approach are discernible, overall, in the comments: the large study area, the search for physical-human environmental connections, and, the choice of so-called primitive communities as supportive examples.

THE STUDY OF THE SOUTHERN CONTINENTS IN JUNIOR YEARS

The analysis in TABLE V shows that the study of the Southern Continents usually occurs in the first two years of school programmes. It was noted also in the sequence of studies outlined in the responses that the study of the Southern Continents almost invariably followed local area studies, and that both these studies were frequently associated with the teaching of general principles. The underlying reasons for this sequence seemed worthy of analysis, for the juxtaposition of a study of the Southern Continents and local area studies seemed strange in view of the very real differences between them of landscapes, cultures, and areal magnitude.

TABLE XVII shows the analysis and it is clear that the Southern Continents are considered by teachers to offer opportunities for ease of study in the initial years of teaching, and that pupil interest in these regions is an important factor in their study at this level.

There are differences between school types, Junior and Four Year schools emphasizing pupil interest more than Five-Six Year schools, but the two reasons together gained a high and similar percentage response from each school type. The contrast with the local area was another important reason given for the study. This could in one sense be linked with

TABLE XVII
 PROGRAMMES OF STUDIES:
 SOUTHERN CONTINENTS: REASONS FOR INCLUSION
 IN PROGRAMMES OF STUDIES IN YEARS ONE AND TWO:
 BY TYPE OF SCHOOL

Reasons	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Ease of Study: uncomplicated	40	37	63
Pupil interest in region	20	19	7
Marked contrast with local area	35	37	23
Not stressed in later years	--	7	7
Correlates with other subjects	<u>5</u>	<u>--</u>	<u>--</u>
	100	100	100
Number of respondents who commented on the inclusion of Southern Continents in programmes	14	12	31
Total number of respondents	54	86	173

the reasons discussed above, for the strangeness of peoples and places stimulates pupil interest.

The reasons given for the relative ease of study fell into two broad groups. Firstly, the regions provide clear examples for the application of geographical principles in the relatedness of their climate and vegetation and types of human response. Secondly, as the regions largely produce primary produce and contain relatively few industrial areas, studies fit into the common sequence of studying agriculture before manufacturing - the latter being studied in the Third or Fourth Year. From the teachers' viewpoint these reasons have the support of traditional practice.

The interest of the pupils in the Southern Continents was explained mainly by the marked contrasts of the environments compared with the local scene, examples such as, different seasons, and the strangeness of peoples like the Australian aborigine and the Hottentot being given. Views were also expressed that real ties exist between Europe and these regions, all of which was summed up in one comment:

The Southern Continents exemplify a complete contrast of environment from Britain, yet their cultural ties with European countries, particularly Scotland, make their study both interesting and less complicated than Asia and Europe."

CONCLUSION

Considering the analysis of the programmes of studies and the reasons given for the choice of topics, it is clear that regional studies are the most dominant in school programmes but there is a reduced emphasis on this approach the more senior the year. Local area studies, studies of the British Isles, and the Southern Continents are common components of programmes in the first year. During the first two years an attempt at a world coverage can be discerned. In the middle years, mapwork studies assume importance and studies of North America, Europe and the British Isles are characteristic. In the senior years, a balanced programme is evident but there are repetitious elements in it. Asia and the Southern Continents are almost neglected as points of study from Year Three onwards.

In Junior schools the choice of programmes is largely determined by pupil interest and opportunities for their involvement. In junior years in all school types, the concept of the natural region persists as a convenient framework for world surveys. At this level too, studies of the Southern Continents seem to appeal both to pupils and teachers in terms of interest and, as reported, ease of study.

In Four Year and Five-Six Year schools, the influence of the nature of the examinations is a major one, a fact which is widely acknowledged with some concern by many teachers.

CHAPTER FIVE

TEACHING AIDS IN GEOGRAPHY TEACHING

The responses to questions 10 and 11 in Part I of the Questionnaire, concerned with the values of teaching aids in geography teaching, the frequency of use of several specified teaching aids, and the problems involved in their use were each analyzed according to the type of school and also by year of teacher graduation. The analysis revealed a pattern in the type and use of teaching aids and identified a number of problems.

THE VALUES OF TEACHING AIDS

There was a high response to the question concerned with the values derived from the use of teaching aids, only five percent, approximately, failing to respond. The number of responses in which values were not specifically stated was also low, therefore an extensive base of evidence was available for analysis.

The responses fell into four major categories shown in TABLE XVIII. They are: those concerned with the process of learning, both remembering and understanding; the usefulness

TABLE XVIII
VALUES DERIVED FROM THE USE OF TEACHING AIDS :
BY TYPE OF SCHOOL

Values	Type of School					
	Junior		Four Year		Five-Six Year	
	Percentage of responses					
Learning - remembering and understanding	31		30		29	
Lesson management - facilitate a variety of procedures	28		27		28	
Subject values:						
Substance - essential for development	22		33		30	
Methodology - essential to demonstrate process	<u>11</u>	33	<u>6</u>	39	<u>10</u>	40
Considered to be valuable but not specified	<u>8</u>		<u>4</u>		<u>3</u>	
	100		100		100	
Number of responses	94		163		865	
No response to question (%)	6		5		5	
Number of respondents	35		65		325	

of teaching aids in lesson management or teaching procedures; their vital role in developing the substance of the subject, and their value in demonstrating the methodology of the subject. Within each major category there were a number of varying attitudes, but all came within the broader description of the category.

The responses concerned with the value of teaching aids to the learning process mainly pointed to the factors of clarity, vividness and reinforcement in assisting the act of remembering and understanding. Within the category, approximately forty-eight percent noted the vivid impact and lasting impression created by aids, and the greater effectiveness of the visualizing process over the written and spoken word. As one respondent commented: "Teaching aids can convey conditions of environment, ways of life and landscape, more directly and with more impact than mere description". A further thirty-three percent supported these views but with a slightly different emphasis by regarding aids as clarifying or reinforcing the written or spoken word and thus acting as supports to exposition. Of the remainder in this category, fourteen percent mentioned the usefulness of aids in revision and the consolidation of ideas, and five percent their value in enrichment or wider conceptualizing.

Greater pupil interest during lessons resulting from the use of teaching aids accounted for most of the responses included in the category, Lesson management. Approximately fifty-three percent specifically mentioned interest as developing, or being maintained, consequent on their use. A common type of response was: "Aids bring the subject to life and judiciously used help to prevent boredom." A further twenty-two percent considered that the variety afforded to lessons was an important attribute, and eleven percent acknowledged the opportunity created by aids for activity and pupil participation. The remaining fourteen percent in this category, with no significant differences between types of schools, regarded teaching aids as being important for use with slower learners and low ability classes.

The responses concerned with the importance of teaching aids in developing the substance of the subject and in demonstrating its methodology were the most numerous for all categories and also gained the most responses from each type of school. Of the two aspects, the development of subject substance had significantly more responses. Included in this group are all references to the importance of realistic images in the portrayal of regions, described by one respondent as: "... cutting through language difficulties

and helping to ensure that pupils have a realistic picture of areas they have only heard about." Within the group, forty-nine percent responded in such a manner. In addition, twenty-five percent referred either to the usefulness or the vital role of aids as basic tools of the subject, for the purposes of: reference; location; teaching reading skills, particularly with maps, globes and atlases, and for illustrating ideas and concepts developed in discussion. The remaining twenty-five percent of the responses were equally divided between those who regarded aids as essential for conveying the importance of accuracy in the subject, and those who pointed to their importance in portraying processes in physical geography.

The role of aids in demonstrating the methodology of the subject was referred to by a relatively small number of respondents. A majority of these, fifty-six percent, mentioned the developmental process of methodology, from observation and selection of evidence to analysis and interpretation. The remainder looked upon aids as being necessary for showing relationships between reality and principles, and for developing relationships between different aspects of the subject.

Overall, and disregarding the division of responses into the four categories described, out of a total of 1,122

responses analyzed, the values most frequently mentioned were, the development and maintenance of pupil interest in studies (fourteen percent); the portrayal of realism in landscape patterns (fourteen percent); and the visualizing processes and vivid impact of aids on the minds of pupils (ten percent).

The pattern of percentage responses for each type of school shows no outstanding differences in the values of aids. In fact, in the areas of learning processes and lesson management there is a high degree of conformity of responses. Only in one group, Subject substance, do any differences appear. The respondents from Junior schools placed significantly less emphasis on this aspect than respondents from the more academically oriented Four Year and Five-Six Year schools.

TABLE XIX shows the response pattern according to the four categories. Whilst there is a general correspondence of responses between the four categories there are some differences of emphasis. Older teachers, who graduated prior to 1946, placed relatively less emphasis on the value of aids to learning processes, and slightly more value on their usefulness in lesson management and the development of subject substance. Recently graduated teachers, from 1960 onwards, placed the greatest stress of all groups on

TABLE XIX

VALUES DERIVED FROM THE USE OF TEACHING AIDS:
BY YEAR OF TEACHER GRADUATION

Values	Year of Teacher Graduation			
	Prior to 1946	1946-52	1953-59	1960-66
	Percentage of responses			
Learning - remembering and understanding	26	28	28	33
Lesson management - facilitate a variety of procedures	30	23	26	31
Subject values:				
Substance - essential for development	33	36	28	25
Methodology - essential to demonstrate process	<u>7</u> 40	<u>10</u> 46	<u>13</u> 41	<u>8</u> 33
Considered to be valuable but not specified	<u>4</u>	<u>3</u>	<u>5</u>	<u>3</u>
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of responses	194	263	274	379
No response to question (%)	12	5	2	2
Number of respondents	80	105	103	132

pedagogy, both learning processes and lesson management, and the least emphasis of all on their value in developing subject substance. On the other hand, there is a noticeable tendency that the older the teacher, by year of graduation, the more value is placed on aids in developing subject substance and methodology.

In conclusion, there is no doubt that teachers regard aids as being vital to the teaching of geography. Every respondent reported positively on their value in some respect and not one questioned or raised doubts about their importance. The responses indicated clearly enough, in a proportion of at least three to two, irrespective of school type or year of graduation of respondents, that teaching aids are respected more for their values in learning and lesson management than in developing the substance and methodology of the subject per se.

The relatively low number of responses that pointed to the value of aids for demonstrating or developing the methodology of the subject suggests a relative lack of emphasis on this aspect of teaching, and the secondary role of aids as sources of evidence for analysis and interpretation. On the other hand, the responses that pointed to values in the development of subject substance were the most numerous of all individual categories, and except for Junior schools and more

recently graduated teachers, the most numerous in an analysis by school types and year of teacher graduation.

THE FREQUENCY OF USE OF TEACHING AIDS

The responses to the question on the frequency of use of teaching aids revealed quite clearly that those aids traditionally associated with the subject, atlases and wall maps, are still the most useful to teachers whatever the type of school. Further, these aids are the more popular in the more academically oriented schools.

TABLE XX shows the percentage distributions of responses in three parts, one for each type of school. If the percentage figures in the "Always" and "Usually" columns are added as an indicator of the most useful aids, the totals for atlases and wall maps in the Four Year and Five-Six Year schools are higher than in the Junior schools. On the same basis, the use-frequency of globes is high, and, of the photographic aids, only picture usage is comparable. The photographic aids are, in fact, very significantly lower in usage than atlases, wall maps, and the globe. Grouping the latter aids together and comparing them with the group of films, filmstrips, pictures, photographs and slides, the

TABLE XX

TEACHING AIDS: FREQUENCY OF USE: BY TYPE OF SCHOOL

1. Junior schools

Teaching Aid	Frequency of Use				No response to question (%)
	Always	Usually	Sometimes	Seldom	
	Percentage of responses				
Films	11	10	52	21	6
Filmstrips	7	14	53	20	6
Pictures	32	33	24	11	6
Photographs	16	20	43	21	6
Slides	11	9	28	28	6
Topographic maps	11	11	32	40	6
Atlases	66	28	6	--	--
Wall maps	57	26	14	3	--
Globe	31	21	39	9	6
Number of respondents	35				

TABLE XX (cont'd)

2. Four Year schools

Teaching Aid	Frequency of Use				No response to question (%)	
	Always	Usually	Sometimes	Seldom		Never
	Percentage of responses					
Films	2	9	59	15	15	1
Filmstrips	3	23	57	8	9	--
Pictures	18	47	26	8	1	1
Photographs	9	34	34	17	6	7
Slides	--	14	46	18	22	5
Topographic maps	23	21	39	12	5	--
Atlases	73	26	1	--	--	--
Wall maps	60	31	8	1	--	--
Globe	27	27	36	9	1	1
Number of respondents	65					

TABLE XX (cont'd)

Teaching Aid	Frequency of Use					No response to question (%)
	Always	Usually	Sometimes	Seldom	Never	
	Percentage of responses					
Films	2	8	37	28	25	3
Filmstrips	3	22	49	15	11	4
Pictures	17	35	35	9	4	3
Photographs	13	22	48	14	3	4
Slides	2	17	42	24	15	6
Topographic maps	23	31	40	5	1	3
Atlases	82	17	1	--	--	--
Wall maps	59	27	12	2	--	1
Globe	25	23	42	9	1	2
Number of respondents	325					

frequency responses of each grouping under the "Seldom" and "Never" columns show clearly a much more unfavourable attitude towards the use of photographic materials on the part of teachers. This feature, however, is less evident in Junior schools than in other schools and is particularly noticeable in Five-Six Year schools.

Considering in broad terms the use-frequency of teaching aids, therefore, the aspect of reality portrayed in schools is more frequently that of a highly symbolized, large areal dimension of national-continental proportions, than the detailed, localized scale dimensions of photographic media. The use-frequency of topographic maps which might provide a small-area perspective of a scale sufficient to compensate for the dominantly used small-scale type aids, whilst significantly higher than photographic aids, except pictures, is not, however, as high as any one of the small-scale media.

The least used of all aids are films, filmstrips and slides which, significantly, demand the operation and availability of equipment for their use. Films and slides, in particular, seldom appear as a useful aid outside Junior schools and even filmstrips, potentially the most valuable source of good pictures, have only mediocre usage. Pictures, on the other hand, requiring roughly the same small operational involvement as atlases, wall maps and the globe have

a use-frequency more or less comparable to that of the globe. It appears evident that the degree of operational complexity is one strong factor in the use-frequency of teaching aids.

PROBLEMS IN THE USE OF TEACHING AIDS

The analysis of the responses concerned with problems in the use of teaching aids is shown in TABLE XXI. The number of responses in which there were no problems stated was small, approximately six percent for each type of school. The nature of the response to the question is analyzed at the bottom of the table.

In all three types of schools, the outstanding problem stated was the lack of equipment or inadequate facilities for the effective use of aids. This was particularly the case with those aids demanding equipment for their use; films, filmstrips, and slides. The most common problems are: the non-existence of, or inefficient black-out facilities, and the lack of readily available projectors. These inadequacies place a burden on teachers in that arrangements have to be made for room changes to places where facilities are available. This has a detrimental effect on the use of aids, as one teacher noted: "... because I have to change rooms, there is no scope for their spontaneous use."

TEACHING AIDS: PROBLEMS ASSOCIATED WITH THEIR USE:
BY TYPE OF SCHOOL

Problems	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Lack of, or inadequate facilities and equipment	47	57	61
Non-availability or poor quality of materials	19	25	18
Time consuming in proportion to value derived	18	13	14
Classes too large for efficient use	<u>16</u>	<u>5</u>	<u>7</u>
	100	100	100
Response (percentage in brackets)			
Number of responses analyzed above	77 (77)	140 (77)	765 (79)
Number of responses in which "no problems" stated	2 (6)	3 (5)	19 (6)
Number of responses in which improvement in facilities pending	2 (6)	6 (9)	23 (7)
No response to question	4 (11)	6 (9)	26 (8)
Number of respondents	35 (100)	65 (100)	325 (100)

Another view expressed was: "... as another room has to be arranged, I tend to show a number of filmstrips at a time rather than the relevant one at the appropriate time in the programme." The extent of this concern with equipment inadequacies can be further noticed in TABLE XXII. This analysis shows that out of 765 responses recorded, 445, or 58 percent, specifically mentioned problems with films, filmstrips and slides, and of these almost one-half referred to inadequate facilities.

The non-availability or poor quality of materials was of lesser concern than inadequacy of facilities. Again, films, filmstrips and slides were most frequently mentioned as presenting the greatest difficulties, as the Five-Six Year school responses show. The non-availability of these aids on requested dates, and their arrival at inconvenient times with respect to programme timetables, were the most frequently noted complaints, aptly summed up by one teacher: "... unless films and filmstrips are owned by the school, the problem of synchronization with the course is considerable." Films were generally criticized because of their length which creates procedural problems, described in one reply:

"Most films last thirty minutes, hence follow-up lessons are usually several days later by which time pupils have only a hazy recollection of the content. Without a follow-up lesson, films are largely wasted."

TABLE XXII

TEACHING AIDS: PROBLEMS ASSOCIATED WITH THEIR USE
IN FIVE-SIX YEAR SCHOOLS: BY TYPE OF TEACHING AID

Problems	Type of Teaching Aid				
	Films	Film Strips and Slides	Pictures and Photographs	Topographic Maps, Atlases, Wall Maps, and Globes	General: Teaching Aids not Specified
	Percentage of responses				
Lack of or inadequate facilities and equipment	43	49	47	58	97
Non-availability or poor quality of materials	25	27	21	16	--
Time consuming in proportion to value derived	27	18	14	--	--
Classes too large for efficient use	<u>5</u> 100	<u>6</u> 100	<u>18</u> 100	<u>26</u> 100	<u>3</u> 100
Number of responses	244	201	68	43	209
Number of respondents	325				

The out-of-date character of photographic aids was also frequently mentioned as a reason for their lack of use. This problem of redundancy in aids is a continuing one, particularly in regions of rapidly changing conditions, as in developing countries, where there is a tendency, if such aids are used, as one teacher noted: "... to show traditional ways of life no longer applicable except in an historical sense."

There were relatively few problems stated concerning other aids. The lack of display space and of storage space for large-scale maps, and the inadequacy of desks when maps are in use, were the principal problems mentioned. Approximately twenty-seven percent of respondents who commented on large-scale maps noted the difficulty of obtaining foreign maps. The number commenting on this was very small however, approximately one percent overall, which probably suggests that such maps are very rarely used in schools.

Where the amount of time available for geography teaching was considered by respondents to be limited, the anxiety concerning the quality and availability of aids and equipment led to concern about the value of their use. The percentage responses indicating this are shown in TABLE XXI,

Time consuming in proportion to value derived , and TABLE XXII shows this concern to be entirely with photographic aids. The number of periods per week, commonly two in Year One and Two, four in Year Three and Four and five or six in

senior years, whilst adequate for the use of aids, particularly in upper years, does not appear to be so in the minds of some teachers. The percentage responses concerning this, shown in TABLE XXI, whilst not appearing to be too significant, is nevertheless high, when the value of photographic aids to geography teaching is considered. Furthermore, the reasons given for their non-use, examination pressures and a full curriculum, might impart unfortunate attitudes in the minds of pupils. One respondent reported clearly on this:

"The big problem is time. The curriculum being what it is does not allow much time for extensive use of filmstrips or films until the S.C.E. examinations are over, which of course lessens the benefit that pupils get from these aids."

A consequence of this practice, as frequently stated, is that photographic aids are regarded as entertainment, or as a diversion from the main effort of learning.

The size of classes as a factor in the efficient use of teaching aids gained the lowest number of responses of any category, although it does appear to have some significance in Junior schools. Problems were reported with respect to those aids requiring individual or shared copies for their effective use such as, pictures, photographs, and topographic maps (TABLE XXII). Obviously, with such aids class size is a factor in their use. It is likely that teachers who develop laboratory type learning activities might be hindered by large classes which would present less

problems in formal instructional procedures. It is significant that approximately eighty percent of those respondents who stated that they had no problems also reported that they had a new or a well-equipped geography room available, or, that such a room would shortly become available in the school. The percentage of such responses, shown separately in TABLE XXI, is significant enough to suggest that many problems concerning the use of teaching aids would largely disappear given centralized and adequate facilities. This observation whilst applying particularly to those aids demanding equipment or facilities for their use would not, however, apply to the other major problems reported, namely, the availability of aids at appropriate times and the quality of aids, both in their up-to-date character and appropriateness.

CONCLUSION

Teachers regard teaching aids as essential to the teaching of the subject, but see their role more as aids to learning than to developing the substance, and particularly the methodology, of the subject. The least used of all aids is the group of photographic aids. The aids traditional

to the subject, atlases, wall maps and the globe, are used most frequently, providing only a small-scale perspective on any studies. The inadequacy of facilities and equipment is the most reported difficulty but this can be overcome by the provision of properly equipped rooms.

Taking into account the problems involved in the use of teaching aids, the frequency of use of the various kinds, and teachers' views on their value, there is good evidence to suggest that aids are considered as being mainly supportive of explanatory techniques in classroom procedures.

CHAPTER SIX

FIELD WORK IN SCHOOLS

All teachers were asked to list their opinions of the values of field work whilst departmental heads only reported on the frequency, nature and associated problems of field work in their schools. An analysis was made of the responses in each of these categories.

THE VALUES OF FIELD WORK

The values derived from field work as reported by teachers in answer to question 12, Part I of the Questionnaire fell into two broad categories: benefits in the development of the subject, and benefits to the pupils. The responses were analyzed from three aspects: according to the type of school; the size of the urban area in which the school is located, and, the year of graduation of the respondent. The percentage of responses was particularly high for Five-Six Year schools and good for Four Year and Junior schools.

The analysis in TABLE XXIII according to type of school shows, proportionally, an approximate similarity between the three school types. The value of field work to the

TABLE XXIII

VALUES DERIVED FROM FIELD WORK:
BY TYPE OF SCHOOL

Values	Type of School					
	Junior		Four Year		Five-Six Year	
	Percentage of responses					
Subject values:						
Methodology: demonstrate observations, recording, relationships	31		24		33	
Substance: demonstrate location, perspective	10		13		14	
Map studies given significance	<u>8</u>	49	<u>10</u>	47	<u>7</u>	54
Pupil values:						
Reality: first-hand experience	23		19		22	
Environmental awareness	7		11		4	
Stimulates interest and curiosity	<u>21</u>	51	<u>18</u>	48	<u>17</u>	43
Lesson management: varied procedures		<u>--</u>		<u>5</u>		<u>3</u>
		100		100		100
Number of responses	55		120		688	
No response to question (%)	12		10		3	
Number of respondents	35		65		325	

process of subject development, particularly methodology, and the benefits to the pupil, gained a roughly equal number of responses for Four year and Junior schools. For Five-Six Year schools teachers saw more value in the area of subject development rather than pupil benefits. Little comment was made about the variety of lesson procedures afforded by field work.

Of those teachers who commented on the importance of field work to methodology, approximately forty-seven percent noted the value of training in accuracy of observation and recording; twenty-five percent the importance of showing relationships in landscape features, and ten percent the importance of establishing principles from observable data. All responses in this group emphasized in some manner the value of field work as a "way of doing" that is inherent in the subject. Characteristic of responses in this group was: "Pupils can learn how position, relief, land-use and communications are inter-related and why careful and accurate observations are necessary for analysis."

Field work as a means of furthering understanding of the substance of the subject was noted in two ways: in terms of concept development, and, in the better understanding of mapwork skills. The concepts of location analysis, landscape change, environmental balance, and geographical perspective were mentioned, usually with older pupils in

mind. Concerning the concept of geographical perspective, many teachers implied or obliquely alluded to this in their replies, but few directly pointed to it as did one respondent: "The field study of a small area in detail demonstrates the importance of geographical perspective and scale, a problem which textbooks gloss over." The study of maps in the field is usually thought of as essential in developing greater understanding of map scales and symbols, yet few respondents considered it to be important.

One important element that teachers identified in the value for pupils of field work was the direct contact with the real world, described by one teacher as, "... the geographer's laboratory." This contact was seen from two aspects: the social value: "Field work emphasizes the immediate value of geography in the everyday world", and, the learning element: "Field work deals with concrete facts in real situations and these are more easily remembered by pupils." The social element was also implicit in comments concerning the greater environmental awareness consequent on field work. Almost invariably, local studies were mentioned in this context: "First-hand observation in the local area provides the pupil with local standards of reference, and helps him to see his environment in a more meaningful way."

The other important beneficial value to pupils reported

by teachers was stimulation of interest and curiosity. Here, in fifty-three percent of the responses teachers noted a variety of advantages: personal involvement and self-learning, development of initiative, and the stimulation of personal exploration. Another large group of responses, forty-four percent, pointed to the stimulation of interest in the subject as well as in outdoor activities, such as, walking, hostelling and orienteering.

Asked to list the values of field work in order of importance most teachers, eighty-two percent, gave two or more values. The values listed first were: reality: first-hand experience, thirty-three percent; subject methodology, twenty-nine percent; stimulates interest and curiosity, fourteen percent; subject substance, thirteen percent; map studies given significance, six percent, and, environmental awareness, five percent.

Clearly, teachers see the value of study in the real world, at first-hand, and the demonstration and teaching of geographical method as of prime importance in field work. The most common combinations of field work values, as reported in rank order were made up of: subject methodology; reality; first-hand experience, and stimulates interest and curiosity. Together, combinations of these three values accounted for nearly thirty-six percent of all replies.

The responses were also analyzed according to the urban location of responding schools and the results are shown in TABLE XXIV (see Appendix III for the classification of urban areas). As can be seen in the analysis, teachers in the Edinburgh area appear to differ most in their consideration of field work values, noticeably in their lesser concern with the values of field work in subject development. The values that appear to account for the difference are, the greater importance attached in Edinburgh to the reality of first-hand experiences, and the lesser importance attached to methodology as an outcome of field work. Of lesser note, teachers in the Clydeside area and in settlements of less than 25,000 see the value of field work in furthering map studies of minor significance compared with the other areas. Overall, the two areas most unlike are Clydeside and Edinburgh, the other three urban groupings bearing some measure of similarity of responses. The differences are marginal, apart from the Edinburgh responses, but the significance of these findings cannot be accounted for from the replies.

As a further assessment of the responses, an analysis was made according to the year of graduation of the responding teacher and the results are shown in TABLE XXV. Again, there is no wide divergence of responses between these

TABLE XXIV

VALUES DERIVED FROM FIELD WORK: BY FIVE URBAN GROUPINGS

	Size of Urban Area								
	Clydeside	Edinburgh	Aberdeen and Dundee	Urban areas of:					
				25,000-100,000	Less than 25,000				
				Percentage of responses					
Subject values:									
Methodology: demonstrate observation, recording, relationships	33	23	32	31	32				
Substance: demonstrate location, perspective	18	6	10	9	13				
Map studies given significance	<u>6</u>	<u>13</u>	<u>13</u>	<u>10</u>	<u>6</u>	50	51		
Pupil values:									
Reality: first-hand experience	19	32	26	25	21				
Environmental awareness	6	4	5	5	5				
Stimulates interest and curiosity	<u>15</u>	<u>17</u>	<u>12</u>	<u>17</u>	<u>20</u>	46			
Lesson management: varied procedures	<u>3</u>	<u>5</u>	<u>2</u>	<u>3</u>	<u>3</u>	100	100	100	100
Number of responses	212	72	74	86	419				

VALUES DERIVED FROM FIELD WORK:
BY YEAR OF TEACHER GRADUATION

Values	Year of Teacher Graduation			
	Prior to 1946	1946- 1952	1952- 1959	1960- 1966
	Percentage of responses			
Subject values:				
Methodology: demonstrate observation, recording, relationships	32	30	31	33
Substance: demonstrate location, perspective	14	14	15	10
Map studies given significance	<u>6</u> 52	<u>11</u> 55	<u>8</u> 54	<u>6</u> 49
Pupil values:				
Reality: first-hand experience	27	20	19	23
Environmental awareness	1	6	4	7
Stimulates interest and curiosity	<u>17</u> 45	<u>18</u> 44	<u>18</u> 41	<u>18</u> 48
Lesson management: varied procedures	<u>3</u>	<u>1</u>	<u>5</u>	<u>3</u>
	100	100	100	100
Number of responses	133	201	235	294

groupings of teachers. In fact, any differences brought out in the analysis are ones of trend rather than significance. Older teachers for instance, appear to place slightly less emphasis on the value to the pupil of field work than do the most recently graduated teachers. The latter see an approximate balance between outcomes for both the subject and the pupil. The results of this analysis bear some resemblance to the similar analysis on the values of teaching aids in that both analyses show that the youngest teachers place slightly greater stress on pedagogy than teachers graduating prior to 1960 (see TABLE XIX).

THE FREQUENCY AND NATURE OF FIELD WORK

Principal teachers and teachers in charge of geography, in reporting the amount of field work undertaken in their departments, provided sufficient data for analysis of the number and types of trips completed. Overall, the response to the question was high (question 7, Part II of the Questionnaire).

Considering the importance of the benefits, as identified by teachers, accruing from field work for pupils and for the development of the subject, the amount of field work actually

completed during the school year of the survey was very low. TABLE XXVI shows that in about one-third of Junior schools, no field work in any year was completed. Examined Year by Year, the least amount of field work was reported in the first two years, where from approximately two-thirds to three-quarters of all classes in each school type did not participate in this work. This very high proportion is slightly reduced, overall, in the Third and Fourth Years, but it is not until the Fifth and Sixth Years that there is any significant increase in field work. Even at this level, considering the amount of time devoted to geographical study, the proportion of schools reporting no field work completed is very high.

In view of the high proportion of schools reporting no field work, the analysis of the type of field work had to be based on a relatively small population. This is not as satisfactory as anticipated. However, the data was sufficient for an analysis into field work types Year by Year, and also for an analysis of each type.

The field work reported was classified into three groups: excursions, class visits, and surveys. Excursions included trips along a route with halts at appropriate places of interest; class visits embraced all trips to a specific place such as a farm, factory or institution, and

TABLE XXVI
 NO FIELD WORK REPORTED:
 BY TYPE OF SCHOOL AND YEAR

Year	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses for each year		
One	66	76	70
Two	71	69	72
Three	57	45	66
Four		61	60
Five			44
Six*			38
Schools reporting no field work in any Year (%)	35	25	18
Number of respondents	86	54	173
No response to question (%)	8	6	2

*Calculated out of 156 schools where Sixth Year courses reported.

local surveys included all surveys of local features for the collection and analysis of data. TABLE XXVII shows the results of the analysis.

The final column in the analysis shows clearly that, excluding Year Four both in Four Year and Five-Six Year schools, the more senior the year, the more field work is undertaken. As the number of pupils studying geography, however, is proportionately less at each stage in Years Three and Four, and in Years Five and Six, the field work reported does assume a much greater significance in senior years than the figures suggest. On the other hand the small number of trips reported for Years One and Two for all school types, bearing in mind the large number of pupils involved, strongly suggests that field work has very little importance in school programmes at this level.

Of the three types of field work shown in TABLE XXVII, teachers in Junior schools favoured both excursions and class visits, whilst teachers in Four Year schools more noticeably favoured the latter. In both school types, local surveys were by far the least popular. This was not the case in Five-Six Year schools where excursions were clearly the most popular type of trip, and local surveys were increasingly favoured beyond the Second Year. An inference that might be drawn from these patterns is that

NATURE OF FIELD WORK CONDUCTED AND NUMBER OF FIELD
TRIPS REPORTED: BY TYPE OF SCHOOL AND YEAR

Type of School and Year	Type of Field Work			Number of Field Trips
	Excursions	Class Visits	Local Surveys	
	Percentage of responses for each year			
Junior schools				
Year One	41	41	18=100	56
Two	48	39	13	56
Three	36	43	21	<u>98</u>
All Years	41	41	18	210
Four Year schools				
Year One	23	50	27	30
Two	30	52	18	33
Three	33	49	18	63
Four	43	31	26	<u>35</u>
All Years	33	46	21	161
Five-Six Year schools				
Year One	45	28	27	82
Two	50	37	13	70
Three	52	29	19	100
Four	56	20	24	96
Five	43	14	43	160
Six	31	14	55	<u>169</u>
All Years	44	21	35	677

the popularity of class visits in Junior and Four Year schools implies a strong underlying social nature in such trips, whilst the academic emphasis in Five-Six Year schools is reflected in the popularity of certain types of excursions and in local surveys. Any apparent pattern in the analysis however, must be weighed against the decreased numbers in upper years. Excursions, for instance, tend to be more popular with the fewer numbers in Years Three and Four, and local surveys more popular in Years Five and Six.

Bearing in mind the relatively small number of field trips reported, the analysis of the types of trips, by school type and Year, reveals some patterns of fieldwork activity.

In the analysis of excursions, TABLE XXVIII, five kinds of excursions are discernible. Local area map reading referred to any activity specifically for that purpose and, except for Junior schools, was mostly reported as a beginning activity in the First Year. The local area traverse was also frequently reported as an integral part of the beginning local area study in school programmes. The urban-industrial excursion included those trips specifically concerned with urban studies including studies of industrial sites. Trips in this category showed a higher frequency in upper years. In a similar way, rural-agricultural

TABLE XXVIII

FIELD WORK: TYPES OF EXCURSIONS: BY TYPE OF SCHOOL AND YEAR

Type of School and Year	Type of Excursion						Number of Excursions Reported
	Local Area Map Reading	Local Area Traverse	Urban-Industrial	Rural-Agricultural	Physical Emphasis	Other	
Percentage of responses for each year							
Junior Schools:							
Years One-Two	18	10	6	12	22	32	50
Three	20	11	11	12	20	26	35
All Years	19	11	8	12	21	29	85
Four Year Schools:							
Years One-Two	35	12	5	18	18	12	17
Three-Four	8	6	25	22	22	17	36
All Years	17	7	19	21	21	15	53
Five-Six Year Schools:							
Years One-Two	29	21	11	12	11	16	72
Three-Four	10	8	17	26	16	23	106
Five-Six	5	10	19	31	19	16	121
All Years	13	12	16	25	16	18	299

The 'Other' category for Junior Schools was almost entirely Hill Walking, and in Four Year and Five-Six Year Schools, Hill Walking, Coastal Cruises, and attendance at a Field Centre.

excursions, mainly concerned with non-urban landscape patterns, were more popular in senior years. Trips with an emphasis on physical geography, usually the study of the process of landforms and erosion, were more frequent in senior years but also found some favour in Junior schools. Hill walking, an activity commenced in schools in the early years of this century, is still popular, particularly in junior years.

The analysis of class visits shown in TABLE XXIX illustrates the definite urban orientation of these trips. The bulk of the trips reported were to factories and mines, particularly the former, but visits to institutions and public services such as shows, castles and university departments, popular in Five-Six Year schools, had a social purpose as much as a geographical one.

Field work of the survey type shown in TABLE XXX was usually reported as involving either map recording of field data in junior years, or recording and analysis in senior years. The types of survey work reported, apart from some land-use surveys, showed an entire concern with urban environments. Most of the surveys reported were activities well tried over the years and there was little, except in senior years of Five-Six Year schools, of an innovative nature. What little was reported in this respect were surveys

TABLE XXIX

FIELD WORK: TYPES OF CLASS VISITS: BY TYPE OF SCHOOL AND YEAR

Type of School and Year	Type of Class Visit				Transport Centres	Other	Number of Class Visits Reported
	Factories and Mines	Farms	Institutions and Public Services				
Percentage of responses for each year							
Junior Schools:							
Years One-Two	60	13	11	16	--	45	
Three	62	9	17	12	--	<u>42</u>	
All Years	61	11	14	14	--	87	
Four Year Schools:							
Years One-Two	41	6	41	12	--	32	
Three-Four	55	10	17	9	9	<u>42</u>	
All Years	49	8	27	11	5	74	
Five-Six Year Schools:							
Years One-Two	32	27	33	4	4	49	
Three-Four	54	9	31	--	6	48	
Five-Six	35	9	45	--	11	<u>46</u>	
All Years	41	15	36	1	7	143	

The 'Other' category for Four Year and Five-Six Year schools was made up of visits to forestry and hydro-electricity dam establishments.

FIELD WORK: TYPES OF LOCAL SURVEYS: BY TYPE OF SCHOOL AND YEAR

Type of School and Year	Type of Local Survey				Number of Surveys Reported
	Land-Use	Population	Commercial- Industrial	Transport Other	
Percentage of responses for each year					
Junior Schools:					
Years One-Two	6	24	29	12	29
Three	19	10	3	14	24
All Years	13	16	32	13	26
Four Year Schools:					
Years One-Two	--	29	42	--	29
Three-Four	20	15	30	25	10
All Years	12	21	35	15	17
Five-Six Year Schools:					
Years One-Two	16	29	45	--	10
Three-Four	21	12	29	19	19
Five-Six	50	9	10	9	22
All Years	40	12	18	10	20
					17
					<u>21</u>
					38
					14
					<u>20</u>
					34
					31
					42
					<u>162</u>
					235

The 'Other' category for Junior Schools was principally local area project work; and in Four Year and Five-Six Year schools made up of housing surveys and surveys conducted with other departments.

of a geographical-sociological nature, such as, personal attitude and opinion surveys. The outstanding characteristic of the analysis is the small amount of survey work in Junior and Four Year schools compared with Five-Six Year schools. Survey work in these schools spans all years but was particularly well reported for Years Five and Six.

An Assessment of the Field Work Reported

Examining the types of field work and their reported frequency from the point of view of the development of the subject, in both its aspects of methodology and substance, and attempting to disregard the pupil benefits of field work, an assessment might be made of the geographical quality of the field work conducted in schools. Such an assessment could only, of course, be academic, for pupil benefits derived from field work, in both the cognitive and affective domains, are present no matter what type of field work is undertaken. However, certain types of field work do provide greater opportunities, whether they are appreciated by teachers or not, for specifically geographical objectives. Excursions, for instance, present real opportunities in the field for mapwork, both reading and sketching, as well as the examination of spatial patterns and the inter-relatedness of features. Surveys frequently involve the collection and

recording of data in map form with, presumably, subsequent classroom analysis. On the other hand, class visits not infrequently have in mind objectives of a social nature as well as specifically geographical ones, and in some instances the latter may have a subordinate role.

Excursions were the most numerous reported, and surveys and class visits were reported in almost equal numbers. Excursions, apart from local area map reading and traverses, found most favour with senior classes, as did surveys in Five-Six Year schools. Class visits on the other hand tended to be more popular in Junior and Four Year schools. This evidence suggests that the more geographically oriented field work is more likely to be developed in senior years and in Five-Six Year schools. The only exception to this is the beginning field work activities in the first year associated with local area studies which were reported from all school types. In general, upwards of two-thirds of all field work reported appeared to have more discernible geographical objectives than otherwise.

Field Work in Differently-sized Urban Areas

In an attempt to assess the opportunities for field work in differently-sized urban areas, an analysis of the responses was made, according to five urban groupings (see

Appendix III). The analysis is shown in TABLE XXXI. For comparative purposes, it was assumed that one hundred schools had reported from each urban grouping, therefore, the number of actual field trips reported, according to Year, within each group, was adjusted accordingly. In making an assessment of the adjusted data, the variables of teachers' inclinations and abilities concerning field work, and the possible differing attitudes towards field work on the part of local authorities have been ignored. It is acknowledged, however, that these factors might have an important bearing on the outcomes.

The analysis clearly shows that the Aberdeen-Dundee urban size appears to offer significantly greater opportunities for excursions and class visits than do the much larger and also much smaller urban areas. It is also clear that urban areas of a smaller size, of less than 100,000, seem to offer significantly greater opportunities for local surveys. The reasons underlying these findings are obscure. In reporting on the problems of conducting field work the analysis of which appears later on page 235 only eight percent commented on the problem of expense, eight percent on transport problems, and as few as three percent on the unsuitability of the local area for field work, and these replies were not concentrated in any area. The compactness

TABLE XXXI

FIELD WORK AND URBAN SIZE: A COMPARISON IN FIVE URBAN GROUPINGS:
BY TYPE OF FIELD WORK AND YEAR

Type of Field Work and Years	Size of Urban Group by Population			
	Clydeside	Edinburgh	Aberdeen and Dundee	25,000-100,000 Less than 25,000
	Number of trips (adjusted)			
Excursions:				
Years One-Two	41	46	72	41
Three-Four	69	46	134	41
Five-Six	48	38	72	22
All Years	<u>158</u>	<u>130</u>	<u>278</u>	<u>104</u>
Class Visits:				
Years One-Two	40	20	100	30
Three-Four	32	29	61	63
Five-Six	12	50	23	22
All Years	<u>84</u>	<u>99</u>	<u>184</u>	<u>115</u>
Local Surveys:				
Years One-Two	16	--	17	26
Three-Four	16	--	6	41
Five-Six	35	54	33	70
All Years	<u>67</u>	<u>54</u>	<u>56</u>	<u>137</u>
Percentage of reporting schools in urban area in which no field work reported	30%	21%	11%	30%
Number of reporting schools (all types)	63	24	18	27
				167

NB The numbers are not of actual field trips but are calculated, for the purposes of comparison, from the actual number of trips, assuming that one hundred schools reported in each of the urban groups identified.

of smaller settlements possibly encourages teachers to undertake survey work which can embrace the whole area and thus give a sense of completeness. In large urban areas this could not be accomplished without some well organized system of sampling. On the other hand, large urban areas would appear to offer much more opportunity for varied field work experiences of an excursion and class visit type. The evidence in TABLE XXXI suggests that for excursions there is a slight tendency favouring such a hypothesis, but this is not the case for class visits where the opposite seems apparent.

The percentage of reporting schools in which no field work was completed shows that for the Aberdeen-Dundee urban size, significantly more field work was undertaken, and there was the least amount in the Clydeside conurbation and in the settlements of 25,000 to 100,000 population. This is difficult to account for on the evidence available. The Aberdeen-Dundee urban size does appear to offer greater opportunities for field work, as the evidence concerning excursions and class visits shows. The amount of field work reported for all the urban groupings might conceivably show a trend pattern from greater to smaller settlement, or vice versa, but the evidence brings out a rather haphazard picture.

The differences in the character of field work between urban groups as shown in the analysis may also be viewed from another angle, namely, in a comparison of each with the total number of trips reported. In all, there were 437 excursions, 304 class visits, and 307 surveys conducted. Compared with this overall proportion, Clydeside shows a proportion in which excursions are more significant; Edinburgh and Aberdeen-Dundee a very significantly lower number of surveys; settlements of 25,000 - 100,000 very significantly fewer excursions, and for these settlements and those of less than 25,000 a most significantly higher proportion of surveys.

In drawing these inferences from the basic data it must be acknowledged that the data itself is somewhat suspect owing to the small number of reporting schools in each urban group, particularly the three intermediate-sized urban groups. If more field work had been conducted and reported a sounder base might have yielded different interpretations, or firmer conclusions, than those presented.

PROBLEMS INVOLVED IN CONDUCTING FIELD WORK

In view of the importance teachers attach to field work for subject development and in values to the pupil, and, on the other hand, the small amount of field work reported, the problems in conducting field work assume great significance (question 7, Part II of the Questionnaire). The response to this part of the question however, was not as good as other responses to the questionnaire. The analysis of the replies is shown in TABLE XXXII.

The outstanding problem reported from each school type, particularly Four Year and Five-Six Year schools, is the difficulty of making adjustments in timetables and the disruption of other classes. This problem is the more difficult in the first four years where the largest number of pupils is involved, and where in Years Three and Four examination pressures appear to result in rigid timetable arrangements. Some teachers commented strongly on this problem: "Because of the demands of a rigid timetable and the needs of other departments, it is well high impossible to have visits or an excursion for Years One to Four."

Many teachers whilst aware of the intractable nature of timetabling problems were nevertheless convinced that field work had to find a place:

TABLE XXXII
 PROBLEMS INVOLVED IN CONDUCTING FIELD WORK

Problems	Type of School			All Schools	Total number of responses
	Junior	Four Year	Five-Six Year		
	Percentage of responses				
Time-tabling adjustment difficult	27	35	40	37	210
Insufficient time in programmes	15	8	14	14	77
Large classes: insufficient staff	15	18	10	12	67
Pupils unavailable after school hours	2	4	11	9	48
Expense	12	7	7	8	45
Transport	8	9	7	8	44
Weather	6	7	2	3	18
Unsuitability of local area	--	5	3	3	16
Discipline out of school	8	--	1	2	10
Other	<u>7</u>	<u>7</u>	<u>5</u>	<u>4</u>	<u>25</u>
Number of responses	100	100	100	100	560
No response to question (%)	72	85	403		
	35	22	10		

In the 'Other' category eight schools reported a need for guidance in field work techniques; six stated that public cooperation varies; six lacked local area maps, and five noted that their local authority did not favour field work.

"Field work is only of real value when it is integrated into the normal scheme of work so that all pupils can take part. When special arrangements are made pupils are aware of it and don't take the excursion as seriously as they should."

Other teachers commenting on the same problem found the alternatives to normally scheduled field work not satisfactory:

"Field work at the end of term or at a field study centre is valuable for some, but many leave when examinations are finished and the field centre can only be of use to a small group."

Another significant problem reported was the insufficiency of time for field work. On this point opinions came within two groups. The larger group, almost entirely from Four Year and Five-Six Year schools, referred to examination pressures: "The syllabus for Ordinary and Higher levels is too overloaded with general world and regional facts to permit much time to be given to useful field work." The other group was concerned about the amount of time devoted to field work:

"A stimulating experience can be got from field work for many pupils. But a much wider range can be covered in a much shorter time through books and other aids rather than through field work."

A surprising aspect of the analysis is the relatively high percentage of teachers in Junior schools who questioned the amount of time involved in field work. Without the pressure

of examinations most teachers in Four Year and Five-Six Year schools would probably not have considered time involvement to be a problem.

Another problem of equal significance is the large size of classes and the difficulty of obtaining extra supervision during outside activities. For certain types of field work this is a serious problem, as one teacher pointed out,

"I have sometimes taken second years' out to practise map reading, but as I teach 52 of them I find it difficult to fit it in as it has to be done in groups and needs too many helpers."

Failing a reduction in class sizes, any alleviation of this problem can only come about either by timetable arrangements which would allow for extra supervisory staff, already noted as being difficult, or, well disciplined field activities which in itself is inimical to the spirit of field work.

From some teachers who attempt to develop field work outside the normal school timetable, further problems were stated. The unavailability of pupils after school hours and during weekends, mitigated against field work being an integral part of programmes. Teachers, because of this, were loath to undertake essential work at these times. In boarding schools too, the demands of club and sports activities, and of other departments, at times when outside geography work might be developed, were reported as

discouraging features.

Of the other problems reported, the expense of field work was of some significance in Junior schools, but the difficulty of arranging transport, the vagaries of the weather, and the unsuitability of the local area for field work were of marginal significance only. Discipline problems during field work, reported only from Junior schools, could be linked with the size of classes or lack of supervisory assistance.

CONCLUSION

Considering the importance attached to field work by teachers both in the development of the subject and in its benefits to pupils, and considering this against its insignificant role in school programmes, the problems outlined warrant the most serious attention. Whilst some teachers did question the worthwhileness of field work in relation to available time in their programmes, none questioned its value to the subject. The two problems of the inability to organize sufficient time in school timetables, and the pressure of preparation for examinations, which do not test field experiences, are serious concerns worthy of a searching inquiry.

There appears to be different kinds of opportunity for field work types in differently sized urban areas, and possibly, although this was not clear in the evidence, some differences depending on regional location. Any attempts to have field experiences accepted as integrated units in school programmes need to take into account class sizes, restricted time allotment, and the urban location of schools.

CHAPTER SEVEN

TEACHERS' QUALIFICATIONS AND THEIR OPPORTUNITIES
AND PREFERENCES IN GEOGRAPHY TEACHINGAcademic Qualifications of Respondents

A very high percentage of the teachers who responded to the questionnaire, have academic qualifications. This can be seen in TABLE XXXIII. All responding teachers in Five-Six Year schools have degrees, and only three percent in Four Year schools and eight percent in Junior schools did not list a degree (question 3, Pt. I. of the Questionnaire). Of the respondents with honours degrees, shown in the first two lines of TABLE XXXIII, eighty-eight percent of all those with Master's degrees, and ninety-four percent of all those with Bachelor's degrees teach in Five-Six Year schools. In these schools forty-four percent of the responding geography teachers have honours qualifications. By comparison, the specialized background of responding teachers in Four Year and Junior schools is much lower: twenty percent and nine percent respectively. Differences in the academic background of teachers between the types of schools are well marked.

TABLE XXXIII

ACADEMIC QUALIFICATIONS OF RESPONDING TEACHERS

Degrees	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of respondents		
Ph.D., M.A. (Hons.), M.Sc. (Hons.)	3	19	29
B.A. (Hons.), B.Sc. (Hons.)	6	1	15
M.A., M.Sc., B.A., B.Sc.	69	71	48
Degree and Diploma of Education	14	6	8
No degree listed	8	3	--
	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	35	65	325

Year of Graduation of Respondents

There is little difference between the types of school when the year of graduation of geography teachers is considered (question 3, Pt. I of the Questionnaire). TABLE XXXIV shows four periods into which the year of graduation of respondents has been grouped. There is an older group of teachers in Junior schools, but overall, in each school type, there is a reasonably equal balance of age groups.

Membership of Geographical Societies; Geography Working Groups, and Attendance at Geographic Education Conferences

A large percentage of responding teachers, particularly in Junior and Four Year schools do not belong to a geographical society (question 4, Pt. I of the Questionnaire). The analysis in TABLE XXXV shows the responses according to society membership. Overall, both the Royal Scottish Geographical Society and the Geographical Association are favoured in membership in approximately equal numbers. The percentage of membership of a geographical society in each type of school is approximately the same as the percentage of responding teachers with specialized academic qualifications.

An analysis of the membership of working groups or committees concerned with geographic education shows a

TABLE XXXIV
YEAR OF GRADUATION OF RESPONDING TEACHERS

Period in which graduated	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of respondents		
Prior to 1946	26	17	19
1946-1952	17	21	26
1953-1959	23	31	23
1960-1966	26	28	32
No degree listed	8	3	--
	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	35	65	325

TABLE XXXV
MEMBERSHIP OF GEOGRAPHICAL SOCIETIES
OF RESPONDING TEACHERS

Society	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of respondents		
Royal Scottish Geographical Society	3	6	18
Geographical Association	8	6	14
Both Societies listed above	3	3	9
*Other	1	5	6
No membership listed	85	80	53
	<u>100</u>	<u>100</u>	<u>100</u>
Number of respondents	35	65	325

* Royal Geographical Society, National Geographic Society and Association of Ayrshire Geography Teachers

considerably more active involvement on the part of responding teachers from the Five-Six Year schools (question 5, Pt. I of the Questionnaire). Twenty-one percent from these schools having been involved during the previous three years compared with six percent each for Four Year and Junior schools.

Attendance at conferences on geographic education during the previous three years also shows a similar pattern: fifty-two percent of responding teachers in Five-Six Year schools and twenty-seven and twenty-one percent respectively for Four Year and Junior schools having attended (question 6, Pt. I of the Questionnaire).

Teaching Opportunities for Teachers with Academic Specializations in Geography

There is a limited opportunity for geography teachers to teach in their area of academic specialization. This fact was revealed in the answers to the question concerned with specialized training and opportunities for teaching in any specific area (question 18, Pt. I of the Questionnaire). The responses also show that almost one-half of the respondents in each type of school have no specialization within the field of geography. Of those with specialized training, all respondents in Junior schools, forty percent of respondents in Four Year schools, and approximately one-half in Five-Six

Year schools reported either very limited or no opportunity for teaching in their area of specialization. Only a small percentage failed to respond to the question and the analysis of the responses by type of school is shown in TABLE XXXVI.

Almost every response was phrased in general terms and only occasionally was any reference made to a particular level of teaching. In these instances, the development of their specialization with senior pupils was usually mentioned, but invariably this was qualified with the statement that overall there was very limited opportunity for development. It is clear from the evidence in TABLE XXXVI that, in the present situation in schools, teachers see that the only advantage of academic specialization is in the improvement in their own background knowledge. Further, that field work provides them with an opportunity to use this knowledge. A very small number of teachers in Five-Six Year schools, reported some advantages in practical or laboratory type activities. It is also clear that academic specializations have very little importance for teaching in Junior schools.

The areas of specialization listed in the responses were: geomorphology, climatology, cartography, surveying and photogrammetry; and economic, political, population, urban and historical geography. Approximately fifty-nine percent

TABLE XXXVI

TEACHING OPPORTUNITIES IN PROGRAMMES OF STUDIES
FOR TEACHERS WITH SPECIALIZATIONS IN GEOGRAPHY:
BY TYPE OF SCHOOL

Teaching Opportunities	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of responses		
Field Work	--	23	22
Practical or laboratory- type activities	--	--	5
General background value	--	37	24
Very limited opportunity	31	17	29
No opportunity	<u>69</u>	<u>23</u>	<u>20</u>
	100	100	100
Response (Percentage in brackets)			
Number of responses analyzed above	13 (37)	30 (46)	139 (43)
Number of responses in which "no specialization" stated	16 (46)	31 (48)	157 (48)
No response to question	<u>6</u> (17)	<u>4</u> (6)	<u>29</u> (9)
Number of respondents	35 (100)	65 (100)	325 (100)

of respondents stated a specialization in the area of physical geography, mostly in geomorphology, and twenty-seven percent named a specialization in human geography. In terms of usefulness in teaching there were no significant differences between any of these specialized areas, nor between these areas when grouped into physical or human geography.

The general lack of carry over from the knowledge of a specialized area into geography teaching in schools was a cause for considerable comment. Of those with a specialization, approximately forty-five percent offered explanations as to why they were unable to exploit their training in teaching. The principal reason given was the pressure of time and the restrictions imposed on their teaching by examination preparation. There was some concern expressed or implied that the preparation of pupils for examinations, as they are presently structured, might suffer if teachers did in fact spend time in developing their own specializations. All the specializations reported were in the field of systematic geography, and criticisms frequently referred to the regional emphasis in the examinations:

"The strong regional emphasis of 'O' level means that there is not much opportunity for development of any branch of systematic geography."

However, others did make some attempt to work their training into the regional framework:

"The demands of the SCE syllabus in geography have only allowed incidental reference to my own particular interests. I do tend to emphasize the importance of historical factors especially in regional studies. Urban geography is only touched on superficially in connection with map interpretation, and even less in regional work."

Further reasons reported for the lack of opportunity were: the large size of classes in junior and middle years; the lack of suitable equipment for some activities, such as weather observations and surveying, and the difficulty in arranging time table changes for field work.

Where opportunity for teaching in an area of specialization was reported, it was almost entirely during post-examination periods and frequently with small groups of pupils. A very small number of teachers pointed to the greater opportunities for the development of their specialized interests in preparing pupils for the Advanced level, General Certificate of Education examinations, in England. A further small number indicated that greater opportunities occurred in local study activities than in other work:

"I should like to see local geography taken in greater detail and more time and opportunity given to field studies, excursions and local landforms. Unfortunately, most of the time is spent on the study of foreign countries with little reference to Scotland where the opportunity to develop one's interests would be best served."

Classroom Experiments in Teaching Methods

The number of reporting schools in which experiments in teaching methods in geography have taken place during the last few years is very small: one percent of Junior schools; three percent of Four Year schools, and nine percent of Five-Six Year schools (question 8, Pt. II of the Questionnaire).

Of the experimental activities reported, four principal areas of interest emerged: project work; experiments with audio-visual media; field studies, and programmed learning. In almost all of the experiments the concern was with greater emphasis on pupil activity and enquiry. In the case of most of the reports on project work and field studies the opportunity created for work in local area was noted with favour.

A very few teachers, six percent from all school types, volunteered reasons why they have not been involved in classroom experiments and a large majority of these referred to the pressure of examinations.

Subjects Taught by Geography Teachers and Their Geography Teaching Commitments

The subjects taught by respondents in addition to geography are mainly subjects of a literary character - English, History and Modern Studies (question 8, Pt. I of the

Questionnaire). Science subjects were listed so seldom in the replies that they were grouped with a miscellany of other subjects, such as Physical Education and Languages. The analysis is shown in TABLE XXXVII.

More than two-thirds of respondents in Five-Six Year schools taught only geography, a reflection of the specialized character of these schools beyond junior levels. By comparison, less than one-third of respondents taught geography only in Four Year and Junior schools.

The knowledge and professional competence of geography teachers in English, History or Modern Studies would suggest a stronger bias towards literary studies as against a laboratory style analysis which is central to sound science teaching. The preponderance of textbook type teaching in these subjects along with the academic interests of the teachers might be the reason why they are combined with geography.

An analysis of the teaching commitments of respondents showed that a large majority in Five-Six Year and Four Year schools, eighty-one percent and eighty-six percent respectively, teach all years of geography in their programmes (question 9, Pt. I of the Questionnaire). Very few respondents teach three years or less - only six percent in Five-Six Year schools, and eleven percent in Four Year schools.

TABLE XXXVII
 SUBJECTS TAUGHT BY GEOGRAPHY TEACHERS

Subjects	Type of School		
	Junior	Four Year	Five-Six Year
	Percentage of respondents		
Geography only	31	31	68
Geography and - English	14	23	5
History	14	18	4
Modern Studies	9	11	16
combination of English, History and Modern Studies	32	11	--
Other	--	6	7
	<hr/> 100	<hr/> 100	<hr/> 100
Number of respondents	35	65	325

The specialized image of teachers in Five-Six Year schools, noted in the analysis of subjects taught, TABLE XXXVII, tends to be blurred by the evidence that most teachers are committed to a variety of studies with pupils of different ages and abilities.

Preferred Aspects of Geography Teaching

The answers to the question concerned with the aspects of geography teaching most enjoyed by teachers provided three different groups of data: the preferences stated, the appropriate Year(s), and, the reasons for the preference (question 17, Pt. I of the Questionnaire). The analyzed data is shown in TABLE XXXVIII and TABLE XXXIX which is divided into three parts, one for each type of school.

TABLE XXXVIII shows clearly that preferences for human and physical geography together dominated all preferences submitted, and that of these two, preferences for human geography were the more numerous. Human geography is most popular in the junior years in all schools and whilst it is consistently popular through to senior years, physical geography increases in preference from year to year.

By comparison, regional geography and the physical-human relationships approach, although significant in response percentage, except for Junior schools, are clearly not as favoured as human and physical geography. Regional

TABLE XXXVIII

ASPECTS OF GEOGRAPHY TEACHING PREFERRED BY TEACHERS:
BY TYPE OF SCHOOL AND YEAR

Preferences	Type of School					
	Junior	Four Year		Five-Six Year		
	Year 1-3	1-2	3-4	1-2	3-4	5-6
	Percentage of responses					
Human Geography	36	31	27	29	26	24
Physical Geography	10	19	25	15	22	27
Regional Geography	2	11	17	11	14	10
Relationships - Human/ Physical	8	13	13	10	12	14
Sample or Thematic Studies	4	5	2	5	2	1
Local area or field studies	9	5	2	6	2	4
Mapwork with Ordnance Survey maps	14	12	12	13	16	16
Mathematical Geography	3	1	--	1	2	2
No particular preference	<u>14</u>	<u>3</u>	<u>2</u>	<u>10</u>	<u>4</u>	<u>2</u>
	100	100	100	100	100	100
Number of responses	98	106	109	349	438	513
No response to question (%)	16	5			8	
Number of respondents	35	65			325	

geography appears to be slightly more popular during the middle years than at other levels. Map work is consistently enjoyed in all years, in all types of school. In Junior schools it is the second most enjoyable aspect reported, probably testifying to its practical character for this level. All other approaches by comparison are only marginal in popularity.

The pattern of responses in which no particular preference was stated may suggest that there is a greater general concern with the overall study of geography in junior years than in later years. This observation is supported by the lower response to the question from teachers in Junior schools (TABLE XXXVIII). In the more senior years there appears to be a greater opportunity for teachers to develop their own interests and specialities.

Reasons for Preferences in Geography Teaching

The reasons given for teachers' preferences in geography teaching in the case of Junior schools and Four Year schools fell into four main categories: the interest and response of pupils; the personal interest of the respondents; the benefits accruing to pupils, and, the opportunities afforded by the nature of the topic for varied lesson procedure (TABLE XXXIX, Part 1 and 2). In Five-Six Year schools,

TABLE XXXIX

REASONS FOR PREFERENCES IN GEOGRAPHY TEACHING:
BY TYPE OF SCHOOL

1. Junior Schools

Preferences	Reasons for Preferences			
	Pupil Interest	Personal Interest	Benefit for Pupils	Varied Methods Possible
	Percentage of responses			
Human Geography	36	46	71	30
Physical Geography	7	15	--	17
Regional Geography	--	--	--	--
Relationships - Human/Physical	11	5	12	--
Sample or Thematic Studies	9	3	5	--
Local area or field studies	17	16	7	27
Mapwork with Ordnance Survey maps	16	10	5	23
Mathematical Geography	<u>4</u>	<u>5</u>	<u>--</u>	<u>3</u>
	100	100	100	100
Number of responses	34	30	14	10
No response to question (%)			17	
Number of respondents			35	

TABLE XXXIX (cont'd)

2. Four Year Schools

Preferences	Reasons for Preferences			
	Pupil Interest	Personal Interest	Benefit for Pupils	Varied Methods Possible
	Percentage of responses			
Human Geography	41	36	37	31
Physical Geography	18	24	19	28
Regional Geography	9	8	14	4
Relationships - Human/Physical	5	4	8	6
Sample or Thematic Studies	12	7	--	3
Local area or field studies	4	10	10	14
Mapwork with Ordnance Survey maps	11	11	12	14
Mathematical Geography	--	--	--	--
	100	100	100	100
Number of responses	30	25	19	16
No response to question (%)			9	
Number of respondents			65	

TABLE XXXIX (cont'd)

3. Five-Six Year Schools

Preferences	Reasons for Preferences				Enjoyed in Post- Exam. Period
	Pupil Interest	Personal Interest	Benefit for Pupils	Varied Methods Possible	
	Percentage of responses				
Human Geography	34	33	41	29	30
Physical Geography	28	28	15	23	30
Regional Geography	8	9	10	11	23
Relationships - Human/Physical	3	7	6	7	7
Sample or Thematic Studies	4	2	--	3	--
Local area or field studies	6	8	10	12	7
Mapwork with Ordnance Survey maps	16	12	15	15	3
Mathematical Geography	<u>1</u>	<u>1</u>	<u>3</u>	<u>--</u>	<u>--</u>
	100	100	100	100	100
Number of responses	240	254	125	102	39
No response to question (%)			10		
Number of respondents			325		

in addition to these, a group of responses referred to the freedom of choice and absence of time pressures during the post-examination period (TABLE XXXIX, part 3). In each school type the majority of responses were concerned with pupil interest and with personal interests, in roughly equal proportions. By far the greater number of responses were received from respondents in Five-Six Year schools.

In the analysis for each of the reasons shown, in each school type, human geography was clearly the most popular preference. Approximately seventy percent of all the responses under the heading human geography, indicated an interest in only general terms. Of the remainder, most stated either a preference for the How People Live theme in junior years, or, for economic geography from Year Four onwards. Only eight percent of these responses stated a preference for world or topical problems, political geography, or urban geography.

The most common aspect of pupil interest reported was the relative ease with which pupils respond to human geography topics, as well as their active interest and the discussion that can be developed. Reasons of this nature were given by respondents from each school type. The respondents who gave personal interest as a reason for preference alluded to the satisfaction gained from teaching a topic

about which they had read widely. Only a relatively small percentage, approximately eighteen percent, reported satisfaction from developing a topic for which they had had academic training. The reason of pupil benefit was almost entirely reported as a citizenship value, that human geography best serves the purpose of developing world understanding, and that there is an immediacy in the material that can be related to the pupils' everyday life. The variety of methods possible given as a reason for the preference of human geography topics were, group and project work, and the extension of studies into the content of other subjects, particularly during library study.

Of the respondents from Four Year and Five-Six Year schools reporting on a preference for physical geography, only fourteen percent stated specific areas, such as, geomorphology or climatology. The responses which gave pupil interest as a reason for preference were similar to those on human geography namely, keen pupil response and opportunity for the interplay of ideas. For the reason of personal interest however, more respondents reporting this preference referred to their academic background than did those commenting on human geography. Benefits for pupils was less frequently reported, on a percentage basis, than was the case in the responses on human geography. The variety of methods given as a reason, mainly referred to senior years where

project work or individual assignments were developed. Responses from Junior schools were the least numerous in this group and the personal interests of teachers, mainly as a consequence of their academic background, was the most common reason for their preference.

Regional geography as a preferable aspect of geography teaching was not commented upon by respondents from Junior schools. In the responses from the other school types those reporting in specific terms named, in order of popularity, North America, Europe and British Isles. Reasons for this preference were similar to those submitted for human and physical geography, but more respondents on a percentage basis noted personal experiences in the areas studied.

There was more comment about Ordnance Survey map work than any of the other preferences shown in TABLE XXXIX. Pupil interest along with respondents' own interest were the most numerous reasons given. Pupil interest in the sample study or thematic study approaches was also acknowledged but the response percentage concerning these was relatively low.

The pattern of responses from teachers in Junior schools showed the greatest divergence of the three school types. There was a greater acknowledgement of human geography in benefits for pupils, less recognition of physical geography, and more reported interest in local area and field studies

and in mathematical geography. This pattern conceivably reflects the greater opportunity the teachers in these schools have for the development of topics without the need to consider preparation for public examinations.

The response pattern of Four Year schools was similar to that of the Five-Six Year schools except that in the latter instance some teachers reported on topics they developed during the post-examination period. Here, except for regional geography, the pattern of interest reported was roughly similar to the others. Regional geography, referred to usually as "regional analysis", increased greatly in preference in the post-examination period, suggesting that, given the freedom of choice its value is acknowledged, almost as much as preferences for human and physical geography.

CONCLUSION

There is a high percentage of geography teachers in secondary schools with academic qualifications, most particularly in Five-Six Year schools. In these schools many teachers belong to geographical societies and involve themselves in professional activities.

There is a limited opportunity for teachers to teach in their area of specialization, and teachers who teach geography only are invariably committed to teaching all age levels which reduces further their chances to specialize. There is reasonable evidence to suggest that the nature of the examinations is a factor in this lack of opportunity. The pressure of examinations was also offered, although the response was low, as a reason for the lack of classroom experiments in teaching methods. In this regard the transfer of ideas from advanced university courses and from professional institutions appears to be restricted.

Human geography is undoubtedly the most popular aspect of geography teaching. Physical geography is more popular than regional geography but there is a little evidence to suggest that regional geography would be more preferable if teachers could feel less restricted by examination pressures. Teachers' personal interests as well as those of the pupils are the chief reasons given for preferences. Teachers' academic background does not appear to affect their choice significantly. For the benefit of pupils human geography topics are clearly seen by teachers to have an advantage over physical geography.

CHAPTER EIGHT

GEOGRAPHY TEXTBOOKS IN USE IN SCHOOLS:
AN ANALYSIS AND APPRAISAL

THE PRINCIPAL TEXTBOOKS USED IN SCHOOLS

The replies to the questions about what teachers considered to be an ideal geography textbook (question 16, Pt. I of the Questionnaire), the textbooks teachers have found to be most useful for their purposes (question 15, Pt. I of the Questionnaire), and, the principal textbooks in use (question 9, Pt. II of the Questionnaire) provided information from which it was possible to discern trends in attitudes towards textbooks and also patterns in their use between types of schools and from Year to Year. The principal textbooks in use were analyzed for their geographic quality. In addition, textbooks concerned with map reading and the geography of Scotland were separately analyzed.

The principal textbooks used in school as reported by respondents were analyzed in two parts, for Four Year and Five-Six Year schools, and, for Junior schools. In the former case the analysis was made by groups of years. The analysis is shown in TABLE XL. Only the most numerous reported textbooks are listed in the table, but these

TABLE XL
PRINCIPAL TEXTBOOKS USED IN SCHOOLS

1. Four Year and Five-Six Year Schools

Series, Title or Author	Titles Reported in Series	Year		
		1-2	3-4	5-6
		Percentage of listings		
Modern Geography Series ¹	6	3	36	38
Groundwork Geographies ²	5	14	4	-
Pickles, T. ³	8	5	7	5
A Course in World Geography ⁴	6	8	9	1
New Ventures in Geography ⁵	4	15	1	-
New Oxford Geographies ⁶	5	8	4	4
Map Book Series ⁷	5	2	7	3
A Certificate Series ⁸	4	1	3	7
Geography for Schools ⁹	4	4	3	4
Nelson's Geography Texts ¹⁰	6	1	2	7
Study Map Notebooks ¹¹	7	-	3	6
<u>Our Scotland</u> ¹²	1	2	6	1
Colour Geographies ¹³	13	7	-	-
Life and Livelihood Geographies ¹⁴	4	6	-	-
<u>A Geography of Scotland</u> ¹⁵	1	-	1	3
		<hr/>	<hr/>	<hr/>
		76	86	79
Number of listings analyzed above		431	925	713
Total number of listings		567	1076	902

N.B. The footnotes appear on the next page, p. 266, following the second part of the table.

TABLE XL (cont'd)

2. Junior Schools

Series or Author	Titles Reported in Series	Years 1-3
		Percentage of listings
Groundwork Geographies ¹⁶	5	22
New Ventures in Geography ¹⁷	4	17
Colour Geographies ¹⁸	13	14
Pickles, T. ¹⁹	8	5
Life and Livelihood Geographies ²⁰	4	4
Real Geography ²¹	6	3
		65
Number of listings analyzed above		191
Total number of listings		294

The following are the titles of each of the series listed:

- ¹ Modern Geography Series: Preece D. M., & H. R. B. Wood, Foundations of Geography, Bk. I, rev. ed., 1963; Idem, The British Isles, Bk. II, rev. ed., 1962; Idem, Europe, Bk. III, rev. ed., 1967; Coysh, A. W. & M. E. Tomlinson, North America, Bk. IV, rev. ed., 1964; Cornish, W. B., Asia, Bk. V, rev. ed., 1962; Coysh, A. W. & M. E. Tomlinson, The Southern Continents, Bk. VI, 1961, London: Univ. Tutorial Press.
- ² Groundwork Geographies: Jackson, Nora, & Philip Penn, British Isles, 1959; Europe, 1959; The Southern Continents, 1959; North America and Asia, 1961; Groundwork of Physical Geography, 1963, London: Geo. Philip and Son.

TABLE XL (cont'd)

- 3 Pickles, T., The British Isles, rev. ed., 1960; Europe, rev. ed., 1960; Asia and European Russia, 1954; North America, rev. ed., 1960; South and Central America, The Southern Continents, Bk. I, rev. ed., 1960; Africa, The Southern Continents, Bk. II, 1961; Australia, New Zealand and the Pacific Islands, The Southern Continents, Bk. III, rev. ed., 1961; Physical Geography, 1960, London: Dent and Sons.
- 4 A Course in World Geography: Young, E. W., People Round the World, Bk. II, 1967; Lowry, J. H., Regions of the World, Their Work and Wealth, Bk. III, 1962; Idem, The British Isles, Bk. IV, 1960; Young, E. W., The World, Physical and Human, Bk. V, 1963; Lowry, J. H., Europe, Bk. VI, 1966; Young E. W., North America, Bk. VII, 1965, London: Edward Arnold.
- 5 New Ventures in Geography: Spink, H. M., & R. P. Brady, Great Britain and Northern Ireland, Bk. I, 1963; The Southern Lands, Bk. II, 1963; The Asiatic World, Bk. III, 1962; The North Atlantic Nations, Bk. IV, 1966; Huddersfield: Schofield and Sims.
- 6 New Oxford Geographies: Stemberge, J. H., The Southern Continents, Bk. II, 1941; North America and Asia, Bk. III, 1941; Europe, Bk. VI, Pt. 1, 1941; The British Isles, Bk. VI, Pt. II, 1951; The World, rev. ed., 1962, London: Oxford Univ. Press.
- 7 Map Book Series: Ferriday, A., A Map Book of the British Isles, 1967; A Map Book of Europe for Senior Forms, 1963; A Map Book of Asia for Middle and Senior Forms, 1964; A Map Book of North America for Middle and Senior Forms, 1963; A Map Book of Africa and South America for School Certificate Forms, 1962, London: Macmillan.
- 8 A Certificate Series: Monkhouse, F. J., Europe, 1961; Cain, H. R., Human and Economic Geography, 1963; Cain, H. R., & R. J. Small, Great Britain and Ireland, 1964; Cain, H. R., Physical Geography, 1963, London: Longmans, Green.
- 9 Geography for Schools: Honeybone, R. C. (ed.) Honeybone, R. C., & M. G. Goss, Britain and Overseas, Bk. I, 1960; Honeybone, R. C., & B. C. Roberson, Southern Continents, Bk. II, 1960; Honeybone, R. C., & N. J. Graves, North America, Bk. III, 1967; Honeybone, R. C., & I. L. M. Long, World Geography, Bk. V, 1962, London: Heinemann.

TABLE XL (cont'd)

- 10 Nelson's Geography Texts: East, W. G. (ed.) Rawson, R. R., and W. G. East, Asia, Bk. III, 1960; Dury, G. H., and T. J. Chandler, North America, Bk. IV, 1959; Cole, R., Europe, Bk. VII, 1964; Morris, J. A., The British Isles, Bk. VIII, 1960; Suggate, L. S., World Geography: Human, Bk. IX, 1959; Dury, G. H., World Geography: Physical, Bk. X, 1958, Edinburgh: Nelson and Sons.
- 11 Study Map Note Books: Murray, Allan, The British Isles, Bk. I, 1964; The New Europe, Bk. II, 1961; Asia, Bk. III, 1964; North and South America, Bk. IV, 1964; Africa, Bk. V, 1961; Australia, New Zealand and the Pacific, Bk. VI, 1967; North America, Bk. VII, 1964, Glasgow: Collins.
- 12 Kinnear, W., and G. C. Wright, Our Scotland, Edinburgh: Nelson and Sons, 1956.
- 13 Colour Geographies: Herdman, T., Farms of Britain, Bk. 2, 1956; Towns of Britain, Bk. 3, 1956; Industry in Britain, Bk. 4, 1956; London, Bk. 5, 1965; Forests and Savanna: West Africa, Bk. 6, 1957; Ricefields in India, Bk. 8, 1957; Great Plain of China, Bk. 9, 1958; Grasslands of the Southern Continents, Bk. 11, 1959; The Prairies, Bk. 13, 1958; West Indies and Gulf Coasts, Bk. 15, 1959; Lands in the Desert: The Middle East, Bk. 16, 1959; Mediterranean Lands, Bk. 17, 1959; Contrasts in Russia, Bk. 18, 1959, London: Longmans, Green.
- 14 Life and Livelihood Geographies: Shave, D. W., North Atlantic Neighbours: Britain, Canada and U. S. A., Bk. I, 1962; Redmore, G. B., Under the Southern Cross: South America, Australasia and Africa; Bk. II, 1963; Penrose, C., Lands of Europe and Asia, Bk. III, 1959, London: John Murray.
- 15 Rae, G., and C. E. Brown, A Geography of Scotland, London: Geo. Bell, 1959.
- 16 Groundwork Geographies, op. cit.
- 17 New Ventures in Geography, op. cit.
- 18 Colour Geographies, op. cit.
- 19 Pickles, op. cit.
- 20 Life and Livelihood Geographies, op. cit.
- 21 Real Geography: Fairgrieve, J., and E. Young, South America, Australia and New Zealand, Bk. I, 1959; North America, Bk. II, 1959; Africa and Southern Europe, Bk. III, 1955; Asia, Bk. IV, 1958; Europe, Bk. V, 1956; The British Isles, Bk. VI, 1956, London: Geo. Philip and Son.

represent a considerable proportion of the total. In all, 2,839 listings were analyzed, 177 different titles being reported. Only six percent of respondents failed to provide information in their returns.

Every school did not report the use of all books in a particular series. Very few schools reported only one title in a series and in Four Year and Five-Six Year schools in particular, from Years Three to Six, several titles in a series were commonly listed. Part One of TABLE XL for Four Year and Five-Six Year schools shows that one series of textbooks, Modern Geography Series, is dominant from Years Three to Six, and that no other series for these years is comparable in use.²² For Years One and Two, no one series dominates in the same way. However, five series of textbooks, New Ventures in Geography, Groundwork Geographies, A Course in World Geography, the New Oxford Geographies, and the Colour Geographies account for more than one-half of the reported titles.^{23,24,25,26,27} In Junior schools, six series, shown in the second part of TABLE XL, accounted for almost two-thirds of the books reported.

22 Modern Geography Series, op. cit.

23 New Ventures in Geography, op. cit.

24 Groundwork Geographies, op. cit.

25 A Course in World Geography, op. cit.

26 New Oxford Geographies, op. cit.

27 Colour Geographies, op. cit.

It is clear from this evidence that the edited series of textbooks is more characteristic of school use than separate titles selected from different series. The only textbooks, not part of a series, sufficiently reported to be included in either part of TABLE XL are of a special nature being devoted entirely to the home region, Scotland. Junior schools are the only schools where this conclusion is less likely to be true, for although the six series noted dominated the returns, there was a great variety of book titles reported.

It is also evident from the analysis for Four Year and Five-Six Year schools, that although some series are more restricted in usage to junior years, New Ventures in Geography and the Colour Geographies for instance, the majority of those listed are used across the years from Year Three to Year Six.^{28,29} This would seem to imply that textbook series are structured in a sequential arrangement of content and materials, from simple to more complex skills and understandings; and are appropriate for the particular age levels. In fact, as will be discussed later in the analysis of textbooks, this is not the case.

²⁸ New Ventures in Geography, op. cit.

²⁹ Colour Geographies, op. cit.

The date of publication of the textbooks reported was given by a number of respondents, approximately ten percent, a sufficiently large sample for use as a basis for further investigation. The dates of publication shown in the footnote to TABLE XL are the most recent dates reported for each title, but are not necessarily the date most commonly reported.

A search in the textbooks listed revealed that some of the series were first published in the 1930's and 1940's - the Modern Geography Series and the series of books written by T. Pickles for instance, with the remainder first published in the 1950's and early 1960's.^{30,31} It is noteworthy that, of the responses in Years Three-Four and Five-Six, forty-three percent listed books in the older series mentioned above (see TABLE XL). The older series have been revised, but in general, those first published during and since the late 1950's have not.

There is sufficiently strong evidence here to suggest that the material in textbooks in use in schools is not up to date in many respects. Outmoded factual detail is one aspect, but this could be corrected during teaching. The images that pupils derive from illustrative materials, particularly out of date photographs, would, however, be

³⁰ Modern Geography Series, op. cit.

³¹ Pickles, op. cit.

less easy to amend. More unfortunately, recent developments in various branches of the subject, or in changing methodological emphases consequent on differing educational perspectives, would be difficult to incorporate into a teaching pattern in which an out of date textbook generally plays an important role.

ANALYSIS OF THE TEXTBOOKS IN USE IN SCHOOLS

Reviews of school geography textbooks have appeared for many years in geographical literature, but it is only in recent times that an analytic appreciation of their structural organization has begun to emerge. The notion that textbooks should be used and worked with and not merely read and learned was mentioned by Fairgrieve.³² The Report of the Geographical Association, Geography in Secondary Schools, pointed to the importance in textbooks of textual references to the illustrations provided, in order that pupils might make geographical deductions.³³ The UNESCO publication,

³² Fairgrieve, James, Geography in School, London: Univ. of London Press, rev. ed., 1951, p. 340.

³³ Briault, E. W. H., and D. W. Shave, Geography in Secondary Schools, Sheffield: Geog. Assoc., rev. ed., 1960, p. 26.

Source Book for Geography Teaching, recognized three types of textbooks; conventional textbooks that present a complete account of each subject; textbooks based on practical exercises, and, textbooks combining these two methods.³⁴ Whilst the latter organization is most recommended overall, disadvantages in all three methods are noted.

A detailed analysis was made by Long and Roberson who identified five types of textbooks: the comprehensive, factual, geographical account; the practical exercise book; the teacher-authored text similar to the first; the pure source material, and the teacher-author's judgement of appropriate content.³⁵ In the ensuing discussion concerning the criteria for the selections of textbooks, Long and Roberson consider four aspects; objectivity; accuracy; adequacy and up-to-dateness. In addition, they discuss the importance of the quality, quantity and variety of source materials and graded exercises linked to the text.³⁶

The analysis of the textbooks reported in the questionnaire was made with these developments in mind. The purpose was to examine whether or not textbooks, in their organization, present an image of the structure of the subject.

³⁴ UNESCO, Source Book for Geography Teaching, London: Longmans, Green, 1965, pp. 147-148.

³⁵ Long, M., and B. S. Roberson, Teaching Geography, Toronto: Bellhaven House, 1967, pp. 87-88.

³⁶ Ibid., pp. 82-92.

Accordingly, the aspects examined were: the size of the area covered by the text; the internal organization of the content; the nature and quality of the study exercises; the nature and quality of the materials, and the gradational sequence of skills and concepts.

It was considered that an analysis of the most numerous reported series of textbooks would be a sufficient sampling in order to draw valid conclusions. Further, that it was not necessary to examine in detail every book in each series as the series reported were edited by one or more of the authors, and the format, style, and organization of content and materials of each book in a series followed almost identical lines.

Areal Coverage in Textbooks

The size of the area covered by each textbook was considered according to the scales of, the world, the continents, and countries. The evidence shows that textbook series are built on continents. Fifty-three of the titles out of seventy-one examined dealt with one continent or more, Southern Continents being an example of a grouping of continents where more than one continent is covered.³⁷ Four of

³⁷ Honeybone and Roberson, op. cit.

the titles had a world focus, such as, Britain and Overseas; seven were concerned with the British Isles, and the remainder were systematically organized with descriptions of physical and human elements on a world scale, such as Foundations of Geography.^{38,39}

The texts with a continental form are either organized around a political framework or a physical one. Texts on Europe, for example, are dominantly arranged on a country by country basis, whereas texts on North America invariably have a physical basis for delimiting regions. No series of textbooks used other criteria for delimiting regions, such as, economic or population data, in order that the possibilities of various regional arrangements might be explored.

Internal Organization of Textbooks

The nature of the internal organization of the texts also followed well defined lines with a small number of exceptions. Forty of the texts are descriptive accounts of facts or concepts, aided by sketch maps, photographs, and diagrams or graphs of varying quality. The common structure of this description and illustration approach is the traditional, compartmentalized one in which there are chapters

³⁸ Honeybone and Goss, op. cit.

³⁹ Preece and Wood, Foundations of Geography, op. cit.

concerned with the physical and cultural elements appropriate to a particular region. An example of this structure is Europe in the popular Modern Geography series, where Chapter One contains sections on Structure, Climate, Vegetation and Natural Regions; Chapter Two sections on Agriculture, Minerals and Industries, Communications, Population, and Races of Europe, and these chapters are followed by a description of each country which generally follows a sequence of Position, Physical, Climate and Natural Regions.⁴⁰

The prose style of these texts is dull and is interesting only in the factual information presented. Very few of the texts examined contained lively, interesting, literary extracts to engage attention or stimulate the imagination. Sixteen of the texts are presented in note style, namely, the two series reported as mainly in use from Year Three on, Study Map Note Books and Map Book Series, and the most popular series reported in use in junior years, Groundwork Geographies.^{41,42,43} In the two map book series the structure is a stereotype one with a page of note-style information facing an annotated sketch map of the region or country described. Note-style prose is dominant:

40 Preece and Wood, Europe, op. cit.

41 Study Map Note Books, op. cit.

42 Map Book Series, op. cit.

43 Groundwork Geographies, op. cit.

"5. The Westland Plain. This consists of a narrow and discontinuous coastal plain stretching along the western side of the Southern Alps. The lowland areas sometimes extend inland as along the valley of the Buller River at Westport.

Inland some of 5 [sic.] supports extensive pastoral farming (store sheep and cattle). Along the coast and especially in the north of the region there is some dairy-farming."⁴⁴

The style in the series, Groundwork Geographies is even more noticeably in note form:

"WATER SUPPLY (London)

London uses about 300 million gallons of water daily, approximately 37 gallons per person per day.

This water is supplied by:

1. Rivers - the Thames and its tributaries such as the Lea and the Colne.
2. Reservoirs - Staines, Enfield, Aldenham, etc.
3. Artesian Wells - wells bored into the underlying layers of porous chalk."⁴⁵

The texts with this description and illustration approach present an air of formality and completeness in their geographical presentation. Only a small number of the texts examined, twelve in all, in the two series, A Course in World Geography, and Geography For Schools, did not follow this traditional approach.^{46,47} These relied more strongly on the use of study exercises for the analysis and interpretation of the text and illustrations. As a consequence, the nature,

⁴⁴ Murray, Australia, New Zealand and the Pacific, op. cit., p. 83.

⁴⁵ Jackson and Penn, British Isles, op. cit., p. 26.

⁴⁶ A Course in world Geography, op. cit.

⁴⁷ Geography for Schools, op. cit.

quality and quantity of the illustrations, and the skill and sequence of the questioning in the study exercises assume much more significance in the structure of the books in these series. The reader must examine and interpret the materials provided for a full understanding of the text. The books are text-materials integrated, the series, A Course in World Geography, relying mainly on the use of small-scale materials, whereas the Geography for Schools series relies generally on large-scale materials in a sample study framework.^{48,49}

The Nature and Quality of Study Exercises in Textbooks

The analysis of the nature of the study tasks or exercises in the texts showed that there are mainly three principal activities: writing essays or drawing sketch maps similar to those asked in examinations; completing quiz-type, short answer tests that generally demand the recall of information presented in the text, and, exercises aimed at the analysis and interpretation of the textual matter and materials provided. Whatever technique is adopted for the study of the text it is generally used throughout the particular series. Only a few texts did not provide for study activities of one kind or another.

⁴⁸ A Course in World Geography, op. cit.

⁴⁹ Geography for Schools, op. cit.

The most popular study activities in the texts examined are essay writing and sketch map drawing, more than one-half of the texts using these activities exclusively. The essays are frequently questions from previous examination papers at the General Certificate Examination, Ordinary level, and are clearly provided for examination practice. They are usually inserted at the end of chapters or, as in the Modern Geography Series, appended at the end of the book.⁵⁰ The essay questions frequently demand little more than the eliciting of facts and understandings from the relevant section in the text and the sketch maps provided. The alternative to essay writing is usually sketch map drawing, and again little is demanded of the pupil except finding the relevant information in the text or in an atlas:

"On a sketch-map of Europe show the chief areas producing wheat, marking distinctively those which have a surplus for export."⁵¹

The books in which essay writing and sketch map drawing are dominantly or exclusively used are also the texts that follow the traditional pattern of description and illustration. These study activities are in keeping with such presentation, both being oriented towards a pattern of established examination practice.

⁵⁰ Modern Geography Series, op. cit.

⁵¹ Preece and Wood, Europe, op. cit., p. 277.

The quiz type of test was not much in evidence in the books examined but is the dominant pupil exercise in the series used in junior years, *Groundwork Geographies*.⁵² The answers to the tests in these books can be found directly in the text but there is little indication of a constructive pattern in the questioning or of an attempt to build geographical concepts:

"Quiz.

1. In which direction does Australia lie from Britain?
2. What season does Australia have in December?
3. Who was Abel Tasman?
4. Who was the man who named Botany Bay?
5. Who are the aborigines?
6. Name the three main physical divisions in Australia?"⁵³

The authors of this series subscribe to such fact learning experiences for pupils:

"Most teachers will have found from experience, we believe, that it is a mistake to suppose that children are averse to learning facts."⁵⁴

The most carefully structured study activities appear in the text and materials integrated texts in the two series, *A Course in World Geography*, and, *Geography for Schools*.^{55,56} The questioning and study activities are the

⁵² *Groundwork Geographies*, op. cit.

⁵³ Jackson and Penn, The Southern Continents, op. cit., p. 29.

⁵⁴ Jackson and Penn, British Isles, op. cit., p. iii.

⁵⁵ *A Course in World Geography*, op. cit.

⁵⁶ *Geography for Schools*, op. cit.

link pin between the textual matter and the materials. Of the two series, Geography for Schools comes closer to the spirit of geography, using as it does, both large and small-scale materials thus allowing for site or sample studies and regional studies to be developed side by side.⁵⁷ In a study of New Zealand in Southern Continents, for example, there is a short descriptive paragraph at the beginning of the chapter followed by two statistical tables.⁵⁸ A series of questions are then asked to elicit facts and concepts from the data and an atlas. Following this there are small-scale sketch maps showing distributions of various physical and economic phenomena interspersed with more description, photographs and questions; a sample study of a farm which includes a farm plan and a farm calendar, and questioning to lead to broader concepts, and finally, a study of a one inch to one mile map along with supporting text and oblique aerial photographs. At the end of the chapter there are additional exercises for review and enrichment of the skills and concepts developed in the chapter. The book, therefore, provides information in the text and basic evidence in the source materials. It illustrates through the questioning a

⁵⁷ Loc. cit.

⁵⁸ Honeybone and Roberson, op. cit., pp. 294-314.

geographical process of thinking, that is, it proceeds from the establishment of facts identified in the source materials, to analysis and interpretation.

The Nature and Quality of Materials in Textbooks

The analysis of the nature and quality of the materials contained in textbooks was conducted on the basis of a sampling. The books in each textbook series reported were the same in format and style. Consequently, only one book, the most numerous reported in the particular series examined, was analyzed. The selection of the series for analysis was made on the basis of two criteria: highest frequency reporting, and, the type of book.

The series selected were: Modern Geography Series which had by far the highest frequency reporting for Years Three to Six: A Course in World Geography, and Geography for Schools, both of which have an integrated text-materials organization; New Ventures in Geography, and Groundwork Geographies which were the two most frequently reported series for Years One and Two.^{59,60,61,62,63} The texts in these

⁵⁹ Modern Geography Series, op. cit.

⁶⁰ A Course in World Geography, op. cit.

⁶¹ Geography for Schools, op. cit.

⁶² New Ventures in Geography, op. cit.

⁶³ Groundwork Geographies, op. cit.

series represent the descriptive text supported by aids, and the text-materials integrated book. These are two of the three types described in Source Book for Geography Teaching - the conventional textbook that presents a complete account, and, the combination text of practical exercises and descriptive material.⁶⁴ The third type of text, the practical exercise book, has been analyzed separately and is discussed later (see p. 298 following).

The five textbooks selected for analysis are: The British Isles, Modern Geography Series; The British Isles, A Course in World Geography; Britain and Overseas, Geography for Schools; The North Atlantic Nations, New Ventures in Geography, and Europe, Groundwork Geographies.^{65,66,67,68,69} Each of these texts had the highest frequency reporting in the particular series.

The materials examined in the texts were: pictures, maps, both sketched and reproduced; sketches and diagrams; statistics in graph or table form, and, literary extracts quoted in the text. The criteria for the analysis were based on the geographic quality of the materials, that is, their

⁶⁴ UNESCO, op. cit.

⁶⁵ Preece and Wood, The British Isles, op. cit.

⁶⁶ Lowry, The British Isles, op. cit.

⁶⁷ Honeybone and Goss, op. cit.

⁶⁸ Spink and Brady, The North Atlantic Nations, op. cit.

⁶⁹ Jackson and Penn, Europe, op. cit.

potential as sources for geographic analysis and interpretation.

Pictures

Halverson, in his pamphlet Geography via Pictures, outlines a hierarchy for pictures based on the relationships that might be discerned or inferred between the physical environment and human activities depicted.⁷⁰ The categories he identifies are: those of primary geographic quality which show either human activity or evidence of human activity in its natural setting; secondly, pictures of secondary geographic quality which show either physical landscapes or dominantly cultural landscapes; and, thirdly, pictures of tertiary geographic quality which show specific items.⁷¹

This classification was used for the analysis of the pictures in the five selected textbooks. It was found however, that whilst the categories appear in their description to be reasonably well differentiated, in practice arbitrary decisions had to be made concerning the appropriate category for some pictures. This did not detract from the final outcome however, as an overall impression of the geographic

⁷⁰ Halverson, Lynn H. Geography via Pictures, Illinois: National Council for Geography Education, rev. ed., 1968.

⁷¹ Ibid., pp. 4-9.

quality of pictures in each text was achieved. The result of the analysis is shown in TABLE XLI.

The value of the pictures for geography teaching and the quality of their reproduction varies markedly between the texts. There is a heavy use in all the books, of specific type pictures that illustrate a feature or an activity described in the text. On the other hand, there is a relatively limited inclusion of pictures that will bear geographic analysis either directly or by inference. According to the classification, less than approximately one-quarter of the pictures in any text are of prime value for analysis, and in The British Isles, Modern Geography Series, and The North Atlantic Nations, New Ventures in Geography, the proportion is notably less than that.^{72,73} In each text pictures placed in the second-class category outnumber those in the primary category. Second-class pictures, those of physical or cultural landscapes, are generally difficult to analyze without other supportive materials such as maps, further pictures or textual description. As Halverson points out, such pictures are "... mainly suggestive and usually serve as starting points in problem solving."⁷⁴

⁷² Preece and Wood, The British Isles, op. cit.

⁷³ Spink and Brady, The North Atlantic Nations, op. cit.

⁷⁴ Halverson, op. cit., p. 8.

TABLE XLI
ANALYSIS OF PICTURES IN FIVE TEXTBOOKS

Title	Prime Quality	Second-class Quality		Specific
		Physical dominant	Cultural dominant	
<u>The British Isles</u> Modern Geography Series	3	10	10	26
<u>The British Isles</u> A Course in World Geography	30	18	21	48
<u>Britain and Overseas</u> Geography for Schools	18	8	13	63
<u>The North Atlantic Nations</u> New Ventures in Geography	19	8	24	88
<u>Europe</u> Groundwork Geographies	12	--	9	24

Except in Britain and Overseas, Geography for Schools and The British Isles, A Course in World Geography, such analysis or problem solving with further materials is not developed in the texts examined.^{75,76} From this evidence it is reasonable to presume that the bulk of the pictures in texts in use in schools are for illustrative purposes only and that if their full exploitation is desired the teacher must provide other materials to support them.

The quality of reproductions of pictures in the texts examined detracts also from their potential value for analysis by pupils. The common weaknesses are poor definition and small size. In Britain and Overseas, Geography for Schools, these weaknesses seriously impair any geographic quality the pictures might otherwise possess.⁷⁷ In The North Atlantic Nations, New Ventures in Geography, reproduction is slightly better but in the pictures depicting cultural scenes, particularly of settlements where clarity is essential for identification, the indistinctness results in a low use value for any analysis.⁷⁸ Only in The British Isles,

⁷⁵ Honeybone and Goss, op. cit., pp. 106-108, for example, provides two aerial photographs of the centre of London supported by a sketch map and text description in a problem solving sequence.

⁷⁶ Lowry, The British Isles, op. cit.

⁷⁷ Honeybone and Goss, op. cit.

⁷⁸ Spink and Brady, The North Atlantic Nations, op. cit.

Modern Geography Series, is definition from average to good.

Maps

Maps, both reproduced and sketched, were examined from the point of view of their scale, content and overall variety. The standard of cartography was also assessed. Scales were analyzed according to whether they were large- or small-scale. Map content was analyzed on the basis of whether they were location maps; showed distributions or classifications or physical or cultural phenomena, such as precipitation, land-use or population maps; showed comparisons or changes through time; showed detail other than of a distributional nature, such as farm plans, or, were annotated with marginal notes. These categories were established after an initial examination of the texts. The results of the analysis are shown in TABLE XLII.

With very few exceptions, maps in the textbooks are small-scale. Only in Britain and Overseas, Geography for Schools, were extracts of large-scale Ordnance Survey maps found and this book also contained the largest number of large-scale sketch plans.⁷⁹ The absence of large-scale maps is indicative of the absence of detailed site or sample

⁷⁹ Honeybone and Goss, op. cit.

TABLE XLII
ANALYSIS OF MAPS IN FIVE TEXTBOOKS

Title	Large-Scale		Small-Scale			Annotated
	Reproduced O. S. Maps	Plans	Location	Distribution and Classification	Comparative	
			Number			
<u>The British Isles</u> Modern Geography Series	--	--	80	26	3	1
<u>The British Isles</u> A Course in World Geography	--	3	98	30	5	1
<u>Britain and Overseas</u> Geography for Schools	4	5	21	17	--	--
<u>The North Atlantic Nations</u> New Ventures in Geography	--	--	45	21	3	--
<u>Europe</u> Groundwork Geographies	--	1	56	3	--	16

studies in the books and illustrates the lack of variety, overall, in the maps.

This lack of variety is also evidenced in the heavy reliance on sketch maps of a locational nature. Although many of these small-scale place maps also show sites, products or communications, the large majority are at an elemental place-location level and are generally inferior in informational value to the varied information that can be obtained, at similar scales, in a good school atlas. Location maps represent from three-quarters to one-half of all maps in any one book, Britain and Overseas, Geography for Schools, being the most balanced in this respect.⁸⁰

Distribution and classification type sketch maps make up the bulk of the other maps. In these there is a strong emphasis towards presenting distributional patterns of geological, relief and climatic phenomena, and a very limited use of maps showing land-use patterns or types of economic activities, and of dot distribution maps. There is a negligible use of maps for comparative purposes either of distributional patterns or of changes through time. The more than usual use of annotated sketch maps in Europe, Groundwork

⁸⁰ Loc. cit.

Geographies, is an extension of the location maps which are dominant in the text.⁸¹

The standard of cartography varies in the texts, none having an exceptional quality, Europe, Groundwork Geographies, having by far the lowest standard.⁸² In this text the scale of maps is frequently omitted, legends are rarely provided, the names of products are over-printed in some maps without distributional boundaries being delimited, elevation is not precisely shown on any map, and the draughting is poor. The North Atlantic Nations, New Ventures in Geography, contains some maps without a scale, and the practice in the text of not drawing a frame around a map gives the appearance of an unfinished map.⁸³ In the other three texts analyzed the maps are generally clear and uncluttered, each having a scale and legend, although occasionally a scale is omitted in Britain and Overseas, Geography for Schools.⁸⁴

Other Source Materials

The quantity of statistical material, both tables and graphs, of sketches and profiles, and of literary extracts in each text is shown in TABLE XLIII. The number of these

⁸¹ Jackson and Penn, op. cit.

⁸² Loc. cit.

⁸³ Spink and Brady, The North Atlantic Nations, op. cit.

⁸⁴ Honeybone and Goss, op. cit.

TABLE XLIII
 SOURCE MATERIALS OTHER THAN PICTURES AND MAPS
 IN FIVE TEXTBOOKS

Title	Statistical Tables and Graphs	Sketches and Profiles	Literary Extracts
<u>The British Isles</u> Modern Geography Series	19	Number 7	--
<u>The British Isles</u> A Course in World Geography	43	52	18
<u>Britain and Overseas</u> Geography for Schools	28	10	--
<u>The North Atlantic Nations</u> New Ventures in Geography	20	12	--
<u>Europe</u> Groundwork Geographies	--	10	--

illustrations is relatively small compared with the number of pictures and maps. Except in The British Isles, A Course in World Geography, statistical tables and graphs are generally more numerous than sketches and profiles and, again with the exception of the text mentioned, literary extracts are not in evidence.⁸⁵

Sequences of Skills and Concepts in Textbooks

An attempt was made to determine whether a developmental sequence of geographic skills and concepts is in evidence in the series of books reported. This was undertaken by examining the stated intent of authors in book prefaces, by noting any changes in the character of the source materials and study exercises, and also any changes in the methodological organization of each series. All the books in the series listed in TABLE XL were examined.

Except for the series specifically written for junior pupils, all the series are either by stated intent or by clear implication intended for pupils in the middle school years, or, at approximately General Certificate of Education, Ordinary level examination standard. Where there was no explicit statement in the preface, the inclusion of sample examination questions in a series, or the nature of the

⁸⁵ Lowry, The British Isles, op. cit.

essay-type questions in study exercises were taken as evidence of intent. Another indication of the level of all the series is that every one is listed in, "Book List for the Secondary Stage," Handbook for Geography Teachers, and none appears in the section for more advanced pupils, "Sixth Forms and Teachers" in the same text.^{86,87} This evidence suggests that any sequences of skills and concepts in the series would be developed with the middle school pupil in mind. Yet the series are as much in use in senior years as they are in the middle years, as TABLE XL clearly shows. This implies that the series are very general in character, and that they provide a background for senior school studies.

Such a viewpoint is supported by the fact that very few schools, less than seven percent, reported the use of all books in a series, implying that each book in a series can be used as an entity in itself and is not an integral part of a structured series. Almost every school, following a continent by continent programme after the first two years, interpolated books from another series for one continental study or another.

⁸⁶ Long, M. (ed.), Handbook for Geography Teachers, Institute of Education, Univ. of London, London: Methuen, 1965, pp. 342-357.

⁸⁷ Ibid., pp. 358-474.

Some of the series reported did include books in addition to the usual continental sequence. These books are: those that deal with either physical or cultural (topical) geography on a world scale, and, those intended for junior pupils as introductory studies to the particular series.⁸⁸ Of the former books, the number reported in use in any series was considerably less than the continentally structured books, a fact that is taken to be indicative of their relative unimportance in any possible skill or concept development.

Of the introductory books, two series do illustrate a sequence of organization of subject matter: *A Course in World Geography*, and *Geography for Schools*.^{89,90} The first two books of the former series are centred around a sample study approach and these are followed by a systematic world survey of economic activities traced through different natural and human environments.⁹¹ The organizational scheme is that of extending from detailed small-area studies to

⁸⁸ For example, Pickles, Physical Geography, op. cit., and Suggate, World Geography: Human, op. cit.

⁸⁹ A Course in World Geography, op. cit.

⁹⁰ Geography for Schools, op. cit.

⁹¹ Young, E. W., People in Britain, A Course in World Geography, Bk. I, London: Edward Arnold, 1960; Idem, People Round the World, op. cit., and, Lowry, Regions of the World, Their Work and Wealth, op. cit.

broader regional studies as the pupil progresses from junior to middle school years.

The same organization scheme is central in the Geography for Schools series, but here the sample study is used throughout the series and from each study broader regional patterns are drawn.⁹² In addition to this, however, the first book in the series, Britain and Overseas, describes how large-scale maps and photographs can be read and interpreted.⁹³ In this way skills are taught along with the study of particular places, and these skills are an essential element in the study of the later books in the series. In addition, the study exercises in each book are graded in difficulty allowing for variations in pupil ability and for enrichment with more able pupils.

In examining the materials in the textbooks - maps, photographs, statistics, graphs and prose - and including the two series discussed above, it was found that there is no discernible evidence of increasing complexity or variation from one book to another in a series. The analysis of the nature and quality of materials in the five textbooks shown in TABLE XLI, TABLE XLII and TABLE XLIII was extended to the other books in each of the particular series. The same types

⁹² Geography for Schools, op. cit.

⁹³ Honeybone and Goss, op. cit.

of source materials, in very similar proportions to the categories shown in the tables were noted in each book. The other series not included in the analysis in these tables but shown in TABLE XL were also examined, and again it was found that the pattern and character of materials in one book is characteristic of the others in the same series.

Study exercises and textual matter also followed the same patterns in a series. Whether the exercises are of an essay type, quiz type, or "Things To Do", there is no increasing difficulty at a conceptual level from one chapter to another or book to book in a series. The exercises examine or review the descriptive material in the previous section or chapter of the book. The only exception to this is the series, *Geography for Schools*.⁹⁴

In conclusion, there is little evidence of a sequential development of concepts and skills in textbook series. Only in the series, *A Course in World Geography*, and *Geography for Schools*, is an attempt made from junior to middle year levels to teach skills in reading and interpretation, or to demonstrate a different organization of subject matter based on scale perspective.^{95,96} The level of all other series

⁹⁴ *Geography for Schools*, op. cit.

⁹⁵ *A Course in World Geography*, op. cit.

⁹⁶ *Geography for Schools*, op. cit.

examined most closely approximates the General Certificate of Examination, Ordinary level standard and any book in any series can be used as an entity in itself.

MAP READING TEXTBOOKS

The questionnaire asked for principle textbooks to be listed and it was assumed that where map reading texts were listed they were considered by the respondent to play an important part in the school's teaching programme. In all, there were 278 listings of map reading textbooks and such response was sufficient to warrant a separate analysis of these books.

No map reading textbooks are listed in Junior School returns, although a few returns from the schools did refer to the use of a map reading book. Of the respondents, seventy-two percent in Five-Six Year schools, and sixty-four percent in Four Year schools listed one or more map reading texts. The distribution of the listings by Year for these schools is shown in TABLE XLIV.

A total of sixteen texts were listed but four titles accounted for seventy-six percent of the 278 listings. These texts were, in order of greatest response: Map Reading and

TABLE XLIV

MAP READING TEXTS REPORTED

YEARS 1 - 6, FOUR YEAR AND FIVE-SIX YEAR SCHOOLS

Year	Number of Listings	Percentage	Map Reading Texts as Percentage of all Principal Texts Listed
1	11	4)
2	8	3) 3
3	51	18)
4	90	32) 13
5	66	24)
6	52	19) 13
	<u>278</u>	<u>100</u>	

Interpretation; Map Reading for Schools; Intermediate Map Reading, and, Reading Topographical Maps.^{97,98,99,100}

The analysis of listings by Year in TABLE XLIV shows that map reading texts, as teaching aids, are relatively unimportant in Years One and Two. The urge to complete a world coverage for pupils who do not continue with geographical study, and the small number of periods per week, usually two, are causal factors in the lack of emphasis on map reading in these early years.

The commencement of serious map reading study in the Third Year, which can be inferred from the analysis, coincides with the beginning of geography programmes structured for examination purposes. From this Year, too, the number of periods per week devoted to geography teaching is usually double the number in the first two years.

The greatest importance is attached to map reading texts in Year Four, which in most schools is the examination year. A similar emphasis on these texts is also noticed in the number of listings for the upper years of Five-Six Year

⁹⁷ Speak, P., and A. H. C. Carter, Map Reading and Interpretation, London: Longmans, Green, 1964.

⁹⁸ Wood, M., Map Reading for Schools, London: Harrop, 1962.

⁹⁹ Pickles, T., Intermediate Map Reading, London: Dent and Sons, 1963.

¹⁰⁰ Meux, A. H., Reading Topographical Maps, London: Univ. of London Press, 1960.

schools. For comparative purposes, the number of map reading texts listed is shown in TABLE XLIV as a percentage of the total listings of principal texts for each two-year group. The same proportion, thirteen percent, was returned for each group, Third and Fourth Year, and Fifth and Sixth Year. Clearly, the Ordinary and Higher grade examinations exert an important influence on the serious study of map work.

Map work study spans either two, three, or four years of school work depending either on the examination prepared for or the length of preparation for the Higher Grade examination which in some schools is two years. It is reasonable to assume from this that the texts used would present a sequential arrangement of map work skills from simple map reading to more complex map interpretation in the final years. An analysis of the four most numerous listed texts and of the number of listings of these texts Year by Year, shows that such an assumption is only partially true.

The analysis in TABLE XLV shows that the four texts are used across the four years of geography programmes, with Map Reading and Interpretation and Map Reading for Schools being more popular in the upper years.^{101,102}

¹⁰¹ Speak and Carter, op. cit.

¹⁰² Wood, op. cit.

TABLE XLV
 MAP READING TEXTS: LISTINGS BY YEAR
 OF THE FOUR MOST NUMEROUSLY REPORTED TEXTS

Title	Year	Number of Listings			
		3	4	5	6
<u>Map Reading and Interpretation</u>		12	22	20	19
<u>Map Reading for Schools</u>		7	31	14	10
<u>Intermediate Map Reading</u>		18	18	5	3
<u>Reading Topographical Maps</u>		8	17	7	3

Each text follows a similar pattern of skill development structured towards the analysis of large-scale maps. This development follows traditional lines - the recognition of symbols, calculation and use of scales, measurement of distance and calculation of direction, use of a grid, contour reading, and cross-section drawing. Map interpretation is developed in the two more advanced texts, Map Reading and Interpretation and Reading Topographical Maps, by a systematic analysis of landscape elements but with little work directed towards synthesizing or regional differentiation.^{103,104} In Map Reading and Interpretation, for instance, map interpretation is developed through exercises on the recognition of landforms, identification of rock types, settlement types, communications, land use, and finally, by an analysis of selected maps.¹⁰⁵ In the latter section, which could provide opportunity for more advanced interpretation, the suggested analysis follows the familiar pattern of, Relief, Drainage, Settlement, Land Use, Communications and Summary, without any attempt at regional synthesis. Similarly, Reading Topographical Maps is divided for systematic analysis into Relief, and Human Geography.¹⁰⁶ The section on relief

103 Speak and Carter, op. cit.

104 Meux, op. cit.

105 Speak and Carter, op. cit.

106 Meux, op. cit.

includes exercises and discussion directed at identifying a variety of landforms from valley types to highland glaciation and coastal scenery. The text outlines a system of analysis, referred to as a catechism, in which a set of simple, graded questions are provided in order to assist pupils to compile relevant, systematic answers for examination purposes.

Whilst it might be the case that teachers enrich the suggested activities in these texts, particularly in upper years, the texts do not extend much beyond reading and analysis of topographic maps. The scales of the maps used are almost entirely 1:63360 and very few maps of larger scales are used. There are no foreign maps included for reading or interpretation. There is no work directed at the techniques of mapping, such as the mapping of economic statistics or population data. In the map extracts provided there is an absence of essentially urban areas, which could best be portrayed on larger scales than the dominantly used 1:63360 scale. The extracts show rural landscapes and settlement patterns as is the case in the map extracts used in both grades of examination. This facilitates the systematic analysis approach described above (see p. 303).

In conclusion, when the differences in age levels and capacities between Years Three and Six are considered, or,

between expectations in standards between Ordinary and Higher Grade examinations, these texts do not provide for the development of reading and interpretation, using many kinds of maps, that one might expect.

GEOGRAPHY TEXTBOOKS ON SCOTLAND

The number of textbooks reported in use that are solely concerned with the geography of Scotland are relatively few. Two were reported in sufficient numbers to be included in TABLE XL - Our Scotland and A Geography of Scotland.^{107,108} Only three others were noted in the responses: Face of Scotland; A Junior Geography of Scotland, and, Looking at Scotland.^{109,110,111}

None of these five books is organized along the lines of a materials approach, none contains site or sample studies of selected or representative areas of Scotland, and all follow the traditional practice of having a textual description aided by illustrations with, in some instances, study

107 Kinnear and Wright, op. cit.

108 Rae and Brown, op. cit.

109 McIntosh, I. G., and C. B. Marshall, Face of Scotland, London: Pergamon Press, 1966.

110 Rae, Gordon, A Junior Geography of Scotland, London: Geo. Philip and Son, 1957.

111 Wright, John M., Looking at Scotland, London: A. and C. Black, 1960.

exercises. Looking at Scotland and A Junior Geography of Scotland are both aimed at junior levels of teaching.^{112,113} The former is a reader perhaps better suited for upper primary levels, and contains some illustrations and a few small-scale maps. A Junior Geography of Scotland is entirely descriptive and includes study exercises in which there are mainly questions of a recall type, questions related to the illustrations, and "Things To Do" or "Find Out" activities.¹¹⁴ Neither of these books can be considered as well structured, concept organized or study oriented and suitable for beginning secondary pupils for home region (Scotland) studies.

The other three textbooks are appropriate for teaching in middle or senior years. They each follow the same pattern of organization - systematic description followed by regional description. Our Scotland, the most numerous reported text, has chapters on, General Picture, Landscape, Weather and Climate, and, Occupations and People, and these are followed by regional descriptions in which the traditional model is applied - descriptive outlines, as appropriate for the region, of such topics as, The Area, Historical Background,

112 Loc. cit.

113 Rae, op. cit.

114 Loc. cit.

Structure and Relief, Climate, Natural Vegetation, Economic Activities, and Towns.¹¹⁵ The illustrations are textual aids: the maps are locational in general, and there are no exercises or study guides. Geography of Scotland also contains few illustrations, it has no pictures, and small-scale maps predominate.¹¹⁶ Face of Scotland is, of the three texts, the most liberally supported with photographs, maps and sketches, but again the content organization is stereotyped both in the initial systematic chapters and the compartmentalization of the content on a regional basis.¹¹⁷ This book too, like Our Scotland, contains no study guides or exercises.¹¹⁸

The importance of the study of the geography of Scotland has been stressed since recommendations about programmes of study were first made by the Scottish Education Department in the early years of this century. These recommendations concerned both senior and middle levels of teaching and were persistent in pointing to two aspects: local area work, and regional studies. Recent statements continue to stress these studies. The Ordinary Grade syllabus outline for Section B of the examination paper states:

115 Kinnear and Wright, op. cit.

116 Rae and Brown, op. cit.

117 McIntosh and Marshall, op. cit.

118 Kinnear and Wright, op. cit.

"Candidates will be expected to have: first-hand regional knowledge of an area of possibly fifty (but certainly not more than one hundred) square miles in extent centred on their home or school; a fairly detailed regional knowledge of Scotland ..."¹¹⁹

A similar statement is made in the outline for the Higher Grade examination.¹²⁰

In view of these recommendations the textbooks reported are few in number, and more importantly are limited in variety, lacking in large-scale materials, and sample or site studies. There is an absence of integrated, text-and-materials studies organized conceptually. In addition, there is a dearth of published auxiliary textbook material for pupil use. For senior pupils there is nothing comparable for Scotland to Minshull's, Human Geography from the Air, which contains a brief text, an excellent series of clear photographs and skillfully devised exercises to illuminate concepts from the photographs, or, to Luxon and Morris', The British Isles in Map and Diagram, in which there is no text but a rich variety of graphic materials - Ordnance Survey and small-scale maps of different kinds.

¹¹⁹ Scottish Certificate of Education Examination Board, Scottish Certificate of Education Examination: Conditions and Arrangements, 1969, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1968, p. 44.

¹²⁰ Ibid., p. 46.

graphs, statistics, diagrams and profiles.^{121,122}

Efforts have been made to provide some local reference - the Atlas of Edinburgh and An Economic Geography of Fife, are two examples.^{123,124} Some detailed materials-organized studies of parts of Scotland are also available in texts which have a broader reference, such as, the sample study of a Glasgow shipyard, in, Study Geography, and of the Highlands of Scotland in, Britain and Overseas.^{125,126} Schools are also equipped with Ordnance Survey maps of their local and other areas of Scotland which do provide opportunities for detailed site studies in the classroom, although their use tends to be restricted to the middle and senior years as the evidence discussed in the chapter on the Programmes of Studies indicates.

Allowing for these references however, the variety of geographic materials and textual matter on Scotland for pupil use, at all levels in secondary schools, is limited.

- ¹²¹ Minshull, Roger M., Human Geography from the Air, London: McMillan and Co., 1968.
- ¹²² Luxon, D. G., and J. A. Morris, The British Isles in Map and Diagram, Edinburgh: Thos. Nelson, 1966.
- ¹²³ The Geographical Association (Edinburgh Branch), An Atlas of Edinburgh, Edinburgh: Geog. Assoc. (Edin. Branch), n. d.
- ¹²⁴ Fife Education Committee, An Economic Geography of Fife, unpublished, Kirkcaldy, 1968.
- ¹²⁵ Rushby, J. G., J. Bell, and M. W. Dybeck, Study Geography, Stage Four, London: Longmans, Green, 1967, pp. 12-21.
- ¹²⁶ Honeybone and Goss, op. cit., pp. 88-99.

In view of the long advocacy of the study of Scotland this is a surprising feature which might be accounted for by the long established practice of teaching world regional patterns, the neglect of local area analysis, and, apart from large-scale maps, the lack of the use of materials for questioning in examinations.

THE MERITS OF AN IDEAL GEOGRAPHY TEXTBOOK

Teachers' views on what they would consider to be an ideal geography textbook are shown, by type of school, in TABLE XLVI. Almost all the responses to this question were positive (question 16, Pt. I of the Questionnaire), only a very small percentage of respondents, from Five-Six Year schools, failing to state any merits, stating that an ideal textbook does not exist.

The analysis shows that teachers consider the quality of illustrations in textbooks, the accuracy of the content matter, the style of the textual materials, and the character of the exercises, in that order, to be the principal attributes of an ideal text. The format of textbooks, their suitability for various age levels and their cost, are on the other hand, much lesser considerations.

TABLE XLVI
MERITS OF AN IDEAL GEOGRAPHY TEXTBOOK

Merits	Type of School		
	Junior	4 Year	5-6 Year
	Percentage of responses		
Illustrations and maps. quality, clarity, good number	30	35	32
Content: accurate, logical arrangement	23	24	28
Textual character: clarity, interesting	17	18	13
Exercises: stimulating, integrated, ordered	15	11	12
Format: attractive, clear type	7	8	9
Suitability for age level	6	4	4
Reasonable price	2	-	2
	<u>100</u>	<u>100</u>	<u>100</u>
Number of responses	70	169	777
No response to question (%)	13	3	7
Negative response, i.e., "No ideal text" stated (%)	-	-	5
Number of respondents	35	65	325

The response pattern of the merits named for each type of school is similar. Each merit appears in the same rank order and there are only minor differences between school type for each merit. There was a slightly greater concern in Junior schools with the provision of clear and interesting textual material and with the provision of stimulating exercises. Teachers in Five-Six Year schools showed a slightly greater interest than others in the provision of up-to-date and concise content matter.

Under the heading, Illustrations and maps, in TABLE XLVI, were included all references to the important role and quality of photographs, maps, sketch maps, diagrams, sketches and statistics. The most important attributes reported were, in order of response, that these illustrations should be clear, accurate and well designed; that there should be plenty of them, and, that they should be related to or integrated with the textual material. The need for clarity and accuracy in, specifically, sketch maps and diagrams was considered to be of great importance, almost one-quarter of all responses included under the heading, Illustrations and maps, commenting on this alone. The desire to have a good supply of photographs, sketch maps and diagrams was noted in approximately one-third of responses in this group, and the advantage of integrating or relating illustrations to textual

material in almost eighteen percent. These three attributes of illustrations, quality, clarity and good number, accounted for almost ninety percent of this group of responses. The least reference was made to statistical data in textbooks, only eight percent of responses in the group referring to this, coming almost entirely from Five-Six Year schools. The need for more simply structured statistical data than is usually found in textbooks was the most frequent comment.

The next major concern of teachers was with the quality of the content in textbooks, and outstanding in these responses, in approximately fifty-two percent, was the demand for accurate, authoritative and up-to-date material. Noted in a further eleven percent of the responses in this group was the importance of conciseness in the presentation of content and a clearer elaboration of principles than is usually found. Accuracy of content was referred to more frequently than its arrangement, slightly less than one-third of responses referring to the need for a logical order that reflects geographical method. Within this group only a small number, three percent, commented on the importance of emphasizing relationships, and fewer still, only two percent, on the desirability of arranging content on region lines.

Although the responses concerned with textual character and the nature of exercises were, except for Junior schools, in total, less than those concerned with the importance of

illustrations, each of these concerns recorded a response percentage of some significance. The responses that referred to the character of textual matter almost entirely showed a concern for clear, interesting material presented in a simple style. Every response from Junior schools referred to this. However, only a very few respondents from the other school types saw a need to include in textbooks prose descriptions of places or phenomena.

Comments on exercises in textbooks drew a similar response percentage from each type of school. All the responses fell into three categories, which in order were: the need for carefully ordered exercises that are integrated with the text and illustrations; thought provoking questions that stimulate pupils to search for answers; and, plenty of variety in the questions and exercises, including revision exercises, interspersed throughout the text.

Of minor significance in the responses was the concern about the format and age level suitability of textbooks. Most of the comments about format referred to a need for an attractive lay-out including the liberal use of colour, and a bold, clear type. A surprisingly small number, only three percent of all responses to the question, mentioned the need for either an index, glossary or a book reference for further reading.

The listed order of merits received from respondents was also analyzed and this revealed similar priorities to those shown in the response percentage in TABLE XLVI. References to illustrations occurred in eighty-two percent of all listed merits, and references to the quality of the content in sixty-six percent. Other frequencies were: reference to exercises thirty-six percent; to the textual character thirty-five percent; to the format twenty-three percent, and, to age level suitability, ten percent. Listed first and as a percentage of all first listings were: reference to the content thirty-two percent; to illustrations twenty-six percent; to the textual style eighteen percent, and, to exercises ten percent.

In summary, it is very clear from the evidence that teachers are genuinely concerned about the quality of all illustrations, maps, photographs, sketches and diagrams, with the authenticity and prose style of the text, and with the quality of the study exercises. Teachers showed little concern by comparison with the format and cost of textbooks. There is good evidence to suggest that an integrated text is preferred in which illustrations, text and exercises complement each other, rather than an expository text in which illustrations are sparse and subordinate and where exercises are appended. Textbooks are viewed less as points of reference for facts, and more as attractive sources for pupils for

the development of concepts and principles, through their active involvement, in the analysis and interpretation of materials provided. The full responses provided by teachers attest to their keen interest in and importance attached to textbooks in geography teaching.

ATTRIBUTES OF TEXTBOOKS IN USE IN SCHOOLS

The various attributes of textbooks in schools as reported by teachers have been grouped together under a number of headings shown in TABLE XLVII.

Teachers show three major concerns when asked which texts have best served their purposes: the conciseness, accuracy and comprehensive character of the content; the quality, clarity and quantity of the illustrations and maps, and, the suitability for the age level, whether junior or examination. This suggests a concern with the use of textbooks in examination preparation, disregarding the junior age level - an observation which is strengthened on further examination of the evidence.

The rank order shown in TABLE XLVII is different from that shown in TABLE XLVI, where the quality of the illustrations and the content together, are of high significance,

TABLE XLVII

ATTRIBUTES OF TEXTBOOKS IN USE IN SCHOOLS

Attributes	Percentage of responses	
Content:		
Concise, accurate, comprehensive	23	
Organization: regional: sample studies	4	27
	—	
Illustrations and Maps:		
Quality, clarity, good number	22	
Integrated with text	4	26
	—	
Suitability for age level:		
Junior levels	10	
Examination levels	16	26
	—	
Textual character: clarity, interesting		14
Exercises: Stimulating, integrated, ordered		7
		—
		100
Number of responses	1,091	
No response to question (%)	4	
Number of respondents	425	

and where the quality of the textual character and of the exercises account for most of the remaining responses. The principal differing factor that emerges from both groups of responses is the concern for age level suitability when textbooks are considered as teaching instruments in a purposeful, rather than an ideal situation. Furthermore, it might appear that teachers' concerns with the nature of the examination override other considerations, such as the quality of textbook exercises, when the use of textbooks is considered.

Further supporting evidence of the view that examinations might be an important factor in teachers' views of textbooks can be found in TABLE XLVIII. Here, the results of the analysis of the comments have been itemized for nine textbook series. Comments on these series accounted for sixty-nine percent of all comments.

The conciseness of the content in a textbook series is a strong factor in its favour. This can be seen in the analysis whether the textbook series is used at junior levels or at examination levels as the comments on the series Groundwork Geographies, Modern Geography Series, A

TABLE XLVIII
ANALYSIS OF COMMENTS MADE ON MOST NUMEROUSLY REPORTED TEXTBOOK SERIES

Textbook Series	Content		Illustrations and Maps		Level		Textual Quality	Exercises Ordered	Number of responses
	Concise	Organized	Quality	Text-Integrated	Junior	Examination			
Modern Geography Series	23	1	17	-	2	38	19	-	172
A Course in World Geography	9	8	33	8	6	2	17	17	145
Groundwork Geographies	48	5	13	-	18	3	10	3	140
Geography for Schools	9	7	25	12	4	12	13	18	90
Longmans Colour Geographies	6	-	29	5	36	-	24	-	78
New Ventures in Geography	14	2	36	5	11	9	11	12	55
A Certificate Series	22	-	22	-	-	34	22	-	27
Study Map Note Books	25	-	35	-	-	40	-	-	25
New Oxford Geographies	18	-	21	-	-	30	24	7	24
Number of responses analyzed									756
Total number of responses for all textbooks									1,091

Certificate Series or The Study Map Notebooks testify.^{127,}
128,129,130 By comparison, the organization of the content
is considered to be of relatively little importance.

The quality of the illustrations is also a consistently
strong attribute in teachers' appreciation of textbook
series. This quality of illustrations was the outstanding
comment when teachers reported on the merits of an ideal
textbook (see TABLE XLVI). By comparison, the quality of
the textual material is considered to be of secondary impor-
tance to that of illustrations. This finding was also noted
in the analysis of comments on an ideal textbook.

There is a reasonably clear division between textbook
series which provide descriptive information in a concise
form, supported by good illustrations, and those that present
an integrated text and materials approach. The analysis
shows clearly that the descriptive-illustrated textbook
series, Modern Geography Series, A Certificate Series, Study
Map Notebooks, and New Oxford Geographies had the highest
response percentages in each case for their suitability at

- 127 Groundwork Geographies, op. cit.
128 Modern Geography Series, op. cit.
129 A Certificate Series, op. cit.
130 Study Map Notebooks, op. cit.

the examination age level.^{131,132,133,134} On the other hand, the integrated text and materials series, *A Course in World Geography*, and *Geography for Schools*, were commended much more for the quality of their illustrations, exercises and text.^{135,136} Teachers obviously are aware of the geographic quality of a series in terms of its organization. As teachers were free to make their own comments on any textbooks they chose themselves, it is noteworthy that of all responses analyzed, approximately twenty-one percent referred to the series, *A Course in World Geography* and *Geography for Schools*.^{137,138} Yet these series are not the most popular series in schools as TABLE XL clearly shows.

This interest by teachers in the integrated text and materials series is also evidenced in the analysis shown in TABLE XLIX. Both the series, *A Course in World Geography*, and *Geography for Schools*, ranked highly in the percentage of titles listed in the comments given by teachers.^{139,140}

- 131 *Modern Geography Series*, op. cit.
- 132 *A Certificate Series*, op. cit.
- 133 *Study Map Notebooks*, op. cit.
- 134 *New Oxford Geographies*, op. cit.
- 135 *A Course in World Geography*, op. cit.
- 136 *Geography for Schools*, op. cit.
- 137 *A Course in World Geography*, op. cit.
- 138 *Geography for Schools*, op. cit.
- 139 *A Course in World Geography*, op. cit.
- 140 *Geography for Schools*, op. cit.

TABLE XLIX

PERCENTAGE LISTINGS OF MOST NUMEROUSLY REPORTED TEXTBOOKS
ON WHICH COMMENTS WERE MADE

Textbook Series	Percentage of Listings
Modern Geography Series	17
A Course in World Geography	10
Groundwork Geographies	9
Geography for Schools	7
Colour Geographies	5
New Ventures in Geography	5
A Certificate Series	3
Study Map Notebooks	3
New Oxford Geographies	3
	<hr/>
	62
Number of listings of textbook titles included in above series	440
Total listing of textbook titles	708

The analysis also provides further evidence of the dominance in geography teaching of a relatively small number of textbook series. Out of 708 listings of textbook titles, sixty-two percent were in nine series, and more than one-third were in three series.

CONCLUSION

In the textbooks examined the organizational structure is, with few exceptions, a continental one, in which there is a compartmentalized arrangement of content. The quality of the materials is indifferent, and there is in all the books, to a greater or lesser degree, a considerable emphasis on the use of pictures for illustration only, and on maps for purposes of location only. The pictures generally lack a good potential for geographic analysis, and are indifferent in definition in instances where definition is important. There is a lack of variety in the type of maps, and other than place and distribution maps, there are few ideas expressed in map form. Apart from the details and concepts shown in the pictures and maps, other materials such as graphs, sketches, profiles and literary extracts, all of which have good potentials for analysis and the

presentation of ideas, are either few in number or non-existent.

The texts which are structured in the direction of problem solving activities, particularly Britain and Overseas, Geography for Schools, and The British Isles, A Course in World Geography, although both have some shortcomings, provide the most useful and varied materials for geography teaching.^{141,142} In the former text where materials are integrated in an activity organized sample or site study approach, the materials are purposefully grouped for the development of concepts, and the quality of the materials used is thus an important component.

The most popular series shown in TABLE XL are those with a description and illustration organization. The two series, Geography for Schools and A Course in World Geography, that have been identified as having a structural organization and sequence along recognizable geographical lines and possess materials of geographic quality, do not appear to be widely used - only twelve percent of all books listed in both Years One and Two and Years Three and Four.^{143,144} The two series most popular in junior years,

141 Honeybone and Goss, op. cit.

142 Lowry, The British Isles, op. cit.

143 Geography for Schools, op. cit.

144 A Course in World Geography, op. cit.

Groundwork Geographies, and New Ventures in Geography, lack the carefully chosen, accurate and varied visual materials which are important at this level.^{145,146}

There is a general lack in map reading and interpretation textbooks of a sequential skill development through the Years, using different kinds of maps of varying scales. There is a paucity of textbook material on Scotland, especially with regard to different organizations of content, of varied scale perspectives, and the provision of source materials.

The greatest concern of teachers, at all levels of teaching, is with the quality and quantity of illustrations and maps, and with the accuracy, conciseness and style, of the content matter. There is sufficient evidence to suggest that the nature of the examination is a considerable factor in how teachers view textbooks. But teachers are conscious of the potential for geography teaching of well ordered, text and materials integrated textbooks.

¹⁴⁵ Groundwork Geographies, op. cit.

¹⁴⁶ New Ventures in Geography, op. cit.

CHAPTER NINE

CONCLUSION

For the purposes of this study the sources of information were adequate. The official annual reports, memoranda, circulars and examination papers provide a continuous record from which trends, innovations and differing approaches in geography teaching may be discerned or inferred. The survey of geography teachers' views and practices in their teaching presented a large amount of information for analysis. Most of the information came from Five-Six Year schools where the majority of geography teachers, as defined in this study, are located. The definition used of a geography teacher presented no problems of interpretation for teachers.

Geography teaching in secondary schools in Scotland has emerged since about the turn of this century from a minor and ill-organized subject to an independent and important subject in school curricula today. Teachers are well qualified in the subject and there is available a variety of geographic teaching aids and textbooks, and a body of ideas, built up over many years, on techniques of teaching the subject and on organizations of subject matter.

The public examination system exerts a strong influence on the organization of the subject for teaching purposes. This influence has been beneficial during periods when new programmes were being implemented, standards being established or new techniques or materials being introduced. In contrast, at other times, and notably during the inter-war period, the examination has, by maintaining uniformity of standards and a structural organization, tended to restrict innovations. The examination influence is particularly noticeable in the middle and senior years of secondary school programmes, but is also felt in the junior years of Four Year and Five-Six Year Schools. The examination structure is reflected in the particular approach, content areas dealt with and the materials used in the classroom.

A regional framework of reference, in which descriptions of phenomena are characteristic, is central in all programmes of study. In senior years there is a noticeable trend towards a more analytic-descriptive approach with systematic studies more prominent. These emphases are characteristic of the examinations at the particular levels. In the optional parts of both examinations the sectioning by continents affords an opportunity for teachers to choose particular continents for concentrated study. As a consequence, Asia, Australasia, Africa, and South America are neglected areas for serious

study in the middle and senior years. While in senior years some systematic or thematic studies which touch on these continents, are taken up, the heaviest emphasis in school programmes from Year Three on is on the British Isles, Europe and North America. In such terms the geography of the emerging nations, particularly in the tropical world, is given much less serious attention than the geography of technologically advanced areas.

The emphasis on regional studies in a continental framework in the examinations is also a strong factor in the neglect or indifference towards small area studies in school programmes. Of the small area studies possible, local area studies, while logically placed at the commencement of secondary school programmes, are rarely developed beyond junior year levels. The sample study approach is little in favour during examination years. Field work is not a regular aspect of school programmes in any year and when questions occur in the examinations, that refer to field work or local area studies, they are optional questions. The outstanding exception is the compulsory map work section in both examinations which occasions, as a discrete teaching area, a concentrated study of large-scale maps from Year Three onwards.

The scale of reference in school programmes, as they relate to examinations, can also be noted in the type of teaching aids most frequently used. Photographic aids which have a small area perspective are less frequently used than the small scale reference found in atlases, wall maps and the globe. The study revealed that there is a lack of readily available, up to date photographic material in schools. This is largely a matter of accessibility, as well organized resource centres at the school level would, on the evidence from schools with an equipped geography room, remove the problem to some extent. In a changing world, a continuous flow of fresh photographic material into the school system is a more necessary element than the replenishment of other media.

The emphasis on regional descriptions, the lack of variety in scale perspectives and the types of visual materials most frequently used, are reflected in the text book series most used in schools. These texts are continental in their focus and regional in their organization. They are commonly arranged in an orderly system that is descriptive, firstly of physical, then of cultural phenomena.

Teachers' views on the objectives of geographic education, and also the pattern of school programmes, match the

objectives and syllabus outlines contained in official examination circulars. The injection into programmes of different organizations of subject matter, of a non-continental framework of reference such as a focus on the tropical world or the Islamic world, would be difficult in view of the long established examination structure. Similarly, the transfer of recent ideas from advanced academic levels into school programmes, which, as the evidence shows, is very little developed, is also difficult to implement given the pressure of the examination.

Innovations in school geography programmes as they relate to the examination have occurred at the senior levels rather than the junior. The recently developed Sixth Year studies programme with its emphases on method and analysis, and the greater use of graphic materials in the Higher Grade examination, are probably indicative of future trends at the middle and junior levels of geographic education. The development now of suitable materials and procedures for use at these lower levels may help to hasten the process.

Whilst it is appreciated that teachers will teach to the particular level of their pupils, there is little evidence, apart from mapwork studies, of conceptually arranged programmes in which a sequence of ideas, on a difficulty level, are being used. In addition, there is no evidence of the

sequential use of source materials from the elementary to the more complex. The opportunities of using a variety of mapping techniques, of various scales, or of vertical aerial photographs, for example, appears not to have been explored at senior levels.

Of the aspects of geography teaching surveyed one important area not well developed in schools is field study. The reasons revealed, particularly of timetabling, present a difficult problem for solution. Well organized field activities of short duration are necessary in the short term if any improvement is to be brought about.

There are no significant differences between teachers according to their year of graduation as teachers, the university or college they attended, or the location of their school, as far as their attitudes and approaches towards the sequence of studies in school programmes, organization of subject matter, geographical approaches, field work and use of teaching aids are concerned. The most significant differences in attitudes and approaches, discernible in all aspects of geography teaching surveyed, occur between teachers in Junior schools and those in Four Year and Five-Six Year schools. This latter is an expected outcome. Overall, the

results illustrate the predominance of the syllabus and examination structure over any possible variation based on teacher background.

The demonstration of a methodology in the subject which could develop in various ways in the use of appropriately ordered textbooks, the use as source materials of a variety of graphic aids, in field activities, or in a flexible approach in both regional and systematic studies appears little in evidence in both Ordinary and Higher levels of examination and in school programmes.

There is sufficient evidence however, that a potential exists amongst teachers for the development of teaching strategies in keeping with the structure of the subject. Examination influences are admitted, and also criticized by teachers. The merits of an analytical approach to regional studies, of sample studies, field work and local studies are well acknowledged. The textbook series in use, that are arranged on a text-materials integrated basis, are recognized for the purposes of presenting both a conceptual framework and a methodology in the subject.

The paucity of varied geographic source material on Scotland presents a good opportunity for the planned development by both academic and professional personnel of model kits of materials. With local services and materials readily

accessible such a project would serve well the needs of teachers at middle and senior levels of teaching where Home Region studies are taken up. The model kits could be ordered to serve those aspects of teaching which have been shown in this study as being under-emphasized or neglected: the demonstration of a geographic method of enquiry; a varied scale perspective concerning areal coverage; the transfer of the most recent concepts at advanced academic levels into school programmes; the provision of varied source materials; skill building in the interpretation of the materials; the encouragement of field studies; and the development of concepts appropriately ordered for various levels in schools.

BIBLIOGRAPHY

A. GOVERNMENT REPORTS, CIRCULARS AND PAPERS

Scotch Education Department, Circulars and Papers: Examination for Leaving Certificates 1889, London: H. M. S. O., 1889.

_____, Circulars and Papers: Examination for Leaving Certificates 1890, London: H. M. S. O., 1890.

_____, Circulars and Papers: Examination for Leaving Certificates 1891, London: H. M. S. O., 1891.

_____, Circulars and Papers: Examination for Leaving Certificates 1892, London: H. M. S. O., 1892.

Secondary Education (Scotland), Report for the Year 1892, London: H. M. S. O., 1892.

_____, Report for the Year 1893, London: H. M. S. O., 1893.

_____, Report for the Year 1894, London: H. M. S. O., 1894.

_____, Report for the Year 1895, London: H. M. S. O., 1895.

_____, Report for the Year 1896, London: H. M. S. O., 1896.

_____, Report for the Year 1897, London: H. M. S. O., 1897.

_____, Report for the Year 1898, London: H. M. S. O., 1898.

_____, Report for the Year 1899, London: H. M. S. O., 1899.

_____, Report for the Year 1900, London: H. M. S. O., 1900.

_____, Report for the Year 1901, London: H. M. S. O., 1901.

_____, Report for the Year 1902, London: H. M. S. O., 1902.

_____, Report for the Year 1903, London: H. M. S. O., 1903.

_____, Report for the Year 1904, London: H. M. S. O., 1904.

_____, Report for the Year 1905, London: H. M. S. O., 1905.

- _____, Report for the Year 1906, London: H. M. S. O., 1906.
- _____, Report for the Year 1907, London: H. M. S. O., 1907.
- _____, Report for the Year 1908, London: H. M. S. O., 1908.
- _____, Report for the Year 1909, London: H. M. S. O., 1909.
- _____, Leaving Certificate Examination: Further Circulars and Examination Papers 1910, London: H. M. S. O., 1910.
- _____, Report for the Year 1910, London: H. M. S. O., 1910.
- _____, Leaving Certificate Examination: Further Circulars and Examination Papers 1911, London: H. M. S. O., 1911.
- _____, Report for the Year 1911, London: H. M. S. O., 1911.
- _____, Leaving Certificate Examination: Further Circulars and Examination Papers 1912, London: H. M. S. O., 1912.
- _____, Report for the Year 1912, London: H. M. S. O., 1912.
- _____, Leaving Certificate Examination: Examination Papers 1913, London: H. M. S. O., 1913.
- _____, Report for the Year 1913, London: H. M. S. O., 1913.

Scottish Education Department, "Suggestions on Post-Intermediate Courses in Geography leading to the Award of a Leaving Certificate", mimeographed, Memo. 230, Nov., 1913, n. p.

- Secondary Education (Scotland), Leaving Certificate Examination: Examination Papers 1914, London: H. M. S. O., 1914.
- _____, Report for the Year 1914, London: H. M. S. O., 1914.
- _____, Leaving Certificate Examination: Examination Papers 1915, London: H. M. S. O., 1915.
- _____, Report for the Year 1915, London: H. M. S. O., 1915.
- _____, Leaving Certificate Examination: Examination Papers 1916, London: H. M. S. O., 1916.

, Leaving Certificate Examination: Examination Papers 1917, London: H. M. S. O., 1917.

, Leaving Certificate Examination: Examination Papers 1918, London: H. M. S. O., 1918.

, Leaving Certificate Examination: Examination Papers 1919, London: H. M. S. O., 1919.

, Leaving Certificate Examination: Examination Papers 1920, London: H. M. S. O., 1920.

, Leaving Certificate Examination: Examination Papers 1921, London: H. M. S. O., 1921.

, Leaving Certificate Examination: Examination Papers 1922, London: H. M. S. O., 1922.

, Leaving Certificate Examination: Examination Papers 1923, London: H. M. S. O., 1923.

, Leaving Certificate Examination: Examination Papers 1924, London: H. M. S. O., 1924.

Scottish Education Department, "Suggestions on Courses in Geography Leading to the Award of a Leaving Certificate", mimeographed, Memo. 230, July, 1924, n. p.

, Leaving Certificate Examination, 1925. Circ. 30 (1924), London: H. M. S. O., 1924.

Secondary Education (Scotland), Leaving Certificate Examination: Examination Papers 1925, London: H. M. S. O., 1925.

, Leaving Certificate Examination: Examination Papers 1926, London: H. M. S. O., 1926.

, Leaving Certificate Examination: Examination Papers 1927, London: H. M. S. O., 1927.

, Leaving Certificate Examination: Examination Papers 1928, London: H. M. S. O., 1928.

, Leaving Certificate Examination: Examination Papers 1929, London: H. M. S. O., 1929.

- , Leaving Certificate Examination: Examination Papers
1930, London: H. M. S. O., 1930.
- Education (Scotland), Education in Scotland: General Reports
1930-33, London: H. M. S. O., 1934.
- Secondary Education (Scotland), Leaving Certificate Examina-
tion: Examination Papers 1931, London: H. M. S. O.,
1931.
- , Leaving Certificate Examination: Examination Papers
1932, London: H. M. S. O., 1932.
- Scottish Education Department, Leaving Certificate Examina-
tion, 1933, Circ. 30 (1932), London: H. M. S. O., 1932.
- Secondary Education (Scotland), Leaving Certificate Examina-
tion: Examination Papers 1933, London: H. M. S. O.,
1933.
- Education (Scotland), Education in Scotland: General Reports
1933-36, Edinburgh: H. M. S. O., 1937.
- Secondary Education (Scotland), Leaving Certificate Examina-
tion: Examination Papers 1934, London: H. M. S. O.,
1934.
- , Leaving Certificate Examination: Examination Papers
1935, London: H. M. S. O., 1935.
- , Leaving Certificate Examination: Examination Papers
1936, Edinburgh: H. M. S. O., 1936.
- , Leaving Certificate Examination: Examination Papers
1937, Edinburgh: H. M. S. O., 1937.
- , Leaving Certificate Examination: Examination Papers
1938, Edinburgh: H. M. S. O., 1938.
- , Leaving Certificate Examination: Examination Papers
1939, Edinburgh: H. M. S. O., 1939.
- Scottish Education Department, Senior Leaving Certificate
Examination, 1940, Circ. 30 (1939), Edinburgh: H. M.
S. O., 1939.

Secondary Education (Scotland), Senior Leaving Certificate Examination: Examination Papers 1946, Edinburgh: H. M. S. O., 1946.

_____, Senior Leaving Certificate Examination: Examination Papers 1947, Edinburgh: H. M. S. O., 1947.

Scottish Education Department, Senior Leaving Certificate Examination, 1948, Circ. 30 (1947), Edinburgh: H. M. S. O., 1947.

Scottish Education Department, Secondary Education: A Report of the Advisory Council on Education in Scotland, Edinburgh: H. M. S. O., 1947.

Secondary Education (Scotland), Senior Leaving Certificate Examination: Examination Papers 1948, Edinburgh: H. M. S. O., 1948.

_____, Senior Leaving Certificate Examination: Examination Papers 1949, Edinburgh: H. M. S. O., 1949.

Scottish Education Department, Education in Scotland in 1949, Edinburgh: H. M. S. O., 1950.

_____, Scottish Leaving Certificate Examination: Examination Papers 1950, Edinburgh: H. M. S. O., 1950.

_____, Education in Scotland in 1950, Edinburgh: H. M. S. O., 1951.

_____, Geography in Secondary Schools, Edinburgh: H. M. S. O., 1951.

_____, Scottish Leaving Certificate Examination: Examination Papers 1951, Edinburgh: H. M. S. O., 1951.

_____, Scottish Leaving Certificate Examination: Examination Papers 1952, Edinburgh: H. M. S. O., 1952.

_____, Education in Scotland in 1952, Edinburgh: H. M. S. O., 1953.

_____, Scottish Leaving Certificate Examination: Examination Papers 1953, Edinburgh: H. M. S. O., 1953.

_____, Scottish Leaving Certificate Examination: Examination Papers 1954, Edinburgh: H. M. S. O., 1954.

_____, Education in Scotland in 1954, Edinburgh: H. M. S. O., 1955.

_____, Junior Secondary Education, Edinburgh: H. M. S. O., 1955.

_____, Scottish Leaving Certificate Examination: Examination Papers 1955, Edinburgh: H. M. S. O., 1955.

_____, Education in Scotland in 1955, Edinburgh: H. M. S. O., 1956.

_____, Scottish Leaving Certificate Examination, 1956, Circ. 30 (1955), Edinburgh: H. M. S. O., 1955.

_____, Scottish Leaving Certificate Examination: Examination Papers 1956, Edinburgh: H. M. S. O., 1956.

_____, Education in Scotland in 1956, Edinburgh: H. M. S. O., 1957.

_____, Scottish Leaving Certificate Examination, 1957, Circ. 30 (1956), Edinburgh: H. M. S. O., 1956.

_____, Scottish Leaving Certificate Examination: Examination Papers 1957, Edinburgh: H. M. S. O., 1957.

_____, Education in Scotland in 1957, Edinburgh: H. M. S. O., 1958.

_____, Teaching of Geography in Secondary Schools, Edinburgh: H. M. S. O., 1958.

_____, Scottish Leaving Certificate Examination: Examination Papers 1958, Edinburgh: H. M. S. O., 1958.

_____, Education in Scotland in 1958, Edinburgh: H. M. S. O., 1959.

_____, Scottish Leaving Certificate Examination: Examination Papers 1959, Edinburgh: H. M. S. O., 1959.

_____, Education in Scotland in 1959, Edinburgh: H. M. S. O., 1960.

_____, Scottish Leaving Certificate Examination: Examination Papers 1960, Edinburgh: H. M. S. O., 1960.

Ministry of Education, Geography and Education, Pamphlet No. 39, London: H. M. S. O., 1960.

Scottish Education Department, Education in Scotland in 1960, Edinburgh: H. M. S. O., 1961.

_____, Scottish Leaving Certificate Examination: Examination Papers 1961, Edinburgh: H. M. S. O., 1961.

_____, Education in Scotland in 1961, Edinburgh: H. M. S. O., 1962.

_____, Scottish Certificate of Education: Examination Arrangements, 1962, Edinburgh: H. M. S. O., 1961.

Scottish Certificate of Education Examination Board, Ordinary Grade Examination Papers 1962, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1962.

_____, Higher Grade Examination Papers 1962, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1962.

Scottish Education Department, Education in Scotland in 1962, Edinburgh: H. M. S. O., 1963.

_____, Scottish Leaving Certificate Examination: Memorandum for the guidance of teachers on the setting and marking of school tests and examinations: Geography, Edinburgh: H. M. S. O., 1963.

Scottish Certificate of Education Examination Board, Ordinary Grade Examination Papers 1963, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1963.

_____, Higher Grade Examination Papers 1963, Edinburgh: Scot. Cert. of Educ. Exam. Board, 1963.

Scottish Education Department, Education in Scotland in 1963, Edinburgh: H. M. S. O., 1964.

_____, Field Studies, Edinburgh: H. M. S. O., 1964.

Scottish Certificate of Education Examination Board,
Ordinary Grade Examination Papers 1964, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1964.

_____, Higher Grade Examination Papers 1964, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1964.

Scottish Education Department, Education in Scotland in
1964, Edinburgh: H. M. S. O., 1965.

_____, Certificate Courses in Scottish Secondary Schools:
Recent Developments, Edinburgh: H. M. S. O., 1965.

Scottish Certificate of Education Examination Board,
Ordinary Grade Examination Papers 1965, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1965.

_____, Higher Grade Examination Papers 1965, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1965.

_____, Report for 1965, Edinburgh: Scot. Cert. of Educ.
Exam. Board, 1966.

_____, Ordinary Grade Examination Papers 1966, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1966.

_____, Higher Grade Examination Papers 1966, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1966.

_____, Report for 1966, Edinburgh: Scot, Cert. of Educ.
Exam. Board, 1967.

_____, Ordinary Grade Examination Papers 1967, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1967.

_____, Higher Grade Examination Papers 1967, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1967.

_____, Report for 1967, Edinburgh: Scot. Cert. of Educ.
Exam. Board, 1968.

_____, Certificate of Sixth Year Studies, Edinburgh: Scot.
Cert. of Educ. Exam. Board, 1967.

- _____, Ordinary Grade Examination Papers 1968, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1968.
- _____, Higher Grade Examination Papers 1968, Edinburgh:
Scot. Cert. of Educ. Exam. Board, 1968.
- _____, Scottish Certificate of Education Examination:
Conditions and Arrangements 1969, Edinburgh: Scot.
Cert. of Educ. Exam. Board, 1968.

B. BOOKS AND ARTICLES

- Bird, J., "Scale in Regional Study: Illustrated by Brief Comparisons between the Western Peninsulas of England and France", Geography, XLI, Jan. 1956, pp. 25-38.
- Bloom, B. S. (ed.), Taxonomy of Educational Objectives, London: Longmans, Green, 1956.
- Bramwell, R. D., Elementary School Work 1900 - 1925, Durham: Univ. of Durham, 1961.
- Briault, E. W. H., and D. W. Shave, Geography In and Out of School, London: Harrap, 1960.
- _____, Geography in Secondary Schools, Sheffield: Geog. Assoc., rev. ed., 1960.
- Broek, Jan O. M., Geography: Its Scope and Spirit, Columbus, Ohio: Chas. E. Merrill, 1965.
- Bruner, Jerome, The Process of Education, New York: Vintage Books, 1963.
- Bryan, P., "Geography in Schools", in R. J. Chorley and P. Haggett (eds.), Frontiers in Geographical Teaching, London: Methuen, 1965, pp. 327-337.
- Bull, G. B. G., "Field Work in Towns: A Review of Techniques for Sixth Forms and Technical Colleges", Geography, XLIX, July, 1964, pp. 206-221.
- Campbell, F. J., "New Books for Schools", Geography, XLVII, April, 1962, pp. 196-201.

- Dempster, Prue, "The Use of Sample Studies in the Teaching of Geography", New Era, 45, Nov. 1964, pp. 256-260.
- Dilke, Margaret S., (ed.), The Purpose and Organization of Field Studies, London: Rivingtons, 1965.
- Edynbry, D., "Fieldwork in the Ordinary Level G. C.E.", Geography, LII, Jan. 1967, pp. 53-59.
- Fairgrieve, James, Geography in School, London: Univ. of London Press, rev. ed., 1951.
- Garnett, Alice, "Memorandum on Geography Teaching", Geography, XLVII, Jan. 1962, pp. 63-71.
- Garnett, Olive, Fundamentals in School Geography, London: Harrap, 1949.
- Geographical Association, The, Sample Studies, Sheffield: Geog. Assoc., 1962.
- Gilbert, E.W., "Geography and Regionalism", in Griffith Taylor (ed.), Geography in the Twentieth Century, London: Methuen, 2nd ed., 1953, pp. 345-370.
- Godfrey Thomson Unit for Education Research, "An Experimental Test of Geography at the Ordinary Grade of the Scottish Certificate of Education", mimeographed, Edinburgh: Univ. of Edinburgh, 1968.
- Gopsill, G. H., The Teaching of Geography, London: Macmillan, rev. ed., 1966.
- Greco, Peter, The Structure of Geography, Social Science Education Consortium, 102, Lafayette: Purdue Univ., 1966.
- Haggett, P. "Scale Components in Geographical Problems", in R. J. Chorley and P. Haggett (eds.), Frontiers in Geographical Teaching, London: Methuen, 1965, pp. 164-185.
- _____, and R. J. Chorley, "Frontier Movements and the Geographical Tradition", in R. J. Chorley and P. Haggett (eds.), Frontiers in Geographical Teaching, London: Methuen, 1965, pp. 358-378.
- Halverson, Lynn H., Geography via Pictures, Normal, Illinois: Nat. Coun. for Geog. Educ., rev. ed., 1968.

Hartshorne, R., The Nature of Geography, Lancaster: Assoc. of Amer. Geogrs., 1939.

_____, Perspective on the Nature of Geography, Chicago: Rand McNally, 1959.

Herbertson, A. J., "The Major Natural Regions: An Essay in Systematic Geography", Geographical Journal, 25, 1905, pp. 300-312.

Hickman, Gladys M., "The Sample Study - A Method and its Limitations", Journal of Geography, XLIX, 1950, pp. 151-159.

Hogan, M. M., "The Evolution of the Regional Concept and its Influence on the Teaching of Geography in Schools", unpub. M. A. thesis, Univ. of London, 1962.

Hutchings, G. E., "Geographical Field Teaching", Geography, XLVII, Jan. 1962, pp. 1-14.

International Geographical Union, Final Report of the Commission on the Teaching of Geography, Chicago: Denoyer-Geppert, 1965.

James, Preston E., "Toward a Further Understanding of the Regional Concept", Annals, Assoc. of Amer. Geogrs., XLII, 1952, pp. 152-222.

Jay, L. J., "Books for Schools: New Titles and Trends", Geography, XLIX, July, 1964, pp. 339-344.

Johnson, Brian A., "The Use of Theoretical Models in Geography Teaching", Journal of Geography, LXVII, April, 1968, pp. 237-240.

Keltie, J. Scott, "Geographical Education", Scottish Geographical Magazine, I, Oct. 1885, pp. 497-505.

Kimble, G. H. T., "The Inadequacy of the Regional Concept", in L. D. Stamp and S. W. Wooldridge (eds.), London Essays in Geography, London: Longmans, Green, 1951, pp. 151-174.

Long, M. (ed.), Handbook for Geography Teachers, Institute of Education, Univ. of London, London: Methuen, rev. ed., 1964.

Long, M., "Research in Picture Study: The Reaction of Grammar School Pupils to Geographical Pictures", Geography, XLVI, Nov. 1961, pp. 322-337.

_____, "The Status of Field Work: The Attitudes of Examination Boards and Local Education Authorities", Geography, XLVII, Jan. 1962, pp. 72-84.

_____, "The Teaching of Geography: A Review of Recent British Research and Investigations", Geography, XLIX, July, 1964, pp. 192-205.

_____, and B. S. Roberson, Teaching Geography, Toronto: Bellhaven House, 1967.

Marchant, E. C., "Geography in Education in England and Wales", Geography, XLIX, July 1964, pp. 173-191.

Marchant, E. C. (ed.), Geography Teaching and the Revision of Geography Textbooks and Atlases, Strasbourg : Council of Europe, 1967.

McLellan, A. G. (ed.) Field Excursions in West Scotland, London: Rivingtons, 1970.

McNee, Robert, "An Approach to Understanding the Current Structure of Geography", in Irving Morrisett (ed.), Concepts and Structure in the New Social Science Curricula, Lafayette: Social Science Education Consortium, 1966, pp. 57-63.

Minshull, Roger, Regional Geography: Theory and Practice, London: Hutchinson, 1967.

Moser, C. A., Survey Methods in Social Investigation, London: Heinemann, 1965.

National Academy of Science - National Research Council, The Science of Geography, pub. 1277, Washington: Nat. Res. Coun., 1965.

National Council for Geographic Education, "Research needs in Geographic Education: Suggestions and Possibilities", Geographic Education Series. No. 7, Illinois State Univ.: Nat. Coun. for Geog. Educ., 1967.

- Nostrand, Richard L., "A Model for Geography", Journal of Geography, LXVII, Jan. 1968, pp. 13-17.
- Parker, W. H., "Geography Defended", Universities Quarterly, XIII, 1958-9, pp. 34-44.
- Pattison, W., "The Four Traditions of Geography", Journal of Geography, LXII, May, 1964, pp. 211-216.
- Picker, Robert D., "Geography and the Learning Process: A Methodological Review", Journal of Geography, LXIV, Nov. 1965, pp. 340-345.
- Roberson, B. S., "A Study of the Kind of Geography Taught in Secondary Modern Schools", Educational Review, 16, 1963, pp. 3-15.
- _____, and M. Long, "Sample Studies: The Development of a Method", Geography, XLI, Nov. 1956, pp. 248-259.
- Rogers, Vincent, The Social Studies in English Education, London: Heinemann, 1968.
- Salmon, R. B., and G. O. B. Thomson (eds.), An Experimental Examination in Geography, Edinburgh: Moray House Coll. of Educ., 1971.
- Scarfe, N. V., "New Directions in Geographic Education in North America", Geography, LI, July, 1966, pp. 198-209.
- _____, "Geography Textbooks for Schools", Geography, XXVII, July, 1942, pp. 106-109.
- _____, "The Teaching of Geography in Schools", Geography, XXXIV, June, 1949, pp. 57-65.
- School Examinations Department, General Certificate of Education Examinations: Chemistry: Ordinary Level: Teachers' Booklet, Nuffield Science Teaching Project, London: Univ. of London, 1967.
- School Government Publishing Co., The Education Authorities Directory and Annual 1967, London: School Govt. Pub. Co., 1967.
- Schools Council, The Certificate of Secondary Education: Trial Examinations - Geography, Examinations Bulletin 14, London: H. M. S. O., 1966.

Schwab, J. J., "The Concept of the Structure of a Discipline", The Educational Record, XLIII, July, 1962, pp. 197-205.

_____, "Structure of the Disciplines: Meanings and Significances", in G. W. Ford and L. Pungo (eds.), The Structure of Knowledge and the Curriculum, Chicago: Rand McNally, 1964, pp. 6-30.

Secondary School Examinations Council, The Certificate of Secondary Education: Some Suggestions for Teachers and Examiners, Examination Bulletin 1, London: H. M. S. O., 1963.

Simons, Martin, "What is a Geographical Factor?" Geography, LI, July, 1966, pp. 210-217.

Simpson, C. A., The Study of Local Geography, London: Methuen, 1950.

Tatham, George, "Environmentalism and Possibilism" in Griffith Taylor (ed.), Geography in the Twentieth Century, London: Methuen, 2nd ed., 1953, pp. 128-162.

Thomas, Edwin N., "Some Comments about a Structure of Geography with a Particular Reference to Geographic Facts, Spatial Distribution, and Areal Association", in Clyde F. Kohn (ed.), Selected Classroom Experiences: High School Geography Project, Normal, Illinois: Nat. Coun. for Geog. Educ., 1964, pp. 44-60.

Turnock, David, "The Region in Modern Geography", Geography, LIII, Nov. 1967, pp. 374-383.

UNESCO, Source Book for Geography Teaching, London: Longmans, Green, 1965.

University of Nottingham Institute of Education, Advisory Committee in Geography, "Implications for Geography Teaching in the Newsom Report", Geography, LIII, April, 1967, pp. 186-192.

Wallwork, K. L., "Map Interpretation and Industrial Location: The Example of Alkali Manufacture in Lancastria", Geography, LII, April, 1967, pp. 166-181.

Walton, Kenneth, "The Certificate of Sixth Year Studies", Scottish Geographical Magazine, 83, Sept. 1967, pp. 125-129.

Warman, H. J., Changing Emphasis in Geographic Education, Nat. Counc. for Geog. Educ., Prof. paper 19, Norman: Univ. of Oklahoma, 1958.

Wood, G. A., Geography in Schools, Glasgow: Blackie, 1957.

Wooldridge, S. W., and W. G. East, The Spirit and Purpose of Geography, London: Hutchinson, 1951.

C. SCHOOL TEXTBOOKS

Beddis, R. A., The Land and People of Britain, London: Univ. of London Press, 1967.

Bryant, R. V., A Foundation Course in Geography, London: Collins, 1967.

Burrell, E. R., and J. Hancock, A Sample Study of Great Britain, London: Methuen, 1967.

Burton, R. N., and C. J. Lines, Europe, London Regional Geographies, Bk. VI, London: Univ. of London Press, 1967.

Cain, H. R., Human and Economic Geography, A Certificate Series, London: Longmans, Green, 1963.

_____, Physical Geography, A Certificate Series, London: Longmans, Green, 1963.

_____, and R. J. Small, Great Britain and Ireland, A Certificate Series, London: Longmans, Green, 1964.

Cole, R., Europe, Nelson's Geography Texts, Bk. VII, Edinburgh: Nelson and Sons, 1964.

Collins, K. J., and D. D. Harris, A Regional Geography of Victoria, Melbourne: Whitcombe and Tombs, 1964.

Cornish, W. B., Asia, Modern Geography Series, Bk. V, London: Univ. Tutorial Press, rev. ed., 1962.

Coysh, A. W., and M. E. Tomlinson, North America, Modern Geography Series, Bk. IV, London: Univ. Tutorial Press, rev. ed., 1964.

- _____, The Southern Continents, Modern Geography Series, Bk. VI, London: Univ. Tutorial Press, 1961
- Dury, G. H., World Geography - Physical, Nelson's Geography Texts, Bk. X, Edinburgh: Nelson and Sons, 1958.
- _____, and T. J. Chandle, North America, Nelson's Geography Texts, Bk. IV, Edinburgh: Nelson and Sons, 1959.
- _____, and J. A. Morris, The Land from the Air: A Photographic Geography, London: Harrap, 1958.
- Ellis, D. M., and W. R. A. Ellis, Geography Around Us, London Regional Geographies, Bk. 1, London: Univ. of London Press, 1963.
- Fairgrieve, J., and E. Young, Africa and Southern Europe, Real Geography, Bk. III, London: Geo. Philip and Son, 1955.
- _____, Asia, Real Geography, Bk. IV, London: Geo. Philip and Son, 1958.
- _____, Europe, Real Geography, Bk. V, London: Geo. Philip and Son, 1956.
- _____, North America, Real Geography, Bk. II, London: Geo. Philip and Son, 1959.
- _____, South America, Australia and New Zealand, Real Geography, Bk. I, London: Geo. Philip and Son, 1959.
- _____, The British Isles, Real Geography, Bk. VI, London: Geo. Philip and Son, 1956.
- Ferriday, A., A Map Book of Africa and South America for School Certificate Forms, Map Book Series, London: Macmillan, 1962.
- _____, A Map Book of Asia for Middle and Senior Forms, Map Book Series, London: Macmillan, 1964.
- _____, A Map Book of Europe for Senior Forms, Map Book Series, London: Macmillan, 1963.
- _____, A Map Book of North America for Middle and Senior Forms, Map Book Series, London: Macmillan, 1963.

- _____, A Map Book of The British Isles, Map Book Series, London: Macmillan, 1967.
- Fife Education Committee, An Economic Geography of Fife, unpublished, Kirkcaldy, 1968.
- Geographical Association, The (Edinburgh Branch) An Atlas of Edinburgh, Edinburgh: Geog. Assoc. (Edin. Branch), n.d.
- Hardy, A. V., and Monkhouse, F. J., Physical Landscape in Pictures, London: Cambridge Univ. Press, 1964.
- Herdman, T. (ed.), Contrasts in Russia, Colour Geographies, Bk. 18, London: Longmans, Green, 1959.
- _____, Farms of Britain, Colour Geographies, Bk. 2, London: Longmans, Green, 1956.
- _____, Forests and Savanna: West Africa, Colour Geographies, Bk. 6, London: Longmans, Green, 1957.
- _____, Grasslands of the Southern Continents, Colour Geographies, Bk. 11, London: Longmans, Green, 1959.
- _____, Great Plain of China, Colour Geographies, Bk. 9, London: Longmans, Green, 1958.
- _____, Industry in Britain, Colour Geographies, Bk. 4, London: Longmans, Green, 1956.
- _____, Lands in the Desert: The Middle East, Colour Geographies, Bk. 16, London: Longmans, Green, 1959.
- _____, London, Colour Geographies, Bk. 5, London: Longmans, Green, 1956.
- _____, Mediterranean Lands, Colour Geographies, Bk. 17, London: Longmans, Green, 1959.
- _____, Ricefields in India, Colour Geographies, Bk. 8, London: Longmans, Green, 1957.
- _____, The Prairies, Colour Geographies, Bk. 13, London: Longmans, Green, 1958.
- _____, Towns of Britain, Colour Geographies, Bk. 3, London: Longmans, Green, 1956.

- _____, West Indies and Gulf Coasts, Colour Geographies, Bk. 15, London: Longmans, Green, 1959.
- Honeybone, R. C., and M. G. Goss, Britain and Overseas, Geography for Schools, Bk. I, London: Heinemann, 1960.
- _____, and N. J. Graves, North America, Geography for Schools, Bk. III, London: Heinemann, 1967.
- _____, and I. L. M. Long, World Geography, Geography for Schools, Bk. V, London: Heinemann, 1962.
- _____, and B. S. Roberson, The Southern Continents, Geography for Schools, Bk. II, London: Heinemann, 1960.
- Jackson, Nora, and Philip Penn, British Isles, Groundwork Geographies, London: Geo. Philip and Son, 1959.
- _____, Europe, Groundwork Geographies, London: Geo. Philip and Son, 1959.
- _____, Groundwork of Physical Geography, Groundwork Geographies, London: Geo. Philip and Son, 1963.
- _____, North America and Asia, Groundwork Geographies, London: Geo. Philip and Son, 1961.
- _____, The Southern Continents, Groundwork Geographies, London: Geo. Philip and Son, 1959.
- Jay, L. J., The Americas, London Regional Geographies, Bk. 11, London: Univ. of London Press, 1964.
- Kinnear, W., and G. C. Wright, Our Scotland, Edinburgh: Nelson and Sons, 1956.
- Lowry, J. H., Europe, A Course in World Geography, Bk. VI, London: Edward Arnold, 1966.
- _____, Regions of the World, Their Work and Wealth, A Course in World Geography, Bk. III, London: Edward Arnold, 1962.
- _____, The British Isles, A Course in World Geography, Bk. IV, London: Edward Arnold, 1960.

- Luxon, D. G., and J. A. Morris, The British Isles in Map and Diagram, London: Nelson and Sons, 1966.
- Mackintosh, R. D., and N. R. Thomson, Living Geography, Edinburgh: Holmes McDougall, 1967.
- McIntosh, I. G., and C. B. Marshall, Face of Scotland, London: Pergamon Press, 1966.
- Meux, A. H., Reading Topographical Maps, London: Univ. of London Press, 1960.
- Minshull, Roger M., Human Geography from the Air, London: Macmillan, 1968.
- Monkhouse, F. J., Europe, A Certificate Series, London: Longmans, Green, 1961.
- Moore, W. G., The Production of Oil, London: Hutchinson, 1961.
- _____, The Temperate Grasslands, London: Hutchinson, 1963.
- Morris, J. A., The British Isles, Nelson's Geography Texts, Bk. VIII, Edinburgh: Nelson and Sons, 1960.
- Murray, Allan, Africa, Study Map Note Books, Bk. V, Glasgow: Collins, 1961.
- _____, Asia, Study Map Note Books, Bk. III, Glasgow: Collins, 1964.
- _____, Australia, New Zealand and the Pacific, Study Map Note Books, Bk. VI, Glasgow: Collins, 1965.
- _____, North America, Study Map Note Books, Bk. VII, Glasgow: Collins, 1964.
- _____, North and South America, Study Map Note Books, Bk. IV, Glasgow: Collins, 1964.
- _____, The British Isles, Study Map Note Books, Bk. I, Glasgow: Collins, 1964.
- _____, The New Europe, Study Map Note Books, Bk. II, Glasgow: Collins, 1961.

- Penrose, C., Lands of Europe and Asia, Life and Livelihood Geographies, Bk. III, London: John Murray, 1959.
- Pickles, T., Africa, The Southern Continents, Bk. II, London: Dent and Sons, 1961.
- _____, Asia and European Russia, London: Dent and Sons, 1954.
- _____, Australia, New Zealand and the Pacific Islands, The Southern Continents, Bk. III, London: Dent and Sons, rev. ed., 1961.
- _____, Europe, London: Dent and Sons, rev. ed., 1960.
- _____, Intermediate Map Reading, London: Dent and Sons, 1963.
- _____, North America, London: Dent and Sons, rev. ed., 1960.
- _____, Physical Geography, London: Dent and Sons, 1960.
- _____, South and Central America, The Southern Continents, Bk. I, London: Dent and Sons, rev. ed., 1960.
- _____, The British Isles, London: Dent and Sons, rev. ed., 1960.
- Preece, D. M., and H. R. B. Wood, Europe, Modern Geography Series, Bk. III, London: Univ. Tutorial Press, rev. ed., 1967.
- _____, Foundations of Geography, Modern Geography Series, Bk. I, London: Univ. Tutorial Press, rev. ed., 1963.
- _____, The British Isles, Modern Geography Series, Bk. II, London: Univ. Tutorial Press, rev. ed., 1962.
- Rae, Gordon, A Junior Geography of Scotland, London: Geo. Philip and Son, 1957.
- _____, and Charles E. Brown, Geography of Scotland, London: Bell and Sons, 1966.
- Rawson, R. R., and W. G. East, Asia, Nelson's Geography Texts, Bk. III, Edinburgh: Nelson and Sons, 1960.

- Redmore, G. B., Under the Southern Cross: South America, Australia and Africa, Life and Livelihood Geographies, Bk. II, London: John Murray, 1963.
- Rushby, J. G., J. Bell, and M. W. Dybeck, Study Geography, Stage One, London: Longmans, Green, 1968.
- _____, Study Geography, Stage Three, London: Longmans, Green, 1969.
- Shave, D. W., North Atlantic Neighbours: Britain, Canada, U. S. A., Life and Livelihood Geographies, Bk. 1, London: John Murray, 1962.
- Speak, P., and A. H. C. Carter, Map Reading and Interpretation, London: Longmans, Green, 1964.
- Spink, H. M., and R. P. Brady, Great Britain and Northern Ireland, New Ventures in Geography, Bk. I, Huddersfield: Schofield and Sims, 1963.
- _____, The Asiatic World, New Ventures in Geography, Bk. III, Huddersfield: Schofield and Sims, 1962.
- _____, The North Atlantic Nations, New Ventures in Geography, Bk. IV, Huddersfield: Schofield and Sims, 1966.
- _____, The Southern Lands, New Ventures in Geography, Bk. II, Huddersfield: Schofield and Sims, 1963.
- Stembridge, J. H., Europe, New Oxford Geographies, Bk. VI, Pt. I, London: Oxford Univ. Press, 1941.
- _____, North America and Asia, New Oxford Geographies, Bk. III, London: Oxford Univ. Press, 1941.
- _____, The British Isles, New Oxford Geographies, Bk. VI, Pt. II, London: Oxford Univ. Press, 1951.
- _____, The Southern Continents, New Oxford Geographies, Bk. II, London: Oxford Univ. Press, 1941.
- _____, The World, New Oxford Geographies, London: Oxford Univ. Press, rev. ed., 1962.

Suggate, L. S., World Geography - Human, Nelson's Geography Texts, Bk. IX, Edinburgh: Nelson and Sons, 1958.

Wood, M., Map Reading for Schools, London: Harrap, 1962.

Wright, John M., Looking at Scotland, London: A. and C. Black, 1960.

Young, E. W., North America, A Course in World Geography, Bk. VII, London: Edward Arnold, 1965.

_____, People Round the World, A Course in World Geography, Bk. II, London: Edward Arnold, 1967.

_____, The World, Physical and Human, A Course in World Geography, Bk. V, London: Edward Arnold, 1963.

APPENDIX I

Department of Geography,
University of Edinburgh,
High School Yards,
Edinburgh, 8.
14 Sept., 1967

The Headmaster,

Dear Sir, .

I am conducting research into the methodology of geography teaching in secondary schools in Scotland. In order to obtain basic data I am requesting the co-operation of geography teachers in the completion of a questionnaire which was drawn up on consultation with teachers in the Edinburgh area and was approved by the Scottish Council for Research in Education and by the Association of Directors of Education.

In pursuance of the research I require information concerning qualifications of teachers, methods and use of materials, programmes of study and textbooks in use, geographic approach to teaching, and opinions on examinations and the educational values of teaching aids and field work.

The questionnaire is in two parts. It is requested that one part be completed by all teachers who devote more than fifty percent of their time to teaching geography, and the other part completed by Principal Teachers of Geography or teachers in charge of geography. I am appreciative of the time involved in completing questionnaires and accordingly the questionnaire has been kept to a minimum. All information obtained will be analysed solely for the purposes of the research and will be treated in the strictest confidence.

In order to provide your school with the correct number of questionnaires would you kindly complete the form below and return it unsealed in the enclosed stamped addressed envelope. If there are no teachers in your school who fall into the categories above would you please send a 'Nil' return.

I would be most grateful for your co-operation.

Yours sincerely,

E. E. Owen.

Questionnaire on the Teaching of Geography. Ref. _____

School _____

Questionnaires are required for Number

Principal Teacher of Geography, or, the
teacher in charge of geography. _____

Teacher(s) who devote more than fifty
percent of their time to teaching
geography (excluding above). _____

Kindly return unsealed in the stamped addressed envelope.

- 2 -

10. In your teaching how often do you use the following aids? Tick (✓).

	Always	Usually	Sometimes	Seldom	Never
Filmstrips					
Films					
Pictures					
Photographs					
Slides					
Atlases					
Wall maps					
Globe					
Topographic maps					

Comment on any problems associated with the use of any of these aids, e.g., availability, facilities, class organization, etc.

11. From the viewpoint of the subject what do you consider to be the values derived from the use of teaching aids? (List as 1, 2, 3, etc.)

12. From the viewpoint of the subject what do you consider to be the values derived from field work? (List as 1, 2, 3, etc.)

- 3 -

13. In your teaching which of the following do you emphasize? In your choice tick (✓) one or more and name the year(s).

- | | | |
|-----|---------|----------------------------------------------------------------------------------------------|
| () | Year(s) | Relationships between the physical and human environments. |
| — | — | The geographical factors that influence the actions of man. |
| — | — | Human response to the physical environment. |
| — | — | How people live. |
| — | — | The description of habitat, economy and society. |
| — | — | The description of relief, climate, vegetation, agriculture, manufacturing, settlement, etc. |
| — | — | The analysis and description of regional differences. |
| — | — | The analysis and interpretation of maps, pictures, statistics or written description. |
| — | — | The analysis and description of natural regions. |
| — | — | Other _____ |

What are the reasons for your emphasis? Tick one or more.

- | | |
|---|-----------------------------------------------------------------------|
| — | The arrangement of subject matter in textbooks. |
| — | Pupils are more interested in this emphasis. |
| — | You believe this to be the nature of geography. |
| — | This is as much as pupils can cope with. |
| — | Materials are not available for any other emphasis. |
| — | The nature of public examination questions lead you to this emphasis. |
| — | Other _____ |

Add any comment concerning your geographical approach to teaching and your reasons for it.

14. What do you consider to be the educational benefits of geography teaching? (List as 1, 2, 3, etc.)

- 4 -

15. In your experience which textbook(s) have you found to be the most useful for your purposes?

Text(s) and Author	Particular merits of Text(s)
--------------------	------------------------------

16. What do you consider to be the attributes of an ideal geography textbook? (List as 1, 2, 3, etc.)

17. Which aspect(s) of geography do you most enjoy teaching and to which year(s)?

State your reasons.

18. Name any specialized training you have had within the field of geography.

In your teaching what opportunity, if any, have you had to develop your specialization? Comment.

Thank you.

- 1 -

QUESTIONNAIRE ON SECONDARY SCHOOL GEOGRAPHY TEACHING

Ref. _____

PART II. To be completed only by Principal Teachers of Geography, or, by teachers in charge of geography.

1. School _____ Junior _____ Senior _____
Comprehensive _____ Other _____

2. How many periods per week are allocated to geography teaching? From Form III indicate periods allocated to different programmes.

Year

I _____ II _____ III _____ IV _____ V _____ VI _____

3. State briefly your Programme of Studies for each year.

Year

I

II

III

IV

V

VI

State the reasons, year by year, for your particular sequence of studies. If convenient, group years together.

Year

I

II

3. cont'd

- 2 -

3. cont'd
 Year
 III

 IV

 V

 VI

4. Complete the following table by ticking under the appropriate year where there is emphasis on the approach named.

	I	II	III	IV	V	VI
Regional approach						
Systematic approach						
Other(s)						

List the reasons for your emphasis.

5. In which year(s) is the sample study approach used in your department? _____

List the problems (if any) you have found in using the approach.

- 3 -

6. In which year(s) is a problem or thematic approach used in your department? _____

Name any themes (and the year) you have found to be of most interest to teachers and pupils.

Compared with other approaches list any particular merits of the problem approach.

7. During the last school year, what field work did you undertake in your department?

	Year(a) and Number	Type
Excursions		

Class visits

Local Surveys

Other (Name)

List any problems associated with field work.

- 4 -

8. Give details of any experiments with teaching methods in geography which you or your department have been involved in during the last few years.

9. Name the principal textbook (s) used in each year.

Year	Author	Title	Publisher
I			
II			
III			
IV			
V			
VI			

If you are willing to co-operate further in this enquiry kindly complete:

Name _____

Thank you.

APPENDIX III

Groupings of Secondary Schools According
to Location for Purposes of Analysis

Schools located in the areas named below were grouped together in the following categories.

1. Clydeside

The almost continuously built up area from the city area of Glasgow to Renfrew, Clydebank and Dumbarton, north to Bearsden and Milngavie, east to Coatbridge and Airdrie, south to Rutherglen, and west to Paisley, Johnstone and Barrhead. The Hamilton-Motherwell-Wishaw area is also included.

Kirkintilloch, Kilsyth, Greenock and Port Glasgow were not included in this category.

2. Edinburgh

Includes the built up area of Edinburgh, Leith and outer suburbs but excludes Musselburgh and Currie.

3. Aberdeen and Dundee

Includes the built up areas of both cities to their outer suburbs.

4. Settlements of 25,000 to 100,000 population

Includes Greenock, Kirkcaldy, Kilmarnock, Dunfermline, Ayr, Perth, Falkirk, Inverness, Stirling and Dumfries.

5. Settlements of less than 25,000 population

Includes all settlements not included in the above four categories.