

UNIVERSITY OF HULL

THE CASE FOR A GEOGRAPHY OF EDUCATION

by

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being a thesis submitted in accordance with the  
Regulations for the Degree of Doctor of Philosophy

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DEDICATION

for

HUBERT P WALKER BSc(London) MA(Cantab)

in recognition of his setting me on the  
parallel roads of geography and education

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PREFACE

In a recent book, Ernest L. Boyer proposes a fourfold reconceptualization of scholarship. (1) This thesis falls into the second of his categories: 'The Scholarship of Integration'; that is to say a study concerned with such interests as the 'integration and interpretation of knowledge', the 'boundaries where fields converge' and 'overlapping academic neighbourhoods'. The last two characteristics are expressed by means of metaphors most apt for this particular piece of work, the aim of which is to highlight the significance of the spatial dimension of educational experience, or as Thrift has it: 'The Geography of Knowledge'. (2)

The thesis is, that there is intellectual scope for a geography of education; that while elements of it exist, it has not been brought together; that it has considerable potential in instrumental terms; in short that it should be one of the fields comprising the educational foundations. The fact that at the time of writing, in England at any rate, the educational foundations as a component of teacher education are out of favour and so the likelihood of practical progress on the basis of the thesis is minimal, is irrelevant. In any case, the ideal is for a sub discipline of geography as well as of education to develop; the geography of education.

The thesis is prosecuted through a number of routes. Part A is concerned with examining the comparable nature of the two disciplines,

geography and education, from the interaction of which it is hoped first to identify and then to fashion the new sub-discipline. Part B seeks to highlight the spatial dimension of educational development through the application of a geographical approach to a number of broad themes such as: educational diffusion and the evolution of the cultural landscape; nationalism and colonialism; migration and modernisation. The purpose of the chapters comprising Part B is to show that the story of educational development is inherently, though not of course exclusively, geographical but is rarely viewed in this way. Part C examines the attempts already made to promote the idea of a geography of education, and to take these further through the application of various models of modern geography to aspects of educational activity. An attempt is then made to take the main components to human geography serially, and examine such explicit and implicit components of their literature that could be categorised as elements of a geography of education. The sixth and final chapter seeks to rest the case for a geography of education and to establish its broad identity within and between its parent disciplines. There are nine appendices, an extensive bibliography, and numerous figures, few of which are merely illustrative.

This is a thesis based neither on empirical research nor, in the conventional sense on documentary research. It is, in Boyer's terms, an integrative study which goes well beyond the few attempts already made to prosecute the case for a geography of education. It is therefore original and provides the basis for a post doctoral volume

that would, at least in the medium of English, be the formative published work for a new sub-discipline.

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1. Ernest L. Boyer, Scholarship Reconsidered : Priorities for the Professoriate Carnegie Foundation for the Advancement of Teaching, (1990).  
  
(Boyer's four categories of scholarship are: a) of discovery; b) of integration; c) of application; d) of teaching).
2. Nigel Thrift, 'Flies and Germs: a Geography of Knowledge', in: Derek Gregory and John Urry (Eds), Social Relations and Spatial Structures, Macmillan, (1985), pp. 366 - 403.

PART A

THE ISSUE AND THE DISCIPLINES

INTRODUCTION : PROBLEM AND PLAN OF ACTION

CHAPTER ONE : EDUCATION AND GEOGRAPHY AS DISCIPLINES

- 1.1 Introduction
- 1.2 The Nature and Development of Education
- 1.3 The Nature and Development of Geography
- 1.4 Comparison and Interaction between Education and Geography

## INTRODUCTION

### PROBLEM AND PLAN OF ACTION

"Today of course, we are aware of geographical variations in the provision of education in this country, and even more so on a global scale". (1)

The problem is that we are not! Or rather that the degree of awareness is not such as to realise the distinctive significance of the geographical factor in helping to explain the development, distribution, operation and outcome of educational activity. This is largely because no member of the family of educational foundations emerged based on the geographical factor whereas the psychology, philosophy, sociology, history and economics of education have emerged to a greater or lesser degree and although currently denigrated in official circles in Britain still form a standard component of the education of teachers in most countries.

The absence of a geography of education is perhaps partly due to the emergence of the remaining foundations subject, comparative education, which by definition implies a spatial dimension. But there is little in the standard literature of comparative education - broadly defined to include also 'education in developing countries' and 'international education' - that really accommodates the geographical factor, the major exception being the substantive work edited by Anderson and Bowman. (2) Elsewhere in the comparative fields, Ryba's description of Bereday's treatment of the 'geographical factor' as being "unsophisticated" could reasonably be applied to the standard works

underpinning the emergence of this field as one of the foundation disciplines, and its expansion in the 1950s and 1960s.(3) Comparative education is not the same as the geography of education, and this thesis is concerned with the latter rather than the former; that is to say the potential for the application of geographical approaches to the analysis of almost any aspect of educational activity.

The modest level of geographical analysis obtaining throughout educational studies is partly due to the nature and status of geography at the times of the schooldays of many of those who have become leading educationists. As we shall see in Chapter One below, geography did not emerge as a modern analytical discipline until the 1960s and even then very few geographers have seen education as a suitable case for treatment. As the writer has argued elsewhere in respect of geography's contribution to educational studies:

"That the image of the geographical factor is outdated is at least as much the fault of geographers. Despite the widespread and developing utilisation of land for educational purposes, very few geographers have been stimulated to apply modern techniques of spatial and locational analysis to these phenomena. It is not surprising therefore that geography is viewed by many educationalists in purely physical terms and even then altitudinal and scenic images predominate. Consequently the geographical factor is seen as a constant, whereas in reality it is continually changing in temporal as well as in spatial terms". (4)

Such an image represents a very strong and ingrained type of misconception, and it is in the desire to reverse this outdated image

that the main motivation in prosecuting this thesis resides. The aim is to show that not only is there considerable potential worth in taking a geographical perspective on educational phenomena, but also that educational activity with its dynamic spatial dimension is itself a geographical factor.

In seeking to make a case for the geography of education, the writer has organised the thesis in three parts. Following these introductory comments, Part A examines the complementary and indeed comparable nature of the two disciplines he is seeking to relate; Part B attempts to illustrate the latent or implicit significance of the geographical factor by providing a geographical interpretation of educational development; Part C moves on to the explicit by putting forward a model for the geography of education and relating to it not only the examples discussed in Part B but also the small but significant body of literature to date in this nascent sub-discipline. In conclusion, relationships are reviewed, and recommendations for the role and development of the geography of education are made.

In Chapter One, 'Education and Geography as Disciplines', the argument is made not only that a parallel structure exists as between the two but that in essence, 'education the phenomenon' is fundamentally geographical in that its natural purpose is to disseminate knowledge and information across various forms of space. Even the other dimensions of its usage, for example: as a mechanism of political and social control; as a measure of custody for the younger generations in urban environments that have no occupational place for them in the



economy; as a self perpetuating mythology, all have spatial patterns and implications. There have always been strong reservations about the status of education as a discipline as exemplified so well by Thomas Lane Peacock's character, Mr McBorrowdale and his aversion to the three bores-politics, economics and education:

"The bore of all bores was the third.  
His subject had no beginning, middle or  
end. It was education. Never was such  
a journey through the desert of the  
mind: the great Sahara of intellect.  
The very recollection makes me thirsty".(5)

The use of geographical metaphor to sharpen the point is in itself instructive. Perhaps a geography of education would have been able to help bridge the gap between 'education the discipline' and 'education the phenomenon'. Certainly one of the most imaginative and influential of McBorrowdale's 'bores' was excited by the dynamic and integrative potential of geography:

"The unity of all science is found in  
geography. The significance of  
geography is that it presents the earth  
as the enduring home of the occupations  
of man. The world without its  
relationships to human activity is less  
than a world". (6)

As it happens, John Dewey did not proceed to link his recognition of the potential of geographical analysis to an examination of the massive spatial operation of educational phenomena.

In Part B, the writer attempts to illustrate this potential by taking a spatial view of aspects of educational evolution from the earliest known appearance of formal education in the first urban revolution in

Mesopotamia to the complexities of modern urban concentrations and the place of schooling in urban ecology. The related themes of movement, migration, colonisation and diffusion are employed with respect to examples ranging from the role of education in medieval urban colonisation in Europe to the effect on the spatial patterns of school provision in sub-Saharan Africa of the locational priorities of Christian missions. Certain geographical concepts introduced in Chapter One are utilised in a general way, such as core-periphery patterns, networks, intensity of occurrence and locational association, but this part is essentially utilising general educational literature to illustrate how it contains fundamentally geographical dimensions without normally recognising them as such. Nonetheless, some theoretical literature in the fields of cultural and political geography is employed, notably aspects of the work of Meinig and Dodgshon. Within Part B, Chapter Two focuses on temporal, spatial and political dimensions of educational development, while Chapter Three is concerned more with economic, social and cultural factors. While the former ranges from the first urban revolution to the third and the consolidation of national education systems in Europe, the latter while beginning in that continent moves out with examples from selected aspects of colonial expansion in Africa, Asia and the tropical island zones before returning to England and the issue of education and urban ecology in the mid twentieth century.

Throughout Part B, there is an underlying and ongoing concern with interactive relationships between education and human mobility at various scales of geographical focus. Some significant amount of

space is given to a comparative discussion of the interplay between political geography and educational provision in respect of nineteenth century Prussia, France and England. Then, with reference to England in particular, the issue of disparities in educational development in relation to the radical transformation of economic and social geography is considered. Issues of mobility and access to school lead on to a wider discussion of the broader theme of migration and education in the context of colonialism. The effect on the emergent geography of education in Sierra Leone of the resettlement of freed Afro-Caribbean slaves, with its Christian dimension is considered; as well as the subsequent development of successive and selective penetrations of the indigenous and Islamicised interior by river, rail and road. A further migrational issue highlighted in relation to education is that of plantation economies and the cultural pluralism arising from indentured labour in selected examples from the Caribbean, South and South-East Asia and the South Pacific.

Another ongoing concern in Part B is the issue of geographical scale in relation to the spatial analysis of educational provision, and the latter part of Chapter Three engages a sharper focus to examine education and urban ecology, initially in relation to the inclusion of educational variables in studies of urban social segregation in Trinidad. This is linked to the differential place of Asians and West Indians in relation to urban ecology in England, which is a function not only of transfer and replication of indigenous/colonial educational legacies, but also of underlying disparities of educational culture within urban Britain. So in concluding Part B

with further discussion of the place of an emerging system of universal secondary education within the changing urban ecology of this country, the writer hopes that the basis for a case in respect of promoting and enhancing the geography of education as a needed sub-discipline has been laid.

In Part C the case is prosecuted by selecting a model of modern geographical study from among a number that are discussed, and applying the literature of the geography of education to it. This literature is selected not only from examples arising in Part B of the thesis, which are in general implicit contributions, but also from the explicit literature of the nascent sub-discipline to date. This is preceded by a brief discussion of efforts to establish the geography of education as a distinctive field, especially in Britain.

The model of dynamic human geography selected for this purpose is that put forward by Walford (7) but some use is also made of those developed by Broek (8) and Haggett. (9) These are each part of the geographical renaissance of the 1960s and 70s, but it must not be forgotten that throughout the history of the discipline there have been pioneers striving to move away from the motionless descriptive encyclopaedism that unfortunately characterised the emasculated version encapsulated in the famous 'capes and bays' epithet. For example, in his wonderful 1902 Manchester Guardian review of Halford Mackinder's greatest work, and under the title "The Raising of Geography From the Dead", Montague reminds us that the effect of schooling on the enlivenment of the mind need not be terminal:

"Only now do many of us begin to see how well they kept from us at school the secret of the joy of finding how the earth works". (10)

The writer was fortunate indeed to have, in the form of the schoolmaster to whom this thesis is dedicated, an influence on his secondary education that has maintained a vital specialist interest in geography within a general regard for the diffuse worth of education sufficient to have been able to enjoy a career in both. Here they are brought together in an attempt to legitimate and coordinate a new sub-discipline; to make the case for a geography of education.

This is neither an empirical nor a documentary research exercise, in the primary sense, though of course many sources are utilised. The recency or otherwise of these sources is not significant. It is not a thesis in comparative education or in geography. Instead it is an argument, a thesis, based on reinterpretation, synthesis and application with a view to enlarging and strengthening the already extended family of educational sciences. While, in the context of supporting comparative educational study, Bereday (11) identified political geography as a potential 'foster parent', the writer would wish to return to the previous generation and seek to act as 'midwife' to a geography of education, within which the political dimension is well to the fore. Although a few small attempts have been made to argue for a geography of education, to the best of the writer's knowledge, no such attempt has been made on anything near the scale of this thesis, and to this extent the work is undoubtedly original.

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2. C. Arnold Anderson and Mary Jean Bowman (Eds), Education and Economic Development, Frank Cass, (1966).  
  
See Section III, 'The Diffusion of Schooling, Technologies and Educational Opportunities', which comprises chapters :
  12. Torsten Hagerstrand, 'Quantitative Techniques for Analysis of the Spread of Information and Technology', pp. 244 - 280;
  13. Simon Rottenberg, 'The International Exchange of Knowledge', pp. 281 - 290;
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  16. Rudolph C. Blitz, 'Some Observations Concerning the Chilean Educational System and its Relation to Economic Growth', pp. 303 - 313;
  17. C. Arnold Anderson, 'Patterns and Variability in the Distribution and Diffusion of Schooling', pp. 314 - 344.
3. Colin Brock, 'Comparative Education : What Do We Think Of It So Far?' in: Trevor Corner (Ed), Learning Opportunities for Adults : Proceedings of the 1986 Conference of The British Comparative and International Education Society, University of Glasgow (1988), pp. 16 - 42.
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## CHAPTER ONE

### EDUCATION AND GEOGRAPHY AS DISCIPLINES

#### 1.1 INTRODUCTION

The aim of this chapter is to set out the broad principles and structures of these two disciplines. This is a necessary beginning since the prime object of the thesis is to argue and illustrate the case for the generation of a sub-discipline of one within the other.

Both geography and education are composite disciplines, drawing on the contributions of a range of other more or less unitary areas of knowledge. The artificial construct of 'subjects', while necessary to manage the wealth of information accumulated by homo sapiens over the millennia, has enabled the development of tribalism and mythology in association with each area of knowledge that has had its impact in a curious concern with identity. This may have as much to do with networks of scholars necessarily safeguarding their vested interests as with the finer points of epistemology. The concern here is not to justify the existence of the two disciplines in question.(1) That they exist, and in global terms have substantial clienteles, make them legitimate parameters for the prosecution of the thesis. Nonetheless it is necessary to present a definition of each, a résumé of their respective natures and development, an outline of their contemporary structures and components, and attempt to illustrate the 'essence' that sustains them. This will be done serially, and the chapter concluded with a structural comparison and discussion of the



contributions of each to the other, within which the case for a 'geography of education' will be initiated.

## 1.2 THE NATURE AND DEVELOPMENT OF EDUCATION

The definition of education preferred by the writer is that it is 'THE STUDY OF LEARNING AND TEACHING'. The processes of learning and teaching are in themselves extremely complex, and so it is necessary for educational study to encompass all significant contextual factors involved in enabling them to operate. The sum total of these contextual factors and their multivariate interaction may be regarded as the system of education even though that term normally carries administrative and official connotations. As Pearse puts it, the term 'education system' can be used:

"... in the sense of a social system brought into existence to act out some phase of the institutional order concerned with educating. It refers to the body of norms about a whole interrelated network of roles which the process of educating requires, and to their actual performance; and likewise to the structure by which the roles are related to one another. This structure is roughly coterminous with a single administrative system. But it does not refer only to the behaviour of persons in the performance of their formal roles, nor is it confined solely to the institutionalized or standardized aspects of their co-activity; it embraces unstructured groups and informal behaviour in so far as these are brought into being by the system". (2)

In order to cope with the vast range of variables and interactions at work in the educational process, a threefold typology of education systems has come to be conventionally accepted. 'Education' as a discipline must encompass all three in its terms of reference. They are:

- a) formal education - that is to say the phenomena of organized learning and teaching as enabled by an official or recognised system of explicitly educational institutions (eg schools, colleges, universities);
  
- b) non-formal education - that is to say the phenomena of organized learning and teaching as enabled by institutions or agencies that are not normally recognized as being part of an official and explicit educational system (eg the armed forces, banks, companies, television stations);
  
- c) informal education - that is to say the phenomena of teaching and learning as enabled by gratuitous, casual or indirect contact (eg tribal, community, family and other personal contacts, 'the media', the spread of ideas).

Together these variants comprise Husén's 'learning society' (3) of lifelong education and interact to produce many possibilities of educational delivery.(4)

Education is not only composite, it is integrative in respect of its treatment of information derived from other subjects or disciplines.

The essence of education is 'curriculum': broadly defined as the experience of learning and teaching in terms of content and method. Contributing disciplines are employed in order to explain the various factors bearing upon the operation of curricula, such as the historical legacy and inertia derived therefrom; politics and administration; finance; ethnicity and language. The object of the study is dynamic and so the temporal dimension and the concept of change (5) are fundamental to modern educational analysis.

As will be seen in respect of geography, the study of education has its roots in classical antiquity, (6) though there are other traditions in the pre-European cultures of Africa, America, Asia and Oceania. (7)

"One of the saddest mistakes of early missionaries was their assumption that they brought education to an entirely uneducated people. If literacy and formal schooling constitute the whole of education they were right; but in so far as education is a preparation for living in the society into which we are born, they were profoundly wrong." (8)

Even Castle's appropriate strictures fail to recognize the existence of literacy in pre- and non-European societies and the existence of formal schooling in some such communities.(9) So we are dealing here with a Western concept of education, and the study of it, that is inevitably partial. It is a study that in its modern form derives from concern about the learning process itself and its relationship to the well-being of society.

Modern educational studies, or a 'science of education', like geography, seems to have formed as part of the intellectual challenges of the seventeenth century, for example as discussed by Francis Bacon (1561 - 1626), whose Novum Organum published in 1620 was, together with other works (10) an attempt to identify "a scientific foundation for the conduct of all human activities". (11) Before the eventual application of a scientific approach to educational study some two hundred years later, the subject had emerged in a less rigorous form through the radical educational innovations of August Herman Francke (1663 - 1726). Francke established a training college for teachers at Halle. (12) Given his commitment to Pietism, the college was a form of seminary, but it was also a component of a cluster of interrelated institutions established by Francke in Halle and embracing all stages of schooling from primary to tertiary; in itself an early example of the geography of education through location by association. There was a strong practical orientation, and the promotion of German as the medium for developing reading, writing and number skills. Within this integrated urban context Francke:

"... achieved further advances in the concept of a professional preparation for teachers and as early as 1696 he was conducting daily two-hour discussion sessions for his elementary school teachers, often undergraduates at the Friedrich University, in what he termed the Seminaries praeceptorum (teachers' seminars)..." (13)

While Francke in effect established the first 'department of education' at university level his concerns were practical, political and religious rather than academic. Though he undoubtedly had a

formative influence on the study, it is to Johann Friedrich Herbart (1776 - 1841) that credit is normally given for the application of the idea of a 'science of education'. Despite the existence of a long line of great educational thinkers before him,(14) Herbart was the first to "connect instruction with character training through interest and to provide techniques based on physiological considerations for the attainment of both." (15) It was on the basis of the practical commitment of Francke and the intellectual leadership of Herbart that the Ministry of Education in Prussia came to require "some systematic treatment of the subject (education) by the Professors of Philosophy in the Universities." (16) Not only had 'education' as a discipline secured a place at the academic table, it had done so through the sponsorship of the state. Given the interests of the nineteenth-century governments of the European nation states in the development of a controlled curriculum and body of teachers, this symbiotic relationship has continued, and in so far as 'education' as a discipline is driven by the requirements of its main sponsor, the State, progression from Herbart's formative 'science of education' to a modern integrated counterpart has not yet been realised.

Despite the substantive influence of German academics on the formation of educational studies as a discipline at university level, the establishment of Chairs in Education as such occurred first in two widely separated locations outside that country in the same year. In the U.S.A.:

"The first permanent chair in education was founded by the University of Iowa in 1873. This chair was built on a normal

department which had existed there since 1855. The purpose was specifically to prepare teachers for advanced schools."(17)

In Britain, also in 1873, a "Professorship in the Science and Art of Education" was established by the College of Preceptors, but lapsed in 1876 with the death of the first incumbent, in which year two Bell Professorships of Education were founded in Scotland, the inaugural holders being Meiklejohn (St. Andrews) and Laurie (Edinburgh). Thus the long standing interest in and support for schooling in Scotland was translated to recognition at the university level, but in England and Wales despite the establishment of a number of training colleges for teachers during the nineteenth century, more than a decade passed before in 1892 Professor Henry Holman founded the 'Training Department' at the University College, Aberystwyth which itself had opened as recently as 1872. He was succeeded in 1894 by Foster Watson, who like Laurie, immediately argued for the acceptance of education as an honours subject in the most credible way, that is to say through the nature and quality of his own research and teaching. Armytage points up Watson's inspirational contribution to the promotion of the study of education with an analogy that is particularly apt for this thesis. He was:

"... a cartographer of the intellectual tributaries of modern educational thought and practice, whose projections are still used and whose findings are still relevant." (18)

In England and Wales it was a recommendation of the 'Cross Commission' (1890) (19) that had provided the main stimulus, for the development of the study of education, namely that "day training colleges be

established in connection with universities and university colleges of England and Wales." (20) The recommendations of the Bryce Commission (21) of 1895 and the widespread development of 'secondary schools' as a result of the Education Act of 1902 boosted the establishment of Departments of Education in the universities. The first Chair of Education in England was established at the University of London in association with the Principalship of the London Day Training College, the inaugural occupant in 1902 being Sir John Adams. In due course the college became the University of London Institute of Education. As similar chairs were established in other universities, the expansion of educational studies was enhanced, but not, as both Stewart (22) and Armytage (23) have pointed out, its status. Education students were welcome as a boost to student numbers, but the study of education was not (plus ça change ...!). Clarke was certain where blame should be ascribed:

"Almost the whole blame must rest upon the State, for its policy was ingeniously contrived to prevent both the education of the teachers and the systematic study of education by the professor." (24)

He contrasts this with the position in Germany where the 'science of education' had been initiated:

"... while in German universities there were keen students of education who were not professors of it, in British universities there were professors of education who were hindered from becoming students of it." (25)

The cynical use of educational studies by the universities in England, and their paymasters, has not been limited to the formative period of

provincial institutions but this period was also a formative one for the identity and status of the discipline, both of which were impaired as a result.

It is then to the U.S.A. and developments there, following the establishment of the Iowa chair of education in 1873, that one must turn to observe a more concerted and coherent development of education as a university discipline. Two factors may be selected as being of fundamental significance in explaining a more positive approach. The first was the long association with pioneering settlement in the U.S.A., at various levels and scales from the local school house in a small community to the granting of land for the establishment of colleges. Under the Land-Grant Act of 1862:

"In return for a land subsidy equal to thirty thousand acres for each representative and senator in its congressional delegation, a state was to establish within five years at least one college ..." (26)

The resulting expansion of higher education was immense, as can be seen by records and studies of the time, but of most profound significance was the accessibility of this sector, including teacher education and training to a wide range of the population.

The second factor was the unparalleled influence of arguably the greatest of modern educational thinkers, John Dewey (1859 - 1952), who had become "head of the combined Departments of Philosophy, Psychology and Pedagogy at the University of Chicago in 1894." (27) In parallel, as it were, to the physical expansion of higher education, and for our



purposes here, teacher education in particular, Dewey created an expansive intellectual territory for the further development of the study of education:

"We have to return to Pestalozzi to find an educationist who so dominated the educational stage as John Dewey did throughout the first half of the twentieth century, and he played his part by virtue of the fact that in him were concentrated in a special degree the progressive tendencies of his age and country." (28)

One of the most obvious manifestations of an interconnection of disciplines attending to educational issues in the U.S.A. was the development of the idea of 'educational foundations'. The set of sub-disciplines normally comprised: philosophy of education, educational psychology, history of education and sociology of education. During the inter-war period (1918 - 1939), through their programmes, supporting texts and specialist journals, these areas of educational study enlarged their bodies of knowledge and networks of scholars, extending their influence across the Atlantic where parallel developments occurred, and the discipline of education, albeit in a segmented form, operated alongside the practical training of teachers. By the mid 1950s, presumably from a British perspective, Stewart was able to claim that:

"There is now a considerable body of knowledge in educational psychology, in educational history and administration, in the methodology of teaching different school subjects in comparative education and in the principles of education."(29)

The expansion of higher education in Britain in the 1960s provided new opportunities for the social sciences and educational studies, but 'foundations' texts were few. (30) The tradition of specialism in the European university model had appropriated the various components of education and this was enhanced by the prime position of scholarly publication in terms of appointments to university lectureships and criteria for subsequent promotion. The significance of the institutionalisation of a discipline for its nature and development, as discussed by Johnston in respect of geography (31), applies as much to education as any other field. Relatively new sub-disciplines such as politics of education, economics of education and comparative education, while enjoying a share of the 1960s expansion, did not, except in certain locations with greater capacity and/or outstanding personalities, manage to draw alongside the older established foundation studies. For the purpose of this thesis, comparative education with its aerial identity is of particular interest, and it is perhaps significant to note that only one of the British generated foundation texts of the expansion period included this dimension of educational study and research.(32) There could be many reasons for this, but one suspects that Blyth has identified the main problem - sheer scope:

"Comparative education, probably the most difficult and demanding of all educational studies, sets the experience and scrutiny of education in our own country against the wider background of world development and at the same time helps to ensure that education itself cannot become a Lilliputian study divorced from the adult world and from the rest of society." (33)

Samples of volumes on, or compendia of, educational research (34) also testify to the strong development of educational sub-disciplines in the 1960s and 1970s. In addition to the foundation areas, there is now a firm identity for moral and social development studies, the study of literacy and language, the development, resourcing and evaluation of curricula, the organisation and administration of education, educational technology, teacher education, vocational education, special education, multicultural education, urban education and gender in education. These sub-disciplines have spawned their own academic communities and bodies of literature. This has been strongly influenced by American models and the aforementioned social science revolution. Quantification, statistical analysis and modelling have been to the fore and in some circles the notion of a generalising 'science of education' revived. The relative decline of documentary research in favour of the data-generating variety is illustrated by the brief presented by the National Foundation for Educational Research to Thouless in respect of his computation of their 'map of educational research'. Presenting the rationale, he states that:

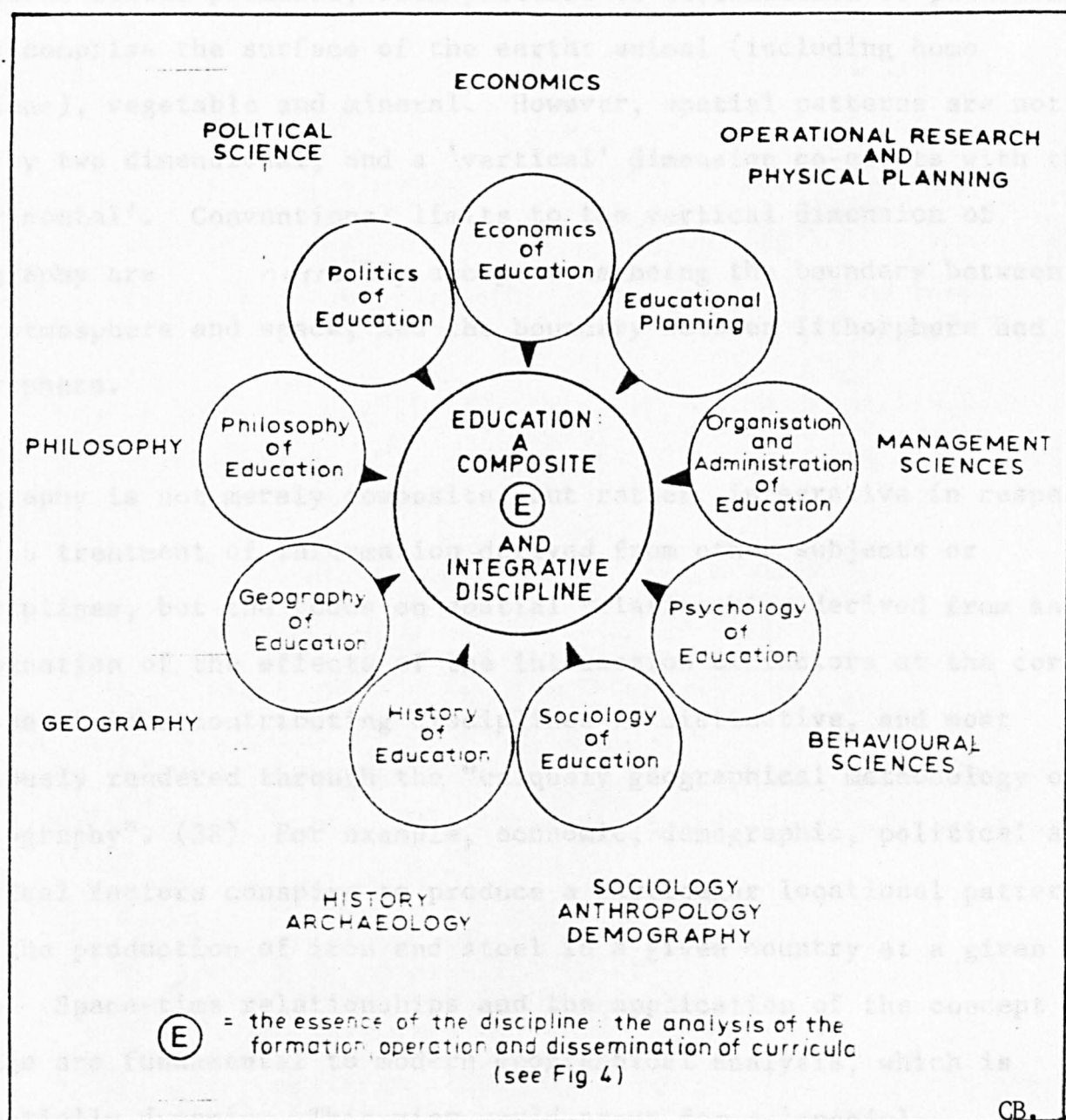
" ... educational research was to be understood as embracing empirical and experimental researches, but not historical and comparative studies in education .." (35)

He goes on to affirm that: "Education is (like agriculture) an applied science", and in the subsequent 20 years of British educational research there would certainly appear to have been a continued drift away from the 'foundations' area to evaluative studies of ongoing contemporary educational practice in terms of provision and

performance. Attempts, like that of Webster,(36) to focus on the integrity of education as a discipline are rare.

Perhaps this is not surprising when one considers the constellation of components that can be observed by an enthusiastic collector of areas of knowledge such as Tykociner (37) whose typology was formulated at a time of unprecedented and unbridled expansion of educational studies in the U.S.A., and comprises Appendix A. Tykociner places 'education' in the 'disseminative sciences', but the creative dimension of education, that is to say the generation of ideas and new knowledge he places in 'zetetics'. For our purposes here in summarising the main contemporary components of education as a discipline, Figure 1.1 will suffice. It is intended to illustrate both the current range of 'foundations' with their parent disciplines, and the integrative essence or core; that is to say, curriculum content and method as they emerge from the interaction of learning and teaching rather than as they are portrayed in syllabuses and regulations. 'Curriculum' is therefore broadly defined so as to encompass all three forms of education outlined above.

A putative 'geography of education' is included in Figure 1.1, and before proceeding to seek evidence of it and argue its case, it is necessary to examine briefly the nature and development of geography itself.

FIGURE 1.1 EDUCATION AS AN INTEGRATIVE DISCIPLINE

### 1.3 THE NATURE AND DEVELOPMENT OF GEOGRAPHY

The definition of geography preferred by the writer is that it is 'THE STUDY OF PLACES AND SPACES'. It is, therefore, profoundly spatial and concerns itself primarily with patterns of distribution of phenomena that comprise the surface of the earth: animal (including homo sapiens), vegetable and mineral. However, spatial patterns are not merely two dimensional, and a 'vertical' dimension co-exists with the 'horizontal'. Conventional limits to the vertical dimension of geography are normally accepted as being the boundary between the atmosphere and space, and the boundary between lithosphere and barysphere.

Geography is not merely composite, but rather, integrative in respect of its treatment of information derived from other subjects or disciplines, but the focus on spatial relationships derived from an examination of the effects of the interaction of factors at the core of the various contributing disciplines is distinctive, and most obviously rendered through the "uniquely geographical methodology of cartography". (38) For example, economic, demographic, political and physical factors conspire to produce a particular locational pattern for the production of iron and steel in a given country at a given time. Space-time relationships and the application of the concept of change are fundamental to modern geographical analysis, which is essentially dynamic. This view would argue for a 'special relationship' between geography and history succinctly encapsulated in the famous medieval aphorism:

" ... if Geography without History seemeth a carkesse without motion, so History without Geography wandreth as a vagrant without a certaine habitation."(39)

The significance of this relationship is employed by Hristov (40) in attempting to explain the profound contribution of the French to the determination of the essence of geography. He argues that the historical and political géostratigiques in respect of France have been instrumental in the mutually formative relationship between geography and history in that country, culminating in the famous French school of regional geography in the nineteenth century.

Like so many components of the Western curricular tradition, geography has its roots in classical antiquity, (41) though Spate would go further:

"I do not think it is an exaggeration to claim that the twin sisters Astronomy and Geography are in fact the oldest branches of human knowledge dependent on exact observation and record.." (42)

He also reminds us that there are other geographies in the spatial formations of indigenous cultural traditions in Asia, Africa, America and Oceania:

"Most appropriately, the documents on which we base ourselves are maps: the maps of ancient Egypt and Chaldea, witnessing to a developed land survey and to wider regional interests; ... Perhaps even more remarkable are the maps and charts of non-literate peoples such as the Eskimos and the Marshall Islanders." (43)

However, except in so far as they interact with the diffusion of the European version they fall beyond the scope of this enquiry.

For much of its history, western geography remained descriptive and encyclopaedic, a tradition that not surprisingly carried sufficient inertia to survive the birth of modern geography in the seventeenth century, and is still residually manifest in many contemporary classrooms. One might speculate that the role and status assigned to geography in the school curricula of the emergent educational systems of European nation states severely depressed its intellectual merits and public image. It was probably not until the emergence of 'Madingley Man' in 1963 (44) that the integrative and dynamic spirit of the founding fathers of modern geography was enabled to find expression, and soon presented a challenge even at primary level.(45)

Modern analytical geography is generally accepted as emerging in the Geographia Generalis of Bernhard Varenius, published in 1650 in Cambridge. Varenius was a German scholar working mainly in Leiden. But the philosophical consolidation of the discipline was effected by Immanuel Kant (1724 - 1804) a century or more later. Kant did not subscribe to the apparent dichotomy between physical and human geography, but it survived him to make its mark in the conventional wisdom that is often still applied to the discipline by outsiders.

Kant:

"claimed physical geography to be 'a summary of nature', the basis not only of history but also of 'all the other possible geographies'. Five of the other geographies he identified as part of physical geography are mathematical (the form, size and movement of the



earth and its place in the solar system), moral (the customs and character of man in relation to environment), political, mercantile (commercial) and theological (the distribution of religions). Physical geography thus embraced the outer physical world, the earth's surface, and its cover of life forms of plants, animals, and man and his works." (46)

The founder of modern physical geography, Alexander von Humboldt (1769 - 1859) had in fact adopted an ecological approach to his extensive research in Latin America, but it was the so-called 'scientific approach' of William Morris Davis (1850 - 1934), Professor of Physical Geography at Harvard that provided the image of a human-free process of landscape development popularised by its coincidence with the beginnings of the mass textbook market. Only during the last quarter century has the human influence on the physical landscape been afforded the recognition properly perceived so long ago by Kant and Humboldt.(47)

For obvious reasons this thesis will be concerned mainly with the human dimensions of geography as they may and do affect various aspects of educational provision, practice and performance. Nonetheless, the capacity of physical geography to appropriate the image and even the label of the discipline is profoundly significant to one of the main justifications for arguing the case for a 'geography of education'. That is to say, in so far as the geographical factor is explicitly recognised in educational literature it tends to be the physical side that is in mind, whereas it is almost entirely within human geography that this factor so operates.

The founder of modern human and regional geography, Carl Ritter (1779 - 1859), also held the first chair of geography, at the University of Berlin, from 1820 until his death. Although the chair then lapsed, the field of human geography was carried forward by Friedrich Ratzel (1844 - 1904). Ratzel favoured a cultural-anthropological approach, which contrasted with the social and regional identity promoted by Ritter. Nonetheless, the sophistication of geographical analysis in Europe was much in advance of the determinists of the U.S.A., such as Ellen Semple and Ellsworth Huntington. The latter were powerful advocates and tension continued on both sides of the Atlantic as between 'scientific' and 'humanistic' approaches to geographical analysis. The humanistic school was led by Paul Vidal de la Blache (1845 - 1918). Perhaps more popularly known for his contribution to the aforementioned 'French School' of geography, and in particular its regional monographs, Vidal de la Blache, through his powerful advocacy of humanistic and possibilistic approaches, presented a direct challenge to the determinists. The humanistic approach brings behavioural, aesthetic and imaginative dimensions into spatial analysis, whereby possibilism is linked with cultural awareness:

"man's choice is severely restricted by the value system of his society, its organisation, technology, in short by what Vidal called man's genre de vie ("way of life").(48)

So in the course of about 150 years, modern geography has developed from the philosophic basis provided by Kant, through the rigorous integration of field investigation and intellectual analysis whereby

Humboldt and Ritter identified the discipline. There is a considerable literature on the historical development of geography and the nature and contribution of the major national 'schools'. A selection of sources will suffice.(49) But the intellectual contributions of major figures is only half the story. There is also the question of the formal acceptance of a subject, and this normally requires the establishment of a university department and at least one Chair. In England, the appointment of Halford Mackinder to a Readership in Geography at Oxford in 1887 was regarded as a major milestone and his successor Andrew Herbertson gained a personal chair in 1910. The Oxford Readership and another at Cambridge in 1888 followed the recommendations of the Keltie Report of 1885 "which showed the unfavourable position of Britain compared with France and Germany" in respect of geographical education.(50) The first established chair in England was that occupied at University College, London by Lionel W. Lyde from 1903 - 1928. Departments and chairs were established in most of the universities of Britain during the first 40 years of the century, and as with education, so the inter-war period of 1918 - 1939 proved to be particularly significant:

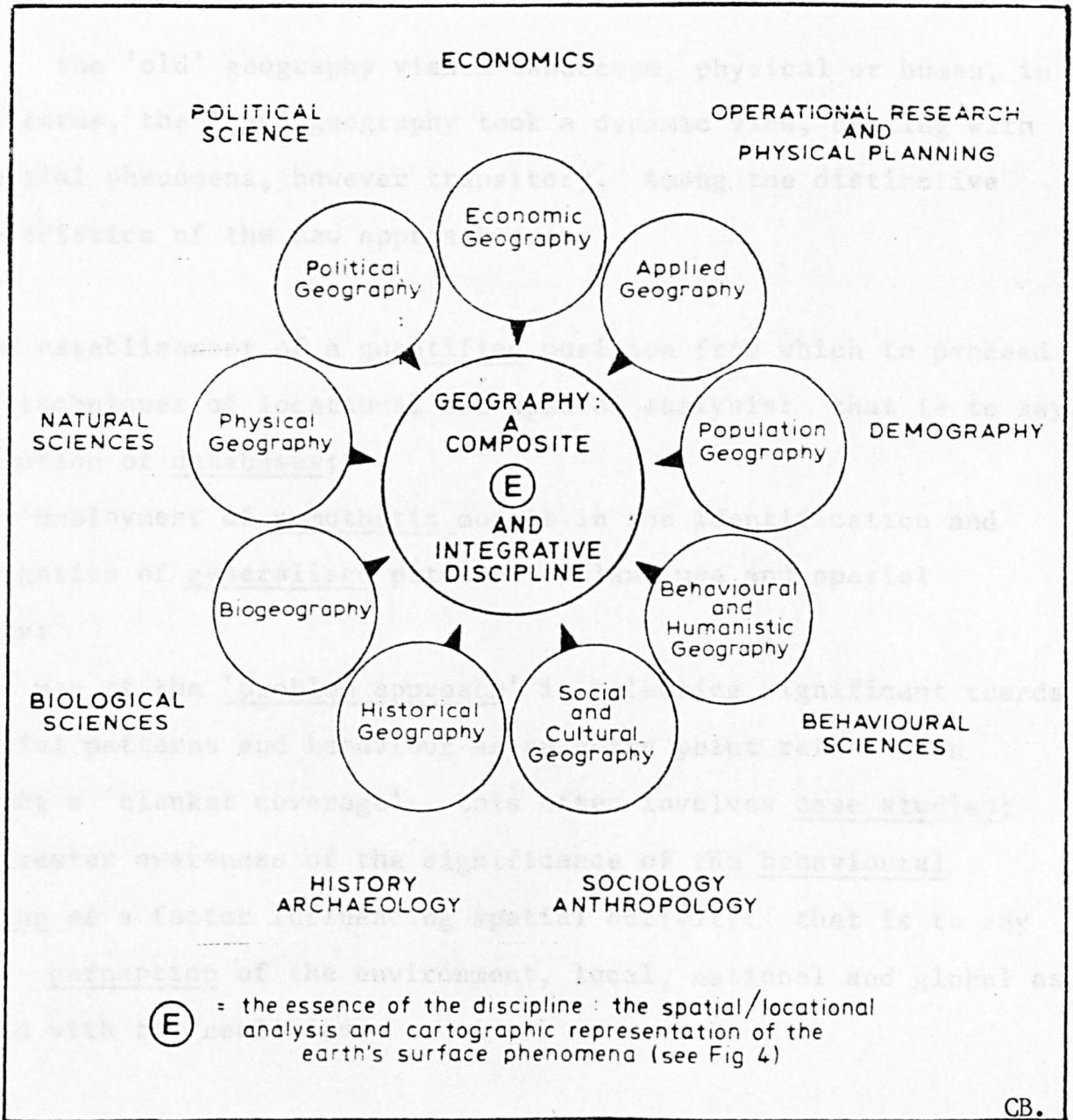
"The growth of the subject as an academic discipline worthy of study in universities matters most to our understanding of the state of geography between the World Wars of the twentieth century, in which century the most important developments have concentrated". (51)

It was on the basis of the inter-war departmental models that further expansion of the subject at university level, including the founding of more departments in the new universities, was carried through. The

discipline had become institutionalised, with all that that implied, (52) and the descriptions by Board and Elkins in the 'Madingley' volume bear witness to the influence of institutional factors on a discipline at university level.(53)

Specialisation and the development of sub-disciplines within geography has, as in education during the twentieth century, been supported by standard texts at school and university level as well as by scholarly journals and societies. For our purposes at this introductory stage of the discussion, Figure 1.2 will suffice in respect of summarising the main sub-disciplines comprising academic geography. Comparison with Figure 1.1 immediately illustrates a structural similarity as between geography and education, but the integrative essence or core, that is to say a concern with dynamic patterns of location and space, is clearly different. It is the rejuvenation of location and spatial analysis that has transformed geography from a descriptive and somewhat denigrated discipline to a truly analytical study with a much enhanced reputation at all levels since 1945.

As alluded to above, at least as far as Britain is concerned, the transformation from ancient to modern has been ascribed to 'Madingley Man', and especially to Richard Chorley and Peter Haggett. Important as the 1963 Madingley lectures undoubtedly were, it was the exposure of the leading protagonists to developments in geography in the U.S.A. that was the real catalyst. Both Broek's inspiring volume (54) and a particularly influential report of the National Academy of Sciences/National Research Council of the USA (55) were published in

FIGURE 1.2 GEOGRAPHY AS AN INTEGRATIVE DISCIPLINE

the same year as the Madingley Lectures (1965). The latter was clear and confident about the place and security of geography as an applied science:

"Geographic studies will be irreplaceable components of the scientific support for efficient space management" (56)

Where the 'old' geography viewed landscape, physical or human, in static terms, the 'new' geography took a dynamic view, dealing with all spatial phenomena, however transitory. Among the distinctive characteristics of the new approach are:

- a) the establishment of a quantified position from which to proceed to the techniques of locational and spatial analysis: that is to say, the creation of databases;
- b) the employment of nomothetic models in the identification and investigation of generalised patterns of land use and spatial activity;
- c) the use of the 'problem approach' in selecting significant trends in spatial patterns and behaviour as an entry point rather than operating a 'blanket coverage': this often involves case studies;
- d) a greater awareness of the significance of the behavioural dimension as a factor influencing spatial activity: that is to say people's perception of the environment, local, national and global as compared with the realities.

As Hall illustrates, the modern approach may be illustrated in terms of questions and concepts:(57)

- |  |   |
|--|---|
| . where are phenomena located?                               | . location, distribution, pattern,            |
| . why there?   | . association, interaction, process,          |
| . what consequences?   | . system, movement, quality of life, welfare, |
| . what alternatives should be considered in decision-making? | . planning, values, perception.               |

In order to illustrate further the key concepts and concerns of modern geographical studies, Figure 1.3 has been compiled as a summary of Broek's perception of the 'essence' of the discipline. Each of his components operate within most of the sub-disciplines of geography illustrated in Figure 1.2, transforming the structure from a discrete to an integrated pattern as compared by Haggett in what is probably the most influential student text of the modern era in this discipline. (58) His comparison comprises Appendix B. Haggett's book, while substantive and popular, clearly relates to a formative period of 'foundation' texts in the U.S.A. (59) These, and similar texts subsequently published in Britain (60) illustrate in their structure the nature of human geography and its key theoretical concerns such as: locational analysis; spatial analysis, network analysis; transport, migration, communication and diffusion studies; the concept of scale; the concept of surface; land use and sector studies; perception, myth and image in geographical terms; political geography and decision-making. These are discussed below, especially in their relationship to the study of education.

These concepts and the theoretical and practical techniques at their disposal, such as nomothetic modelling and computer graphics, have in

FIGURE 1.3 BROEK'S OBSERVATIONS ON THE ESSENCE OF GEOGRAPHY

ESSENTIAL COMPONENTS	OBSERVATIONS
CULTURAL APPRAISAL	"Cultural regions provide a better framework than natural regions" That is to say the old determinist approach has given way to possibilism.
THE REGIONAL CONCEPT	An intellectual concept - a device to comprehend likeness and differences on the earth's surface. As with other types of place, "the region" has a position in time as well as space.
AERIAL COHERENCE	"Phenomena existing together in an area ... exist in association, open to rational organisation and comprehension" They form a "spatial ensemble" with an "internal consistency" resulting from multivariate processes.
SPATIAL INTERACTION	There is a "functional order" in the organisation of space, implying "spatial hierarchies" within the core - periphery extremes and a circulation of "messages, persons and goods".
LOCALIZATION	A tendency to clustering on the part of specific or related features and activities: "in measuring localisation one seeks for intensity of occurrence rather than for mere distribution".
SIGNIFICANCE OF SCALE	Geographical concepts are equally applicable to small and large areas, but "The scale of investigation makes, however, a great difference to the generalisations that can be drawn from observations.
THE CONCEPT OF CHANGE	Change is a general principle; it is the rate and direction of change that matter, therefore: "Events must be viewed in time scales appropriate to the nature of the process". Rates of diffusion influence rates of change.
DISTRIBUTIONS	"Plotting distributions is a very important procedure in geography", but "it is a means to an end, not the purpose of geography".
ABSTRACT THEORY	Important, and sharpens the analysis, but a search for general laws" removes place and time from geography" whereas distributions chiefly result "from non-recurrent historical processes".
SUMMARY	The parameters of disciplines vary, therefore each can be defined "only by its core, not by fixing exact boundaries". The core of geography is a concern with 'place' - a "piece of land" and/or "the human group that occupies it"; can be "unique areas" that exist as such, or "mental concepts formulated to arrange an abstract order".

Source : JAN O.M. BROEK, Geography : Its Scope and Spirit, Charles E. Merrill (1965).



recent decades been applied to aspects of human activity and related land utilisation not previously considered for geographical analysis. They have developed into accepted and respected, even conventional sub-disciplines, including: medical geography; welfare geography; recreational geography; military geography. But as yet there is no developed 'geography of education', despite the interest in welfare geography. It is the purpose of this thesis to argue for a new sub-discipline to be added to the educational constellation. The most recent résumé of British geography does find it strong, but overstressed, and still without the writer's desired sub-discipline.

#### 1.4 COMPARISON AND INTERACTION BETWEEN EDUCATION AND GEOGRAPHY

"In exploring the concept of education a territory is being entered where there are few signposts. To use Ryle's phrase, the 'logical geography' of concepts in the area of education has not yet been mapped" (61)

The employment of geographical metaphor by such eminent philosophers as Peters and Ryle in their attempts to identify the essence of education may be inconsequential in itself. After all, as Taylor has shown there are many metaphors of education which when employed by students of that field "are as diverse as their disciplinary specialisms". (62) But he also claims that: "A metaphor is only alive when there is realisation of a duality of meaning". (63) The writer would wish to claim that the obvious success of the use of geographical metaphor by Armytage in respect of Foster Watson, above, owes a degree of its richness not only to the imagination of the

author but also to the metaphorical potential in respect of the quality of association between geography and education as disciplines.

The brief accounts of the respective development of education and geography given here track a similar history. From formal groundings in classical Greek scholarship, though derived in part from pre-classical and extra-European cultures, both disciplines come to light through the Renaissance and are reshaped in the forge of German academicism. They were subsequently used and compromised by the politics of curriculum development in the context of the role of education in a modern nation-state; revived and enriched in the progressive international intellectual environment of the 1920s and 1930s, but at the same time institutionalised, codified and fragmented by the cult of specialism. A further liberal period in the 1960s was supportive in material terms and accompanied by a cybernetic revolution at once enabling greater rigour in the social sciences while threatening to reduce everything to abstractions. Broek's concern at this time on behalf of the well-being of geography could equally well be applied to educational studies:

"Geography is not concerned with  
universalised economic or social man,  
living on a planet as bare as a billiard  
ball" (64)

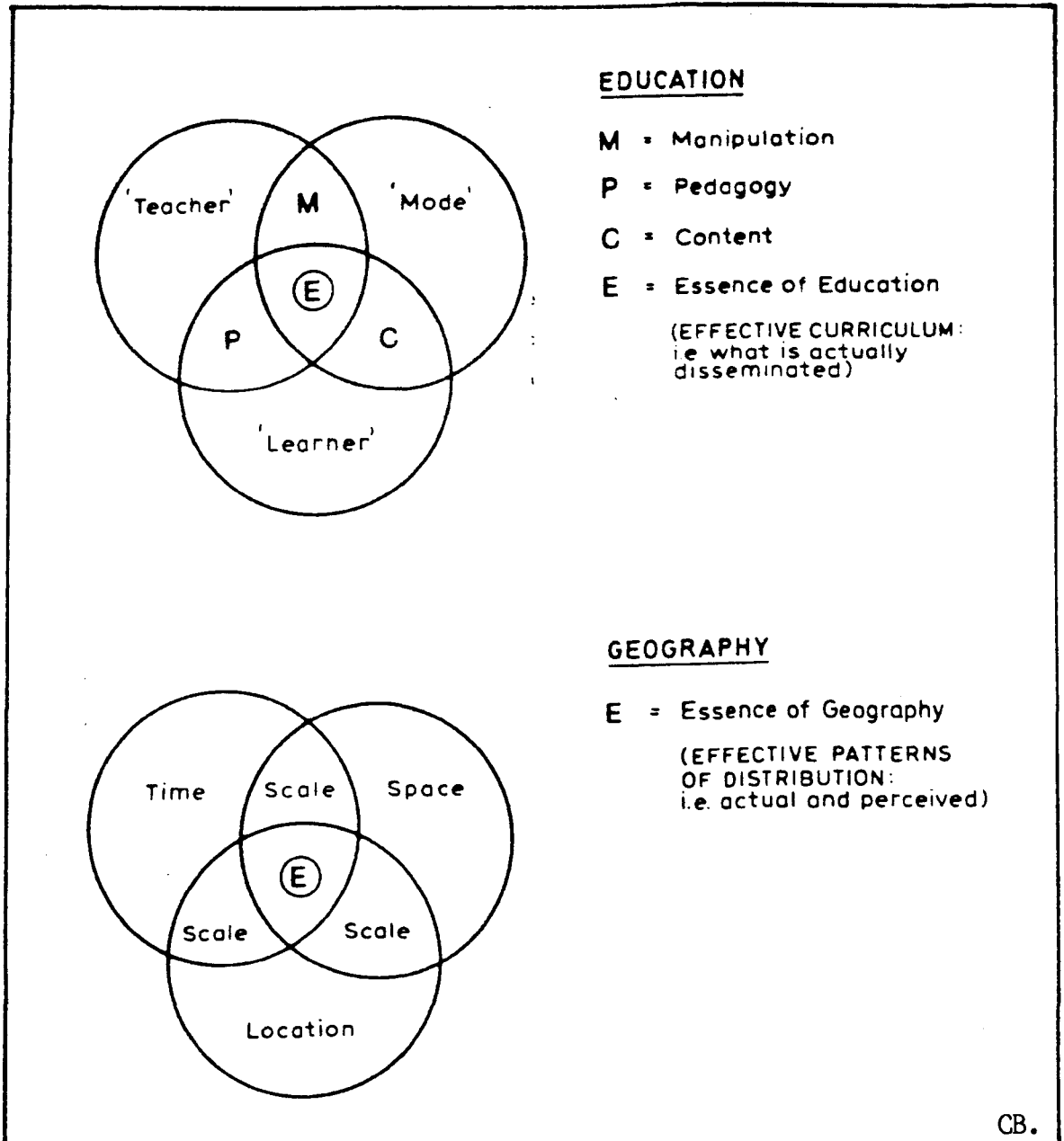
But the parallel evolution of the two disciplines in chronological and contextual terms is shared by other fields, and merely reflects the story of educational development in broad terms.

We could seek a deeper relationship; more generic. If we accept Tykociner's categorisation of education as a 'disseminative science', we may have the key to the aforementioned association that seems to enable the living metaphor to be credible.

"Knowledge accumulating from generation to generation could not be transmitted without a variety of public institutions - schools, colleges, libraries, museums, institutes of higher learning, and other means for disseminating the experience of earlier generations. Similarly important is the mass communication of current events and of all aspects of community, national, and international developments" (65)

Such a concept of education is fundamentally spatial and dynamic, and as such shares a generic relationship with geography. It is clear that educational phenomena are susceptible of geographical analysis and that they also contribute to the aerial synthesis that constitutes 'places and spaces'. Figure 1.4 illustrates the respective 'essences' of the two fields of study as perceived by the writer. So we have a mutually interactive relationship, at the basis of which is the fact that educational provision and process is a user of space. Indeed it is a major user of space, and especially within the United Kingdom where schools, colleges and universities have recreational as well as academic territory. At various scales, descriptive cartographic studies can be made of the siting and design of educational buildings and open spaces; a small literature on school mapping does exist,(66) and individual providers such as local authorities in England and Wales obviously have their own internal plans illustrating the educational land use within their jurisdiction at a given moment in

FIGURE 1.4 THE ESSENCE OF GEOGRAPHY AND EDUCATION COMPARED



time. Such distributions of educational space and related patterns of usage obviously operate within political parameters, which makes political geography of particular significance within the family of sub-disciplines. Policy changes leading to educational reforms often have geographical implications and there is a need for more sophisticated locational and spatial analyses to be made of, for example the implications of the reorganisation of secondary education; the introduction or removal of a middle school sector; the expansion or reduction of teacher training provision; the contraction and rationalisation of the university sector, to take just a few obvious issues from the recent and contemporary scene in England and Wales. For example, the work of Burdett (67) is a helpful beginning to the discussion of locational and spatial implications of a number of recent reforms and innovations in this country.

In developing countries, formal education systems are often incomplete, in that they may lack universal primary provision, and rarely have a universal secondary sector. The existing patterns of schooling may also reflect idiosyncrasies of location arising from the peculiar operations of individual formative agencies, often missions. (68) There is obvious scope here for a space-time analysis ranging from historical through contemporary to future locations and networks. Even primary schools can be development nodes in such locations, (69) just as they routinely form a space-time grid for a new town in England, such as in the case of Milton Keynes.

In these examples, educational phenomena in respect of their spatial implications are being viewed in a dynamic way, not merely as items of land use to be described but also as interactive variables in the ever-changing matrix of human activities on the surface of the earth. As one of these geographical factors, does education have a particularly distinctive role? Spencer and Thomas perceived education systems as being "space adjusting techniques", (70) because "they seek to create cultural uniformity and continuity over all the territory occupied by the society operating the educational system". While tenable, this view relates to a particular form of educational provision, the unitary form, which rarely exists in practice, and is really a planner's or manager's concept of formal education. Personalised forms of learning may, as Price suggests, (71) find affinity with the 'non-place realm' of geographical theory and reality. So while a mutually interactive relationship exists between education and geography its potential for both understanding and prediction is constrained by inadequate conceptions on either side. The full development of a set of principles underpinning the 'geography of education', elements of which already exist, is essential if the sub-discipline is to emerge alongside other foundations in the study of education.

. . . . .

In this chapter an attempt has been made to argue the case of an affinity between education and geography as disciplines. A brief resume of the nature and development of each has been provided and a comparable structure illustrated in the form of Figures 1.1 and 1.2. The 'geography of education' has been intimated in Figure 1.2 though in practice it does not yet exist in the form either of a coordinated body of theory and literature, or as a teaching programme within the study of education as far as the writer is aware.

It will be noted that comparative education does not appear in Figure 1.1. This is because comparative education is 'education writ large' and therefore embraces all the sub-disciplines. The argument put forward by Fletcher (72) that the terms 'geography of education' and 'comparative education' are or should be synonymous, and that this resolves the supposed identity crisis of the latter is rejected by the writer. There is more discussion of this issue below, but the potential value of the 'geography of education' to comparative education study has been argued by the writer elsewhere.(73)

In order to move from the contextual position to the prosecution of a case for the 'geography of education', and the formulation of a model to guide its development, it is necessary to review a selection of relevant literature. The literature falls into two main categories:

a) contributions arguing for a 'geography of education' or formally identifying themselves under this label, that is to say the explicit literature;

b) contributions residing in the literatures of geography, education, or other disciplines that to a greater or lesser degree could be described as being examples of aspects of the 'geography of education', but are not put forward as such; that is to say the implicit or latent literature.

The implicit literature is utilised in the next two chapters, which constitute Part B of the thesis: 'Towards a Geographical Interpretation of Educational Development'. The explicit literature is added in Part C in association with the development of a model for the 'geography of education'.



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PART BTOWARDS A GEOGRAPHICAL INTERPRETATION OF EDUCATIONAL DEVELOPMENTCHAPTER TWO: TEMPORAL, SPATIAL AND POLITICAL ASPECTS

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CHAPTER TWO  
TEMPORAL, SPATIAL AND POLITICAL ASPECTS

2.1 INTRODUCTION

The nascent, and to most educationists obscure, position of the 'geography of education' as a sub-discipline does not preclude the existence within the various literatures of educational studies, and its supporting disciplines, of contributions that would inform the geography of education and assist its development. A selection of such items is considered in this chapter. They come from the literatures of both geography and education, but rather than treat these literatures serially it is better to consider the sources thematically. For obvious reasons the parameters are not hermetic.

Given the interdependence of geography and history already discussed, and their mutual concern with time/space contexts, it is not surprising to find a significant number of sources within both the history of education and historical geography that are relevant to this enquiry. Like both education and geography, history has a vast scope and many component sub-disciplines of its own. It has also shared the 'modernisation' of the 1960s, so that there is said to be a 'new history' alongside the 'new geography'.

In the inaugural edition of History of Education, Asa Briggs comments on the study of education and the study of history and recognizes six

areas of the 'new history' that are: "of special interest and importance to historians of education ...". (1) One of these is 'comparative history', "a natural sequel to the rediscovery of the variety of experience embedded in the local, regional and national sub-cultures." (2) Despite the obviously geographical connotations of scale and area that are vested in this comment, the history of education in, or as compared with, another place does not necessarily qualify as the 'historical geography of education'. It would depend on the treatment being geographical. This is the same argument as applied above against Fletcher's contention that 'comparative education' is synonymous with 'geography of education' merely because each has an aerial dimension. (3)

Bearing in mind the caveat entered into above, an attempt has been made to select elements of the historical geography of education according to a broad chronological sequence over the past 3750 years and concentrating on the European and American domains. Included in the European domain for the purposes of this discussion are aspects of the Middle Eastern origins of our civilisation and of the European colonial diaspora. More detailed consideration of geographical concepts as applied to education is necessarily located in Chapter Four below, but in order to interpret the well known story of western educational history from a geographical viewpoint, a number of broad concepts are employed in this section, namely those of: routes, nodes, networks, diffusion, regions and boundaries. Vast dimensions of time and space are involved and so selection is inevitable. Key elements in the progression of western education from the spatial

point of view are targeted, bearing in mind Bird's neat encapsulation of the vital relationship between history and geography: The Target of Space and the Arrow of Time.(4) The period from which elements of the story are selected extends from before the first urban revolution, (5) associated with the discovery of agriculture, through the second urban revolution, associated with the Renaissance (6) to the third associated with the mass industrialisation of Western European society and its derivatives.(7) This will be done in two sub-sections; the first, dealing with the bulk of the time and viewed on a macro scale, extends to the nineteenth century colonisation of the American interior; the second returns to the European context and the association between the formation of the modern political geography of that region and the establishment of national systems of formal education. It should be remembered that in this, 'education' is broadly defined and so includes the diffusion of cultural traits such as language and religion which in turn effect expression in the more confined notion of 'schooling'.

Before the first urban revolution, human society was far from homogenous, though there were large groups with distinctive cultural traits:

"The formation of these large uniform groups was no doubt due to the relative sameness of environment. We must picture the primitive world as presenting infinitely less variety than our present one. It was not cultivated, and its original aspect had undoubtedly not been altered by the destruction or creation due to the numberless acclimatization of plants and animals which human societies effect and multiply as they themselves increase.

Might we not expect that these great uniform spaces would induce a common manner of living, and therefore a common culture among groups of men in search of a means of existence?" (8)

Febvre was writing in 1924, yet sixty years later and with reference to the New World, Norton was able to state with some justification that: "The evolution of cultural regions has received relatively little attention by historical geographers." (9)

More detailed consideration will be given below to some theories of cultural geography derived from examinations of the European peopling of interior America. Since that colonisation took place after, and with the influence of, the major European cultures, these ideas may not be fully applicable to the evolution of the cultural landscapes of Europe itself. Nonetheless, the basic concepts developed by Meinig (10) in respect of the evolution of a cultural region would be worth keeping in mind as we consider the old world context. He postulated the need for and existence of: a) a core or central focus; b) a domain or area in which the culture is or was dominant; c) a sphere or zone of influence in which peripheral acculturation proceeds and extends. Acculturation implies learning, which implies the operation of an educational force as an intrinsic component in the evolution of cultural landscapes.

"The concept of cultural evolution promises to constitute a valuable mode of explanation in the analysis of cultures and cultural change and since the presence of a culture implies an area, this applies to spatial patterns too." (11)

So although the following selection of aspects of the educational dimension of European cultural evolution is inevitably incomplete, it is profoundly spatial and therefore contributes to the historical geography of education.

## 2.2 FROM MESOPOTAMIA TO MICHIGAN : ASPECTS OF EDUCATIONAL DIFFUSION AND THE EVOLUTION OF THE CULTURAL LANDSCAPE.

From the beginning, a fundamentally geographical association attends the study of formal institutionalised education, that is to say its urban identity. The first of the urban revolutions, that of Mesopotamia and the Nile Valley, produced the scribal schools that are conventionally regarded as the beginnings of formal education,(12) scribing being useful to both religious and economic dimensions of city life. Trading within the region required a mutually intelligible and acceptable code, and the vernacular of Akkad performed this function. Consequently, Babylonian scribes were hired in cities outside Mesopotamia and became widely dispersed as the period of the Egyptian Empire unfolded from 1570 BC. This is the first of a series of educational diasporas that were, by definition, geographical in nature and effect. There were also communication networks:

"As early as the third millenium BC, the city-states of Mesopotamia had devised a government postal system.(13)

It was during the period of the Egyptian empire that the modern alphabet, the medium of European educational expansion, also emerged

from the economic intercourse of trading communities in Levantine cities.

"From the Aramaic form the alphabet travelled eastwards, giving scripts for Classical Hebrew, Syriac, Arabic and other languages in the region. From the Pheonician form came the Greek alphabet and from it in turn, all of the European varieties."(14)

The significance of the polis of Classical Greece for the style of European educational development needs no restatement here, but the ecological dynamics and scale of those City States and the role played by education in the urban machine seems to have been overlooked. It seems unsurprising that the model has not proved effective in respect of the mass schooling of later industrialised European communities or of their essentially rural colonies. While the mystery of unaccountable faith in this model of formal education is an anthropological issue, its manifestations have inter alia geographical consequences. Hellenistic learning extended not only to the east and south under Alexander but also to the west, in particular the western Mediterranean.

"... for the most part viable and balanced communities were sent out, sponsored by a mother city, to found a new city state which would be self-sufficient in essentials, autonomous and completely independent from the beginning."(15)

Such an approach would imply the transportation of established media and institutions of education as part of the urban complex and the establishment of networks of information flow within Greek imperial space. Some of these networks were informal, there being a miscellany

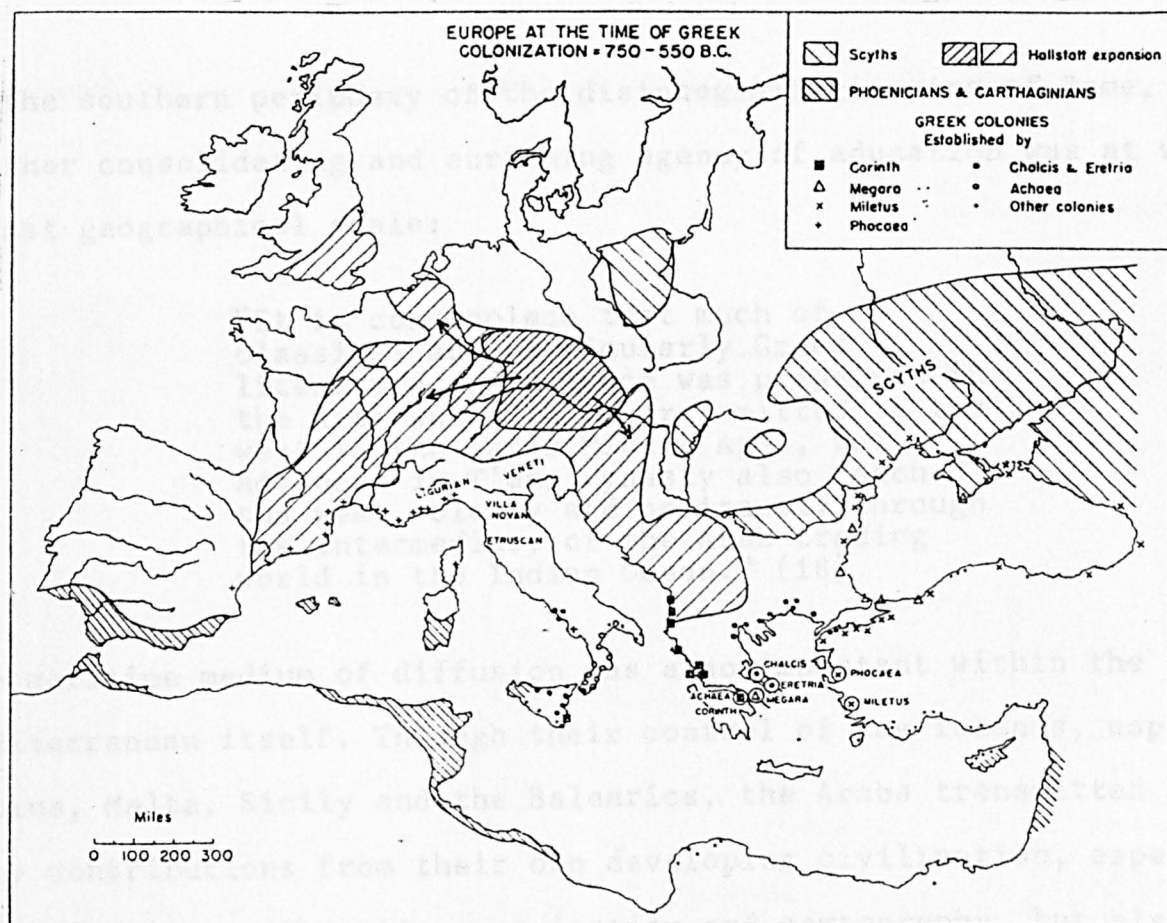
of travellers using popular routes and resting places, others were formal and official. The networks of the Greek states were appropriated by the Romans, and with it the Greek educational conventions, including, as for the Akkadian scribes of 1500 years before, a diaspora of the literate. The organisation and technology of Rome enabled the production of books and this in turn the establishment of libraries, but most influential of all for the diffusion of Graeco-Roman education was the geographic scale of the Roman Empire at its greatest extent. By the first century AD, there were even the beginnings of an imperial education policy. But the role of education as an effective agent of social control requires territorial stability to be maintained, and this was not to be. However, the inclusion of Britain provided the periphery that was to prove vital to the survival of the development of the European educational tradition, which by the time of the collapse of the Roman Empire included the Christian dimension.

Apart from the security of remoteness and insularity enjoyed at that time by the monastic outposts of Britain and Hibernia:

"... situations often thought of as geographically or historically peripheral to the education system can provide the stimulus for innovation."(16)

Certainly these vital institutions were no mere repositories of Christian documentation. Over a period of two centuries of stewardship new standards of graphicacy were attained and maintained through a system of formal training leading to textbook production. Centres of learning tended to be clustered within the periphery — the

FIGURE 2.1 THE EXPANSION OF GREEK COLONIAL CITIES: 750 - 550 B.C.



"The Greek colonial cities, established from about 750 to 550 B.C. on the shores of the Mediterranean and the Black Sea from the Sea of Azov to the Costa Brava in Spain, were centres from which Greek exports and cultural influences spread into the barbarian world. In the east trade contacts were through the pastoral nomads of the steppes and the steppe margins; in the west Massilia was the chief centre to which the tin trade flowed and from which wine, a commodity to acquire great prestige among Celtic chieftains, was exported northwards by way of the Rhone-Saone route. The Greeks represented the most important, perhaps, of the civilising influences among the barbarian peoples of the north, providing another instance of the use of the well-trodden paths to the west by way of Sicily, southern Italy, the western Mediterranean and the Rhone-Saone and Carcassonne gaps."

Source: C.T. Smith, *An Historical Geography of Western Europe before 1800*, Longmans (1967), p. 35 - 36.



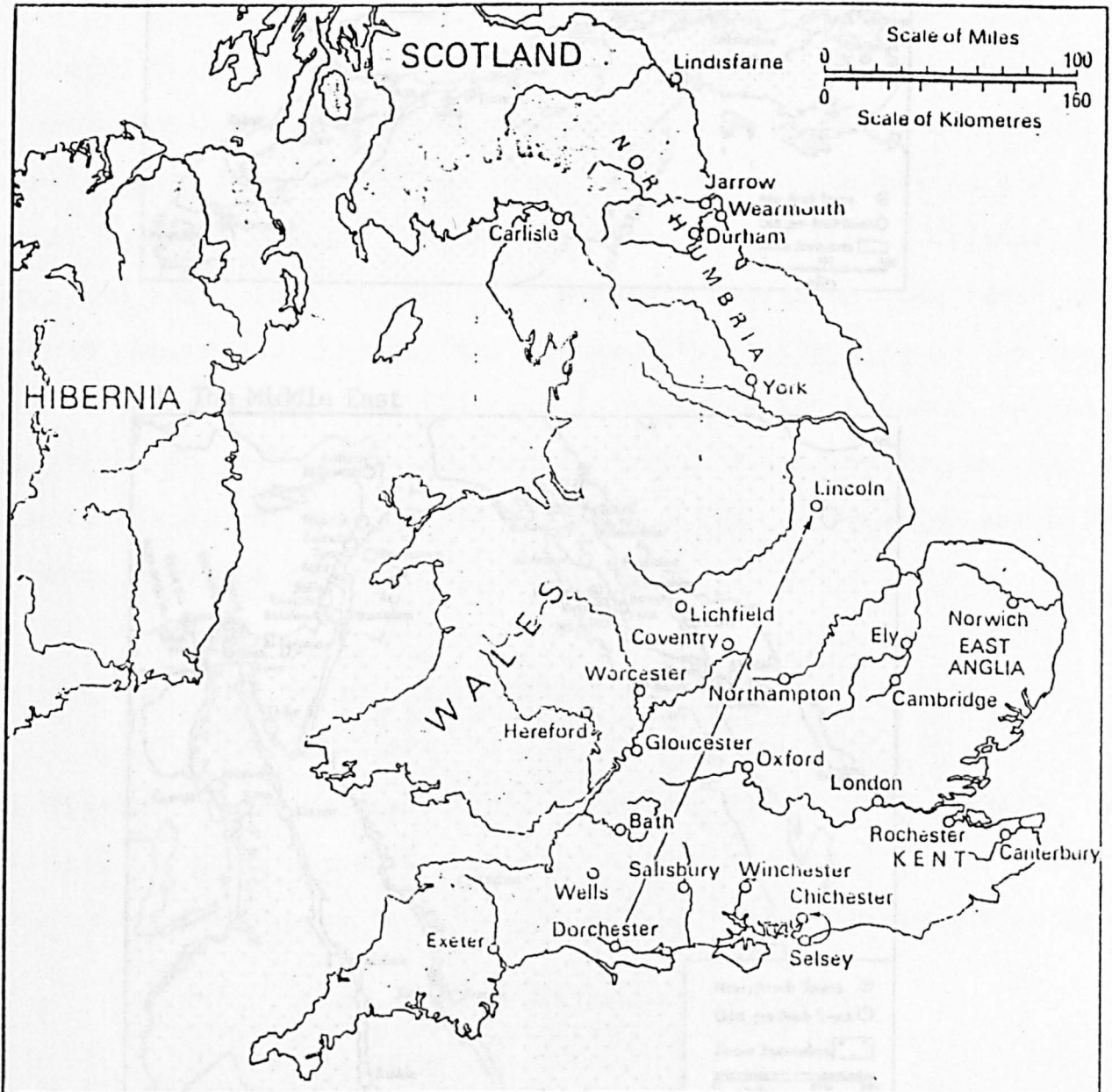
'localisation' of Broek<sup>(17)</sup> — the monasteries of Jarrow, Lindisfarne and Wearmouth being an example of a profoundly geographical 'intensity of occurrence', (see Figure 2.2).

On the southern periphery of the disintegrating empire of Rome, another consolidating and enriching agency of education was at work on a vast geographical scale:

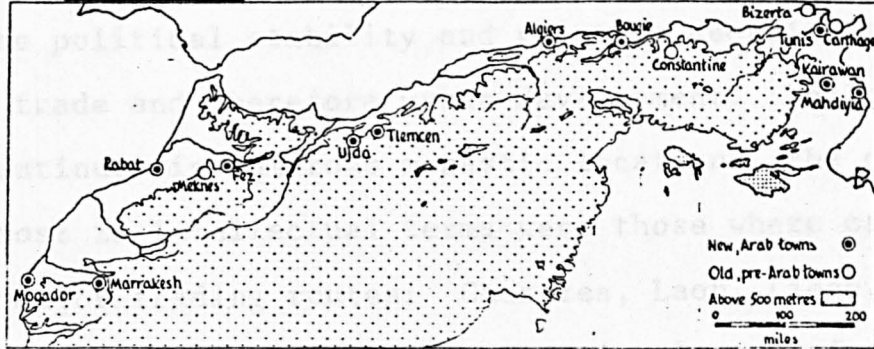
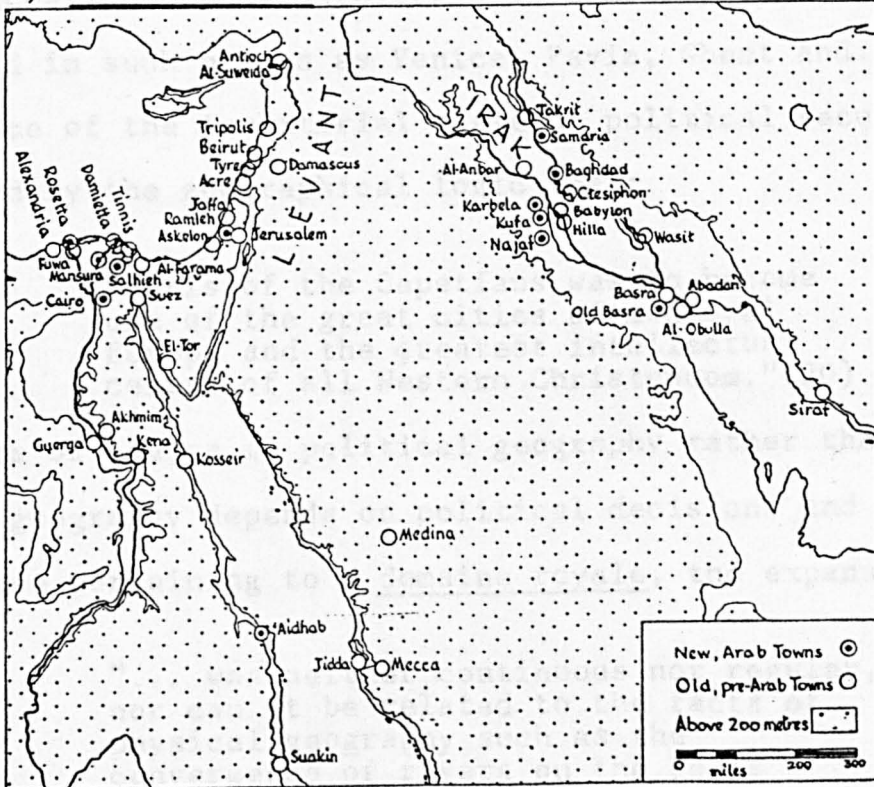
"It is commonplace that much of classical and particularly Greek literature and science was preserved in the Arab world to be transmitted to the west in the later Middle Ages, but advances in T'ang dynasty also reached the west, slowly and hesitantly through the intermediary of the Arab trading world in the Indian Ocean." (18)

The maritime medium of diffusion was also important within the Mediterranean itself. Through their control of key islands, especially Cyprus, Malta, Sicily and the Balearics, the Arabs transmitted not only contributions from their own developing civilisation, especially in relation to mathematics, navigation and cartography, but also preserved Greek astronomy and science for the west. Hamdan (19) notes that five main factors - religious, military, political, commercial and social - supported medieval Arab urbanism; the wealth and security providing sponsorship and shelter for intellectual as well as religious development. Not only were pre-Arab urban centres in the Nile Delta, the Levant coast and Mesopotamia regenerated, but a significant number of new towns were founded, as illustrated in Figure 2.3.

FIGURE 2.2

CENTRES OF LEARNING IN MEDIEVAL ENGLAND

Source: James Bowen A History of Western Education Volume Two The Civilization of Europe : Sixth to Sixteenth Century, Methuen (1975)

FIGURE 2.3 URBAN CENTRES IN THE MEDIEVAL ARAB WORLDa) The Mahgrebb) The Middle East

Source: G Hamdan, 'The Pattern of Medieval Urbanism in the Arab World', Geography, 215 (1962)

The threat to the enlightened periphery in the north-west, posed by the Scandinavian invasions was circumvented by the return of the prime torch of learning from northern England to mainland Europe where it re-entered a territory of imperial scale through the association of Alcuin and Charlemagne, the Holy Roman Empire coming into existence in 800 AD. The political stability and relative security that followed encouraged trade and therefore urban development. While contemplative learning continued in numerous monastic locations, the centres that prospered most in intellectual terms were those where cathedrals existed on major trading routes: Chartres, Laon, Liege, Orleans, Rheims and Paris forming the prime academic cluster of the tenth and eleventh centuries. The revival of the city, inter alia as the focus of educational development followed in Lombardy and Flanders as wealth accumulated in such places as Venice, Pavia, Ghent and Bruges. But the significance of the territorial scale of political security was well illustrated by the geographical logic that:

"Paris of the Capetians was to become one of the great cities of medieval Europe and the greatest intellectual centre of all Western Christendom."(20)

This refers of course to political geography rather than physical, and political geography depends on political decisions and chance events, in this case pertaining to a domaine royale, the expansion of which:

"... was neither continuous nor regular, nor can it be related to the facts of physical geography such as the convergence of rivers on the Paris region. Its course was at every stage contingent upon the exigencies of birth and death, succession and war."(21)

Nonetheless, the core was established from which Meinig's domain and sphere could in turn develop, and all this before the advent of the geographical concept of France within 'natural frontiers'.

The developing historical geography of education in Renaissance Europe was that of an enlarging network of urban centres where Hellenic traditions of learning re-emerged in the form of a new set of institutions, the universities. Initially, religious in foundation, (22) then also municipal (23) and occasionally imperial, (24) these institutions evolved as the nodes of incipient systems of education as well as of international scholarly communities.

The location of the earliest British example, Oxford, can be illustrated by two geographical frames of reference: the concentration of wealth from trade - in this case the Cotswold woollen industry - and the peripheral location of the city within its then diocese - Lincoln. In fact the same diocese had been run from Dorchester-on-Thames until the relocation of the headquarters in 1072-73 to Lincoln. However, over a century later there was still a significant link with the Oxford area in the form of Bishop Hugh's affinity for Eynsham Abbey:

"The abbey which was in a special way his was that of Eynsham in Oxfordshire. Like Selby in Yorkshire it was a rare example of a monastery which belonged to the Bishop of the diocese". (25)

FIGURE 2.4 THE MEDIEVAL DIOCESE OF LINCOLN AND THE PERIPHERAL LOCATION OF OXFORD



Source: David Hugh Farmer, Saint Hugh of Lincoln, Darton, Longman and Todd (1985), p. 26.

Whether this had any bearing on the selection of Oxford as a location for scholars fleeing from Paris, where Hugh had been a prominent scholar, is not clear but the by then peripheral placement within the Lincoln diocese did engender a degree of intellectual freedom. As the current Chancellor of Lincoln puts it: "It is said that Oxford grew up as a University because it was about as far from the Bishop's curia as it was possible to be!" (26)

But capacity to support a community of scholars in whatever form was no guarantee of a university foundation. Political factors determined the outcome. For example an attempt to establish a university at Northampton in 1260 was aborted due to its coincidence with the Baron's war in which the town was in "enemy hands", and lack of royal support foiled a similar attempt at Stamford in 1334. (27) The lack of discussion as to the local or regional effect of medieval universities in the massive standard work on the subject (28) would seem to indicate a lack of significance in terms of local or regional economy, though a more recent study admits that: "the relationship between the medieval universities and society has not been adequately explained on any scale." (29) But despite the lack of data on this issue, Cobban ventures to suggest that:

"It is not really plausible that western medieval society would have continued to give of its limited surplus wealth for so long to support social parasites living a fantasy existence in ivory towers. Medieval university education, at all but the most rarified levels, was considered to be socially useful, providing a range of intellectual skills germane to community functioning". (30)

The writer is of the view that it may reasonably be assumed that locations containing medieval universities in Europe formed significant nodes in the networks of educational diffusion that carried the intellectual effects of the Renaissance out from the major centres. There being no official education systems at that time in Europe, the idea of an hierarchy of nodes operating a pattern of diffusion along the lines suggested by Hagerstrand would be difficult to determine, given the problem of obtaining the necessary data of the time. He suggested that diffusion into a 'frontier' area is led through the urban hierarchy:

"The point of introduction in a new country is the primate city; sometimes some other metropolis. Then centres next in rank follow. Soon, however, the order is broken up and replaced by one where the neighbourhood effect dominates over the pure size succession". (31)

An interpretation of the 'neighbourhood' effect would be the localisation or clustering tendency of functions, including, for example, in relation to education. With respect to the foundation of medieval universities the possibility of a reasonable locational fit with Hagerstrand's theory is made somewhat remote by the fact that the necessary granting of the status of studium generale by the Pope was not always based on objective educational criteria, as political considerations intervened.

More lasting geographical evidence of the significance of the medieval universities is their contribution to the settlements in which they were, and normally still are, located. A genre of urban settlement



emerged, the 'university town'. While Gilbert (32) suggests an economic criterion to determine such a designation: "the proportion of land within the town's boundary that belongs to the university", Beaujeu-Garnier and Chabot (33) add a more behavioural approach: "... the life of the town is completely regulated by university routine" but also "people come from all over the world to lose themselves in an atmosphere untroubled by the fever of commerce and industry". It suffices here to suggest that the medieval universities were significant components in the multivariate dynamic informing the evolution of the urban network in Europe, even though economic and political considerations were normally the prime forces involved.

Indeed, the development of urban centres within the Holy Roman Empire as pioneer communities pushed eastwards was essentially colonial (34) along the lines of the western Mediterranean mercantile satellites of the Greek city states. The early universities of 'Germany' (35) were founded a century or more after their French and Italian counterparts, but the rash of new foundations in the fifteenth century reflected in part a rivalry between emerging statelets that were eventually to number more than 300. A parallel educational development in 'Germany' at this time was the grammar school, and which was also fundamentally linked with urban development. While Latin remained an official medium, the significance of vernacular literacy was recognized by these schools as an essential component of commercial intercourse within and between the spheres of influence of each town and city. The great expansion of urban colonisation in the fifteenth century coincided with:

"The period of the outward expansion of Italian humanism and with the development of printing, this latter being in large part Germany's contribution to civilisation." (36)

With the ecclesiastical, administrative and educational functions of late medieval and early modern urbanisation to some extent integrated, one may associate the creation of bishoprics and monasteries with the diffusion of education. The cities were:

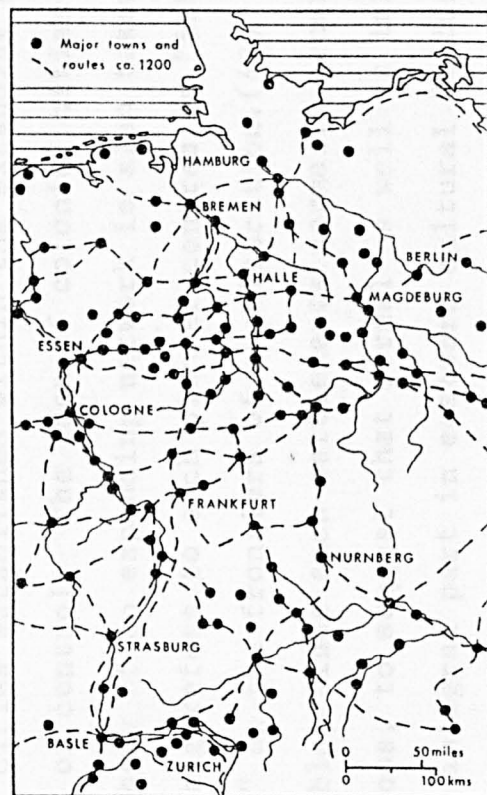
"... the repositories of the accumulated wealth of the continent. They were the seats of bishops and the centres of learning and public administration." (37)

This point was reinforced by Slater in respect of medieval town planning in England, though at this scale of observation he was able to comment on the clustering or localising effect of a major religious foundation, illustrating the point with the fact that three quarters of the medieval boroughs in the Durham palatinate were founded under "ecclesiastical lordship", as were half those in Hertfordshire. (38)

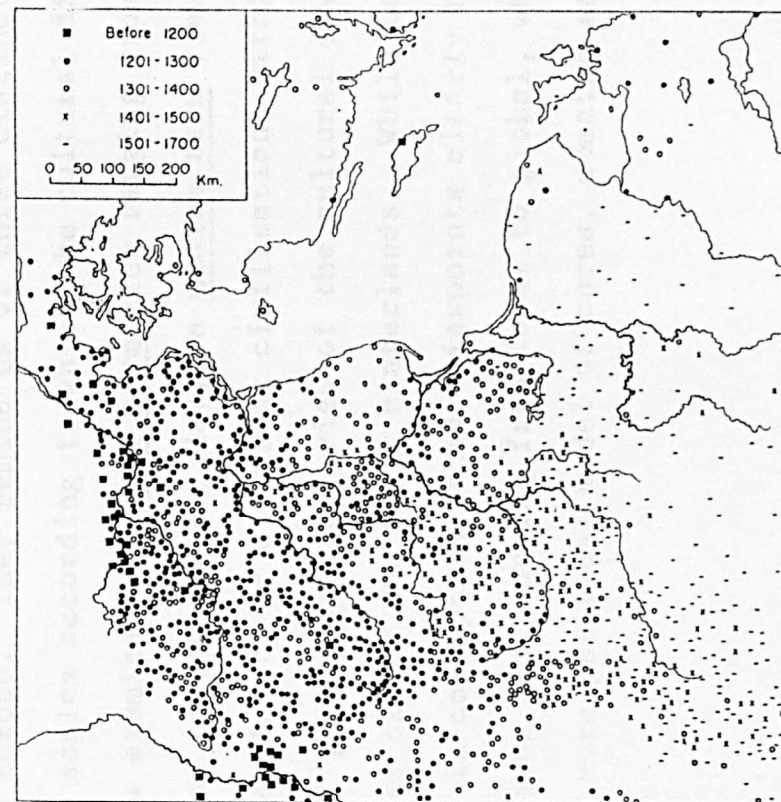
While it is clear that the spread of the western educational model eastwards through German colonisation (in that direction) had to do with the establishment of new towns and cities and their regulations, in particular the laws of Lubeck, Magdeburg, Nurnberg and Vienna, (39) according to Smith insufficient research has been undertaken on the "spacing of medieval urban centres" and the "hierarchy of non agricultural functions which they displayed." (40) It may be useful, therefore, to turn again to theories of cultural diffusion in relation

FIGURE 2.5 ASPECTS OF MEDIEVAL GERMAN URBANISATION AND COLONISATION

a) Towns and Routes in  
Germany before 1200



b) 500 Years of Urban Foundation  
in East Central Europe 1100 - 1700 AD



Source: C.T. Smith op. cit., pp. 324 - 325.

to urban colonisation derived from the American experience. In his 'structural theory' of imperialism, Galtung (41) postulates a dynamic of interaction between the major cities of the coloniser and 'beached' towns and cities established within the expanding periphery of influence or control. The idea of colonial cities being nodes within the periphery of an expanding network is also taken up by Earle, (42) while Meinig refers to such pioneer centres as "intense points of encounter" on the frontiers of acculturation.(43) It is not unreasonable, since such settlements normally generated educational institutions, to suggest that formal as well as informal education played an integral part in eastward cultural diffusion in Europe from the earlier medieval cities to the west.

A major contribution to the theory of cultural urbanism is that made by Redfield and Singer, (44) and is worthy of consideration in relation to the diffusion of western education within and without medieval Europe. They remind us of three distinct but overlapping temporal scales according to which the cultural dimension of cities should be examined: a long term view ranging from the first urban revolution to the present day; a medium term view ranging throughout the "life-history of different civilisations within which cities have developed"; a short-term view of the cultural development of particular cities and their hinterlands. While being essentially temporal in conception, these viewpoints clearly have spatial implications too, ranging from local to global, which parallel Meinig's more political model of cores, domains and spheres.

Redfield and Singer identify 'cultural functions' and 'cultural centres' in terms of religious, educational and artistic activities and suggest that in the earlier civilisations the 'political-religious' or political-intellectual functions were central to the operations of the city in relation to its region, or domain. They call this 'primary urbanisation', whereby the influx of rural folk and their culture provides a common heritage which is "transmuted by the literati of the cities into a cultural tradition." (45) This becomes a "great tradition" through the production of 'sacred books' or 'Classics' and "sanctified by a cult, expressed in monuments, sculptures, painting and architecture, served by the other arts and sciences." (46) New forms of reflective and systematic thought provide an originality to the culture but the values and traditions of the rural hinterland culture are not repudiated but rather reinterpreted and represented through technical systematization. They talk of the 'sacred centre' of these cities, which includes the cathedrals and their precincts in medieval Europe, and its symbolic meaning throughout the domain:

"At each of these levels - of household, village, and city - the 'sacred centre' provides the forum, the vehicle, and the content for the formation of distinct cultural identities - of families, village and city." (47)

The process of colonisation by urbanisation is predicated upon the existence of these 'primary' forms of urban culture, but has normally occurred within political-economic rationale for expansion where the link between town and country is more of a 'symbiotic relationship'.

Redfield and Singer call this secondary urbanisation whereby the rural environs serve as a "food basket". In intellectual terms there is a technical consensus developed, and the demystification of the great tradition enables radical notions and movements to operate, attracting such types as: "The reformer, agitator, nationalistic leader, missionary and imported schoolteacher." (48)

This profoundly anthropological interpretation of the cultural dynamic of cities and their role in the diffusion of traditions, ideas and skills recognises the spatial implications behind the notions of primary and secondary urbanisation as defined above. Clearly the latter is more susceptible of spatial analysis, dealing as it does with visible channels of transportation and communication and flows of people and goods. Further there is a more diverse form of cultural interaction through trading with, or subjection of, peoples with widely differing ethnic, linguistic and religious backgrounds.

In his interpretation of the work of Redfield and Singer, Bird (49) picks up on their view of the two major forms of cultural urbanisation in a more geographical way. Distinction is made between 'central place centres' and 'gateway cities': the former representing the consolidation of existing culture through the exercise of contemporary political power and administration and servicing their regions; the latter were engaged in the re-ordering of culture through economic innovation and development, and correspond to Galtung's 'beachheads'. The interplay between these types was, however, ever changing under the influence of economic and political forces. Gateway or pioneer

towns, through forest clearance and colonisation of their hinterlands became central places, and in new political circumstances, established central places became gateways. Different commodities and their flows provide very different spheres of influence. Education, broadly defined in commodity terms is particularly susceptible to technical change, and the aforementioned development of printing in fifteenth century German cities greatly redefined their horizons. The commercialisation of the art of printing and book production spread rapidly in mainland Europe, so that by the turn of the sixteenth century 266 towns and cities had presses, compared with only three in England - London, Oxford and St. Albans. (50)

As the interplay between the increasing number of towns and cities in Europe continued to evolve, so different scales of regional complex developed. In the early stages of colonisation each town depended on its immediate environs, but as wider networks of trade and communication emerged, hinterlands extended and overlapped and interlocking sets of hierarchies of urban settlements became evident. Some medieval cities became regional centres and according to Russell, (51) some such 'city regions' were very extensive indeed. He identifies selected regions with reference to their primate city, (52) but in most there would be several significant centres "arranged in a definite order of size within the region", that is to say, a 'rank-size series'. Such zones would certainly be recognised by Dickinson (53) as 'city regions' and by Haggett (54) as 'regional complexes'. Although the educational functions of urban centres within these regions were evident, and most of the primate cities at least had

emergent universities, the forces behind regional evolution and operation were largely economic. Nonetheless, the associated ecclesiastical and cultural dimensions helped to create in Dickinson's terms, "an entity of human space relationships" within which "are effected the transfer of goods and the distribution of services, news and ideas, the very bases of society." (55)

Educational hierarchies, networks and nodes contributed to these regional complexes, so that although only the major centres would normally have universities or seminaries, smaller towns would likely have a 'grammar school' and primary schools:

" ... We must not overlook education which is obtained neither from universities nor colleges, but which nonetheless contributes greatly to the reputation of certain towns." (56)

Some small towns and cites were dominated by a major school, such as Winchester, while in other centres a local hierarchy, or complex of institutions developed, making it a node within the world of educational development itself, such as Halle. The status of medieval towns has been indicated inter alia by the presence or absence of key educational phenomena by some geographers. For example in his survey of urban development in sixteenth and seventeenth century Wales, Carter includes the existence of a grammar school as one of four criteria selected to exhibit significant status as a central place of that period and location:



"It would seem that the founding of a Grammar School during this period can be accepted as an index of the importance of a town in the general life of the area it served. It is therefore worthy of inclusion in the grading scheme, although the corollary should not be assumed, that is, absence of a Grammar School is not necessarily a mark of low status." (57)

Carter's caution is a reminder that educational investment is normally consequent upon other factors, especially political and economic.

This does not affect the significance of the educational hierarchy in itself, but is merely an example of the fundamental relationship

between urbanisation and education 'writ small'. Slater, (58)

however, reinforces the notion of a grammar school being a significant urban indicator when he claims that such foundations were nearly always part of a planned medieval town.

Further consideration will be given below to the development of educational networks in both urban and rural locations, but it is necessary to return now to macro considerations of the evolution of parameters within which the diffusion of the western educational model proceeded.

The coalescence of the various functions of urban centres that gave reality to regional identities enabled a wider political dimension to develop. Medieval city regions, whether homogeneous or polycentric represent a transitional phase in the evolution of the political

geography of Europe between vast imperial tracts such as those of Rome and Carolingia and the emergence of proto-nation states. As Russell puts it:

"Whatever the historical and 'national' forces there were to unite these areas into workable political entities, the demographic and economic forces of the regions were considerable hurdles, too great for the period AD 1000 - 1348 to bring about permanently." (59)

By 1350, a number of powerful royal houses had gained substantial territories which cut across the major city regions. Whereas the major urban centres operated as city states, where artificial political units were created, a tension inevitably developed between city and state. Nonetheless, Pounds and Ball (60) recognise core areas from which the major European nation-states with their education systems subsequently developed. They identify the qualities of internal viability, defensive capability and a capacity to generate surplus income as being common to the core areas they perceive as being what Febvre describes as 'germinal': "There is no durable political formation in whose origin we cannot discover a combination of forces..." (61) In respect of the states that have emerged and endured, he describes them as being "true political, intellectual and moral consolidations of power." (62) This implies an educational element in the formative period, a growth from the inside towards the long term control of territory and frontiers. For those states contrived within 'arbitrary', as opposed to 'organic', frontiers, an educational dimension of the state 'system' that: "profoundly influenced the emergence of national feeling within the political

boundaries already drawn" (63) would seem to have been operative. Figure 2.6 illustrates some of the core areas recognised by Pounds and Ball.

Long before the effective consolidation of the European nation states had been achieved, the diffusion of the western educational model had extended to the New World, and the process of pioneer colonial settlement, with its educational components began to operate again. The Spanish colonisation was strongly 'urban led' and university foundations were among the early initiatives in the major centres. The following description of the scale and style of Hispanic colonial towns in highland Ecuador is reminiscent of Redfield and Singers' 'sacred centres' and clearly recognises the significance of the educational dimension. With respect to the symbiotic religious and administrative function of such towns, Bromley writes:

"This function, however, held far greater significance than is suggested by the occupational data. It enhanced the physical appearance and the settlement by the presence of imposing buildings, gave employment to the population as servants and craftsmen and provided special facilities, particularly education, which increased the residential desirability of the town". (64)

Perception of other places derived from learning processes had a significant part to play in the motivation to expand community horizons and influences. Travellers tales, myths and legends had abounded throughout the millennia and constituted an informal geography of education in the networks of their passage over time and

is sinuous and slightly flattened at the ends, which also

space, but the invention of printing in the fifteenth century revolutionised access to both factual and speculative writings on 'foreign lands'. With reference to English colonialism, Parker's substantial study is based on the contention that:

"The origins and growth of English interest in those parts of the world that would one day make up the British Empire can be followed in the books that came from English presses between 1481 and 1620." (65)

Parker's thesis is that the variables combining in the 'colonial adventure', such as the excitement of maritime exploration, political ambition, economic pressure, material greed and Christian zeal needed the stimulus of a degree of knowledge to carry the exercise through. He reminds us that accounts of the great voyages and travels of earlier explorers from other countries were being published in Germany before Caxton set up the first press in England. Until restrictions were enacted in the 1520s, continental booksellers flooded Britain with all kinds of publications, but thereafter local control not only regulated the information flow but also enabled the further development of the English language, including an enhanced political status. This movement assisted the development of intellectual routes beyond the ecclesiastical bounds that had previously contained intelligent enquiry, and while religious and commercial motivations remained to the fore in the seeking and securing of colonial territories, a wider scientific curiosity was served. Beginning with the publication by Wankyn de Worde in 1495 of the geographical tome of Bartholamaeous (66) a massive genre of descriptive accounts of 'the known world' was set in train from English presses, which also played

their part in the enhancement and popularising of techniques of navigation and cartography.

In these ways the emergence of a popular geography and its role in further cultural diffusion influenced the developing patterns of the geography of education. It is not possible here to follow the educational dimensions of colonialism in all continental directions, so examples are selected mainly from the New World. The choice is dictated in part by the fact that of the small explicit literature of the geography of education (67) the item dealing with the earliest chronological interest in the set examines the emergence of education in colonial Massachusetts. (68) In his article McPartland looks in turn at the origin, support and control of education in that colony in comparison with the position obtaining in England at the time. He explains significant departures from, the then, metropolitan pattern through the themes of distance and movement, migration, diffusion and core-periphery forces - all of course spatial concepts. He also introduces the behavioural dimension in respect of the reaction of settlers and pioneer communities in their perception of the American wilderness. He concludes:

"Thus in these three significant areas: in the origin, support and government of the educational institutions the application of a geographic perspective allows one to highlight the importance of a number of spatial and ecological factors in explaining departures from the Old World practice of education. The widespread zeal for education in the USA, the strong community support for schools, the democratisation of school control allied to the decentralisation of educational administration are all

features whose origins emerged during the colonial period of the country's history. They reflect not so much the working out of established educational principles but the constraints of distance, the difficulty in accumulating surplus wealth; the evolution of new settlement patterns consequent upon the internal movement of people and perhaps overriding all, the colonists' perception of, and response to, the environment which confronted them." (69)

The final point in this quotation is reminiscent of the view expressed by Powell that the 'image' held by people of their surroundings and the development of strategy to cope with it is a "subjectively based process of environmental appraisal." (70) In other words this is a learning process, an educational experience through which cultural landscapes evolve. According to Norton, also with respect to North America, there are at least two implications of such a learning process.

"First there is a stimulus-response, with the response being premeditated. A clear instance of the application of such logic is environmentalism where tradition, culture and the free will of humans is ignored. Second, there is stimulus-meditated response where the stimulus is perceived and considered before a response is made. The appropriate learning process for landscape development is the second version." (71)

The approaches of both McPartland and Norton seem to downgrade the political factor, which while perhaps appropriate to the settings with which they are concerned, makes their arguments less applicable to situations where European colonisation and pioneer settlement was

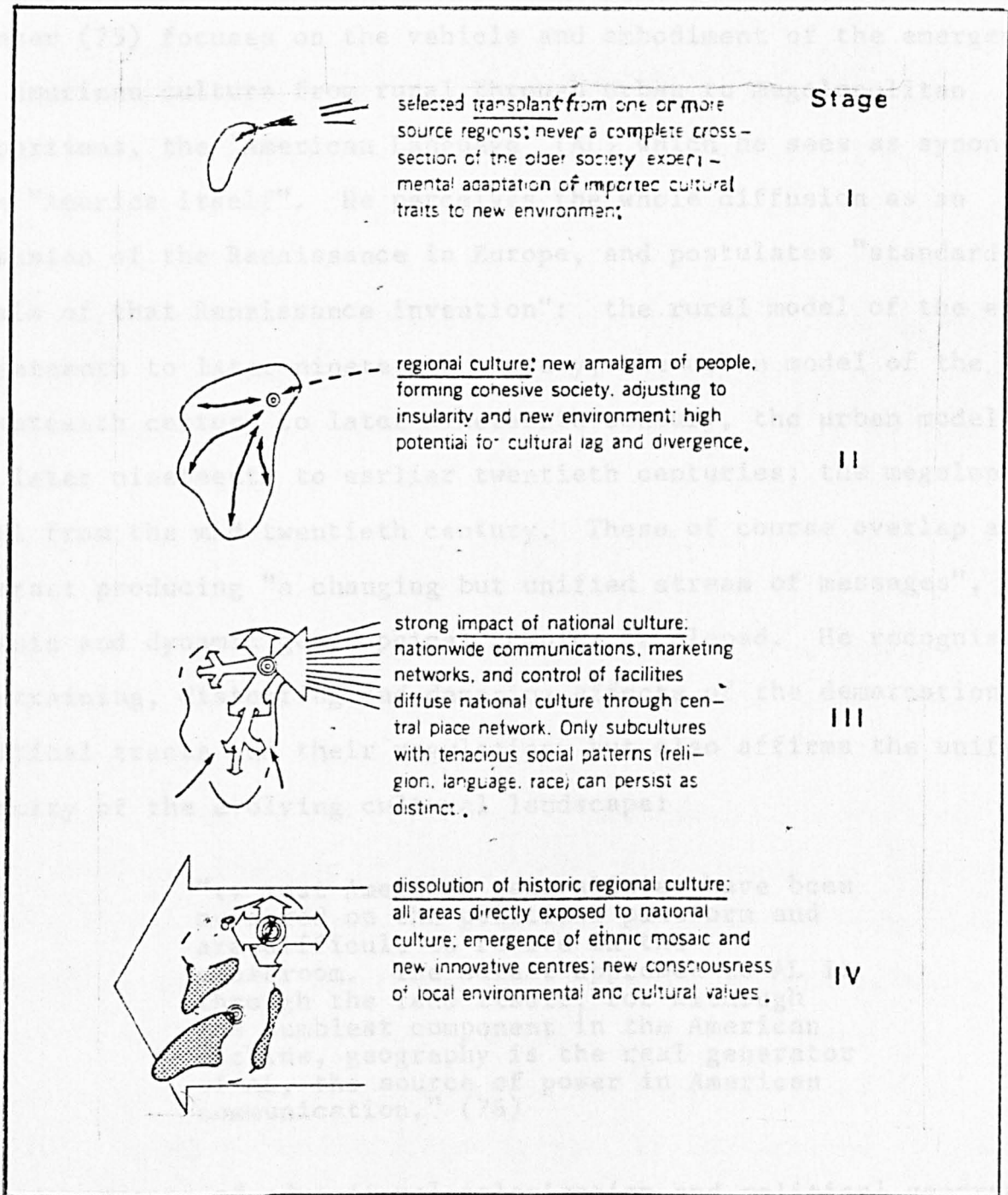
strongly influenced by or even controlled by the metropole. However, their main point that environmental perceptions and geographical exigencies in the formative period of colonisation engendered a generic style for the evolution of the cultural landscape in which the educational dimension, formal or informal played a significant part, is clear. With respect to the emergence of the colonial education system in Massachusetts, McPartland infers that:

" ... since the system forged within this state during the colonial period was the one whose broad delineations established the pattern not only for the remaining New England States, but also for the rest of the country." (72)

this colony was in effect the 'core area' of the USA. In the terms of Redfield and Singer, Boston was a 'gateway city' first, and the unparalleled position of Boston as a complex of higher education institutions today reflects the co-existence of continuity and change.

However, the wider diffusion of the 'Massachusetts model' implied by McPartland would have been only partially effected as the frontier moved west and south-west. New England was not the only colonial core and conditions encountered as between pioneer communities differed significantly. Within a broad democratic ambiance the pattern was further fragmented as earlier colonies became States and the expansion of new cores in the mid-west to control the 'domains' and 'spheres' of Meinig (73) became legally delimited. Elsewhere, and on a broader scale, Meinig puts forward a four stage model of the evolution of cultural regions, which is illustrated in Figure 2.7, and within



FIGURE 2.7 MEINIG'S STAGES OF CULTURAL REGIONAL EVOLUTION

Source: D.W. Meinig, 'American Wests: Preface to a Geographical Introduction', Annals of the Association of American Geographers, 62 (1972), p. 163.

which his earlier model could operate locally at any stage, but comes into its own in the final phase.(74)

Muinzer (75) focuses on the vehicle and embodiment of the emergence of the American culture from rural through urban to megalopolitan proportions, the 'American Language' (AL) which he sees as synonymous with "America itself". He perceives the whole diffusion as an extension of the Renaissance in Europe, and postulates "standard models of that Renaissance invention": the rural model of the early seventeenth to later nineteenth century, the urban model of the early seventeenth century to later nineteenth century, the urban model of the later nineteenth to earlier twentieth centuries; the megalopolitan model from the mid-twentieth century. These of course overlap and interact producing "a changing but unified stream of messages", as the organic and dynamic geographical complex developed. He recognises the constraining, distorting and damaging effects of the demarcation of political tracts and their regulation, but also affirms the unifying capacity of the evolving cultural landscape:

".. most American generalities have been murdered on the political platform and are difficult to revive in the classroom. The surest approach to AL is through the land itself, for although the humblest component in the American machine, geography is the real generator of AL, the source of power in American communication." (76)

The convergence of educational colonisation and political geography is best illustrated by focusing on the 'regional' and local scales, as is meticulously carried out by Knight in his study of the operation and

manipulation of federal land grants in the then 'Northwest Territory' of the USA, that is to say: Illinois, Indiana, Michigan, Ohio and Wisconsin.(77) Following the adoption of the Constitution of the USA, a federal ordinance of 1785 decreed that 'section sixteen' of each township established in the Northwest Territory be earmarked for the use of schools, and that one town in each land district be reserved for the use of a 'seminary of learning'. In the event, Indiana, Illinois and Michigan each subsequently received one of these seminary townships. Three interrelated problems arose from this approach: political, locational and economic, and the emergence of Michigan with the best deal of the five States in the region, had to do with politics and economics in particular, with the enhancement of educational prospects manifest in the locational outcome.

Unlike the other four emergent States in the region, Michigan secured the agreement of the Congress of the USA that the school lands constituting section sixteen of all townships be granted directly to the State and not to the individual local community townships. This meant that the proceeds of these school lands would be consolidated into a central State school fund which could then be distributed pro rata to all parts of the state "thus ensuring uniformity and equality in school facilities."(78) There was a problem, however, in how best to capitalise on the land granted in the interest of all generations seeking schooling, including the first. If the land were to be sold early so as to provide funds for the education of the first generation and every subsequent generation, then diminishing returns would set in. But if the land were to be retained for several decades at least

to capitalise on its increasing value, then earlier generations would receive no education, there being no ready funds. The ideal situation was for the 'sections sixteen' to:

"ultimately yield the greatest amount of revenue for the support of schools, and at the same time provide as soon as possible for the education of those of school age" (79)

In Michigan this was achieved by leasing land in a regulated way so that outlying tracts generate income but did not become available for sale until their value had risen to a profitable level. This was also in keeping with Knight's view that:

"The fact that the first school reservations were made as an inducement to purchasers would seem to indicate that Congress designed the grants to be used by those who were brave enough to venture into the territory when it was a wilderness".(80)

In any case this method of generating sufficient income as the system expanded physically and demographically, accorded with the spatial tendencies of each developing township and engendered a habit of responsible local taxation to augment the pool of funding for local schools.

The Michigan approach, in a minority of one among the North west group in the early nineteenth century, became the 'model' for subsequent States of the Union, which would seem to deny McPartland's claim that Massachussetts provided the mould. But despite the view

expressed by Kaestle and Vinovskis in their study of educational development in nineteenth century Massachusetts that: "The resulting evidence does not support a picture of an evolving benevolent democratic school system" (81), they do recognise the formative cultural influence of a broad universal support for schooling manifest in high and rising enrolments before the promulgation of a Federal Consortium and the greater significance of centralising influences at local and state levels.

The creation and expansion of the United States of America and the 'firming up' of its internal political geography as well as its federal security, is just one example of the emergence of the nation-state from the age of enlightenment. With this movement came the consolidation, if not the generation of the idea of national regulation of educational provision and the establishment of state education systems.

As Green puts it:

"... the national education system thus represented a watershed in the development of learning. It signalled not only the advent of mass education and the spread of popular literacy, but also the origins of 'state schooling' - the system which has come to predominate in the educational development of all modern societies in the twentieth century"(82)

In consequence political geography becomes an increasingly significant

spatial paradigm in respect of the control of diffusion of knowledge, and the national parameter begins to come into its own.

## 2.3 NATIONALISM, COLONIALISM AND THE EMERGENCE OF STATE SYSTEMS

### 2.3.1 Introduction: Some Theoretical Considerations

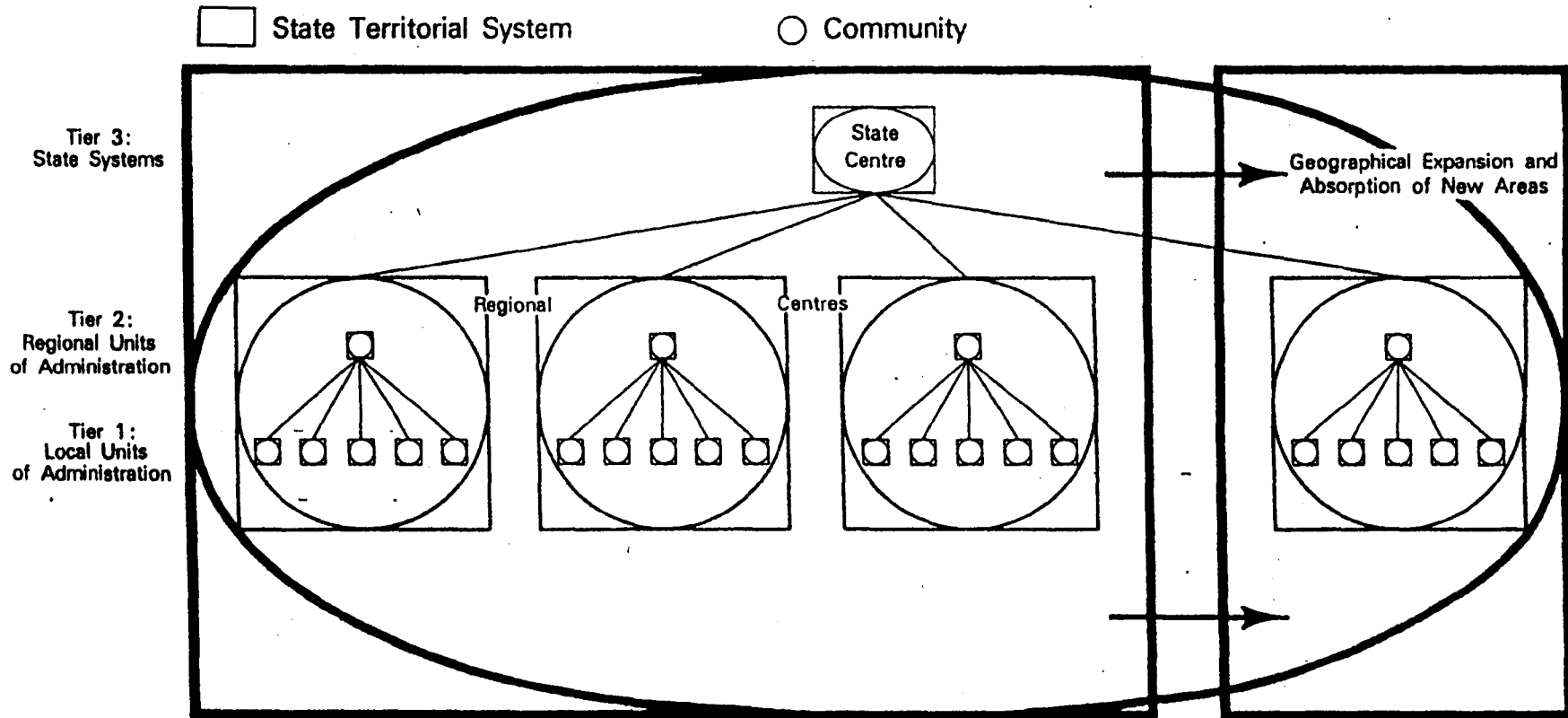
As has been illustrated above with respect to the Mediterranean interests of Classical Greece and early Islam, the eastern expansion of medieval German urbanisation and the westward movement of English settlers in the New World, there is an educational dimension to colonialism. Indeed it may be said to be an essential ingredient of the dynamic of that process, both in acculturation and the evolution of a cultural landscape, and in the creation of facts and myths promoting interests in further territorial acquisition. One of the manifestations of the aforementioned convergence of educational colonisation and political geography, according to Capel, was that the study of colonies became "an indispensable and fairly extensive part of the courses dedicated to 'universal descriptive geography.'" (83) Such convergence was achieved in the form of state education systems purveying formal curricula within various scales of regulated territory. Variations in the degree of centralisation of both curricular and administrative operations do not alter the fundamental relationship between emerging political geographies and emerging state systems.

At this point it is appropriate to refer to the important work of Dodgshon (84) on the social and spatial evolution of the 'European Culture Area' and in particular, the stage in that evolution when regulated space, that is to say national territory, becomes significant. Prior to the emergence of state systems of political order the framework of social organisation was that of vertically oriented kinship systems. This had to give way to horizontally oriented functional administrations in order to cope with the scale of the areas involved and the increasingly multiethnic character of populations enlarged by conquests:

"Any claim to politics having a unity of kinship, whether real or fictitious, whole or partial, faded. Instead we are faced with greatly enlarged politics that defined themselves, first and foremost, in purely spatial terms, or rather as the area ruled over by a particular dynasty. The question of what the state comprised in social terms was reduced to a secondary consideration, a matter of whoever lived within the territorial bounds of the state. In this simple but profound change, we are confronted with one of the decisive revolutions in human spatial order, yet one sorely neglected by geographers". (85)

The role of the nationwide 'state' system of education became clear in this situation; one of a mechanism of social control, sometimes with Church and State in harness, sometimes not. In one way or another the state gained control over education both formal and otherwise and proceeded to operate hierarchial systems such as are illustrated in Figure 2.8. This process of 'internal colonialism' was extended to take in the territory of others as the diagram shows, and these

FIGURE 2.8 DODGSHON'S MODEL OF EARLY STATES AND THE POLITICAL INTEGRATION OF SPACE



Source: Robert A. Dodgshon, The European Past: Social Evolution and Spatial Order, Macmillan (1987), p. 136.



colonies were tied to the metropole in part by the acquisition of a derived system of education which, through the medium of the European language in question, effected an enduring cultural colonialism.

This is not a thesis within the field of comparative education, and mention has already been made of the naive attempt of Fletcher (86) to effect a correlation between this field and the geography of education. Nonetheless, the literature of comparative education, broadly defined, is one of the main repositories of both descriptive and analytical material on the development and operation of systems of education within national and colonial paradigms. Indeed one of the leading developers of comparative education as a discipline, George Bereday, recognised the significance of its geographical dimension in his attempt to identify a suitable home in the community of disciplines, claiming that the strongest affinity of this field: "is to political science, or perhaps to geography." (87) Then he brings them together:

"In comparative education, the proper subject of study is schools, however broadly defined. Other fields and other institutions are best studied on their own account, and come within the purview of comparative education only insofar as they are relevant to education and schools. In short, comparative education is a political geography of schools" (88)

Some other writers, notably Carnoy, (89) see the development of public educational provision under the auspices of a nation-state as a form of cultural imperialism. This would apply not only to the application

of metropolitan models and structures to what Altbach and Kelly term 'internal colonialism' (90) but also to a wider interpretation of that category to include the development and operation of a national system of school provision for the mass of the population, whereby:

"Schooling as social control and economic allocation is synonymous with colonialism".(91) The predominance of the political factor in such an integration is also clear in the typologies put forward by Hopper (92) and Curle (93) for the classification of state education systems.

The interpretation of state education as 'internal colonialism' may well be valid in cases where identifiable components of a federal polity are required to follow centralised educational regulations, as in post revolution Mexico or Russia/USSR. It may also be applied to a unitary state where the central authority takes it upon itself to regulate, control, appropriate, or even abolish, the existing institutions and systems of providers such as churches, towns, cities, charitable organisations and commercial agencies each of which exhibited its own spatial pattern or 'geography of education'. At best the rise of the nation state necessitated an accommodation between educator and politician, for as Reisner put it:

"The educator who would wisely plan the activities and the management of schools, must pay attention to the major conditions of life outside the schools, and must be able to evaluate educational procedure in terms of far reaching and broadly inclusive social purpose. No less must the statesman who would build a just, efficient, prosperous and patriotic nation, enlist the schools in his efforts and utilize them to effect this aim."(94)

Circumstances where a monolithic, unitary system could be implemented virtually overnight were extremely rare, as the period during which state systems were developing was one of considerable geographical, as well as other, forms of change, including modifications to territorial integrity, frontiers and boundaries. Nonetheless this phase took further the process whereby "communities of kin were replaced by communities of space", (95) the domain of authorities becoming even more physically constituted with populations being regulated by control over territory, rather than territorial delimitations arising from the human ecology of the society. Effecting this regulation involved a growing differentiation of control or managerial functions; one strand of this diversified pattern of centralising agencies being the development of a state education system. (96)

In practice the shift from a disparate multiple pattern of provision to an integrated or unitary system involved a complex transition, for which Müller has presented an analysis and a model based on the case of Germany, and Prussia in particular. (97) Figure 2.9 illustrates the three phases of Müller's model.

### 2.3.2 The Case of Prussia

In his analysis Müller distinguishes between 'sets' and 'systems' of educational provision, and his model is concerned with the translation of the former into the latter. By taking the 'rounded' date of 1800

FIGURE 2.9 - MÜLLER' MODEL OF THE SYSTEMATIZATION OF EDUCATION  
PROVISION WITHIN A NATION STATE AS APPLIED TO PRUSSIA

Phase	Description	Dates for 'Germany'
1. System Emergence	"... as yet unrelated developments in initially autonomous areas (individual school types, for example) that anticipate the later system".	1800 - 1880
2. Constitution of the System	"... the integral organisation of all parts of the system, their functional articulation and classification".	1880 - 1900
3. System Complementation	"... the rounding out of the constituted system through modification of existing forms, through integration of areas not yet codifiable at the time of the system's constitution, or through the establishment of new institutions in pursuit of objectives unforeseen at the time of the system's constitution".	1900 -

CB

Source: based on textual information in: Detlef K. Müller, 'The Process of Systematization: the case of German Secondary Education', in: Detlef K. Müller, Fritz Ringer and Brian Simon (Eds) The Rise of the Modern Educational System: Structural Change and Social Reproduction, 1870 - 1920, Cambridge University Press (1987), pp. 15 - 52.

as his starting point in this process as far as Prussia is concerned, he is presumably thinking of the defeat at the hands of Napoleon at Jena in 1806, the Treaty of Tilsit that followed in 1907 and the "Addresses to the German Nation" of Fichte in 1807-8 all of which had profound effects on the consciousness of the German peoples of the day. During the eighteenth century, there had of course been the establishment in Prussia of some of the earliest 'national' regulations in the period of the emergence of the European nation-states. For example: there was the enactment of compulsory village school attendance in 1716; the general regulation of village schools in 1763; the takeover of schools by the State from the Church in 1787; and the codification of state control over education in 1794.(98). Much of this had to do with attempting to raise the educational level of the rural population, for in Prussia, as elsewhere in Europe, as discussed above, the towns had not only generated their own mini systems but also acted as foci for the colonisation of new territory in cultural as well as economic terms. But in the towns were several sets of providers of schools and each urban centre constituted a different amalgam of educational components that severally, though not systematically, formed the collective 'set' of that place. There was also the presence of the international Jesuit network juxtaposed with strong and localised Protestant churches, and an inevitable tension arising from that.

From 1807 the colonising relationship between national political aspirations and the spread of schools was accelerated, as inter alia the towns became shackled with the debt arising from the defeat at the

hands of France, and Müller's first phase gets under way. In 1807 a Prussian Bureau of Education was established and in 1810 the Abitur was standardised. The latter was a particularly significant event for creating, in geographical terminology, a new 'educational surface', for German public administration selected on a meritocratic basis:

"a broad spectrum of Gymnasien, distributed over the entire country and of equivalent standing regardless of region, awarded the Abitur and thus the right to attend the universities, which again were widely distributed, and which differed in the quality of individual faculties and in the social origins of students, but not in the standing of their examinations and degrees".(99)

The relatively large and well distributed university sector already existing throughout 'Germany' by this time, itself owed much to the pre- Napoleonic multiplicity of states each with its own focus of urban wealth and particular politics. The fruits, particularly of the sixteenth century expansion of the university, had flowered and were blooming in the eighteenth. (100)

In Prussia, the widespread distribution of Gymnasien had arisen, at least in part, in response to the decentralised system of public administration as well as by individual policies of Protestant pastors, particular professional and commercial town profiles and the integration of additional provinces with differing social and cultural traditions, so the standardisation of the Abitur acted as one of Spencer Thomas' space adjusting mechanisms, (101) and was soon joined by others such as the equalising of qualifying standards for secondary school teachers and the establishment of local school authorities in

the rural districts, both in 1812. Between 1817 and 1825 further control of 'educational territory' was created in the formation of ten provinces, each of which was further subdivided as illustrated in Figure 2.10. This type of arrangement is, of course, commonplace in the late twentieth century, but the Prussian case is one of the earliest modern examples.

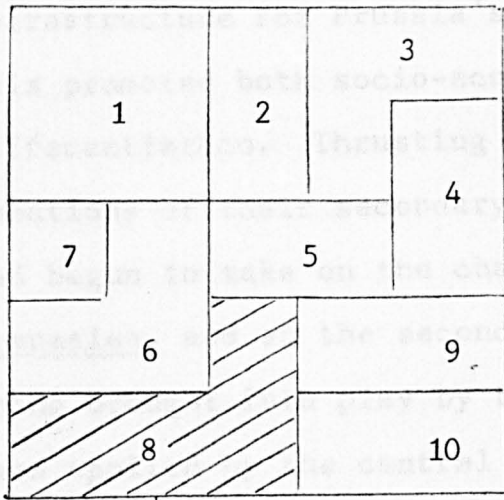
In Dodgshon's terms, and in respect of education (one of its managerial functions), the Prussian State had to establish a "network of authority" linking core and periphery, and:

"The common solution was to territorialise the system, conferring a similar slice of responsibilities on each segment. In other words whilst we can talk about control functions being differentiated, and whilst this emphasised the distinction between core and periphery, the different spheres of control that emerged tended to organise space on the principle of segmentation rather than of differentiation." (102)

Decentralisation does not necessarily mean the devolution of power in respect of educational provision, and the Prussian State of the nineteenth century generally used the network to reaffirm the social class hierarchy through the restrictive management of upward social mobility via the avenue of education and qualifications, while at the same time exhorting the "development of a desired culture among an entire people." (103)

After the Franco-Prussian war and the resulting extension of territory to the west both the wealth of the towns and the power of the Prussian

FIGURE 2.10 PRUSSIAN EDUCATIONAL TERRITORIES CREATED 1817-25:  
UNITS OF SPATIAL ADMINISTRATION AND EDUCATIONAL FUNCTIONS



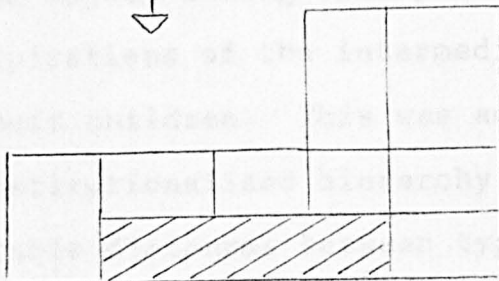
### Provinces

Provincial Board of Education

Secondary Schools

Primary Teacher Training

Examinations

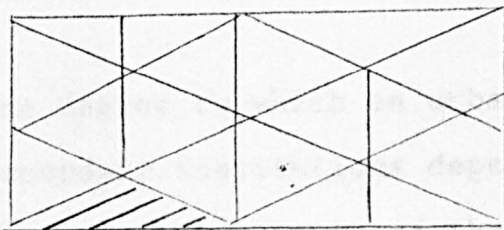


### Counties

Direction of Primary

Education

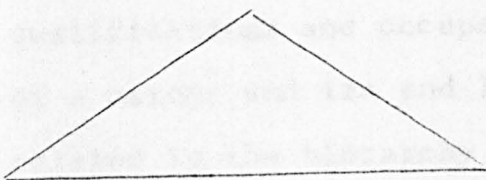
Office of Interior Department



### Circles

Primary School Inspector

(usually clergy)



### Communes

School District - must have at  
least one primary school by law.



State over the whole German nation increased. Imperial bank, railway and postal/telephonic networks were instituted providing an essential infrastructure for Prussia's comparatively late industrialisation. This promoted both socio-economic opportunity and also sharper social differentiation. Thrusting urban communities sought to diversify the functions of their secondary schools. Already the urban Realschulen had begun to take on the character and curricular level of the Gymnasien, and so the second phase of Muller's model can be seen as being brought into play by the curricular regulations of 1892 which were applied by the central State to all Prussian secondary schools. The object during this phase was to curb the rise in expectations and aspirations of the intermediate and lower middle classes on behalf of their children. This was achieved by establishing an institutionalised hierarchy of secondary schools "characterised by stable distances between types", as a result of which "children of academically educated parents came to predominate more and more in the Gymnasien ..." (104)

The degree to which an urban community could accommodate the range of secondary institutions depended very much on town size and function because the majority of the smaller urban centres were under pressure to provide only one secondary school, which of necessity could not be a Gymnasium. A considerable tension had already been built up within the system due to the strictly regulated correlation of educational qualifications and occupational rank, whereby both the beginning level of a career and its end limits were firmly fixed. When this is related to the hierarchy of settlements according to number and type

of secondary school, the significance of the geographical dimension is clear. In fact, according to Muller, in 1880 only 12 Prussian towns were able to offer all three main secondary school types simultaneously, (105) and the subsequent regulations of 1882 and 1892 further entrenched the disparities in educational opportunity according to the location of domicile of the growing numbers of aspirant secondary students.

Consequently phase 3, the complementation of the system, still firmly within the State regulations, is characterised by the quantitative rise of Realschulen and their enrolments, and the innovation of the Oberrealschulen, while the Gymnasien and Realgymnasien remained relatively static in numbers at this time. Thus the secondary enrolment needs of the expanding industrial towns and conurbations were accommodated, while the elites and their professional aspirations through access to Gymnasien were safeguarded. Because the Gymnasien were so widely located and State, rather than locally, controlled, the massive shifts of population in the first third of the twentieth century left many of them in a position of no longer being able to fulfil their statutory curricular obligations. This, together with the advent of the radical National Socialist Party, with its peculiar brand of anti-intellectualism and different notions of an elite, resulted in the abolition of about 60 per cent of Gymnasien and a residual increase in their locational concentration.

In the case of Prussia/Germany, the interplay between the politics and the geography of education is clear. Muller has put forward a model

of political progression that is based on this case and which, when analysed from a geographical standpoint, reveals certain spatial patterns and relationships as described above. Prussia/Germany is distinctive within the emerging fashion of European Nation States in that its mass educational foundations were laid earlier than most, and the period of system emergence paralleled that of the convergence of a considerable number of previously independent states into a unified nation. Furthermore the colonial role of Prussia in this process and its influence on education elsewhere in Germany through the central administration, as for example in the regulations of 1882 and 1892, makes for further distinction as compared with other European nation states. Nonetheless, it should be instructive to consider the geopolitics of system emergence, constitution and complementation in comparable states of the day, France and Britain. After all despite internal differences of detail, the twin forces of nationalism and colonialism were widely operative at that time, and had much to do with the socio-economic diversification associated with industrialisation, and the rise of the bourgeoisie in particular.

"It is evident .... that to a great extent nationalism also coincides above all after 1848, with the interests of the growing European bourgeoisie, at a time when national markets were united and the bourgeoisie began dismantling the structures of the old regime and of rationalization and homogenization of their respective territories and influence".(106)

### 2.3.3 The Case of France

At the time of the post-revolutionary Constitution of 1791, France was administratively divided into diminishing spatial and political domains very much along the lines of the Prussian case illustrated in Figure 2.10. Following abortive attempts in that year, and the two following, to enact educational legislation, in 1795 an Act was passed to relate the provision of primary schooling to Cantons and secondary (central) schools to Départments in terms of responsibility for the creation of a network of mass education. This democratically motivated plan was opposed by the bourgeoisie and the Church, leading to considerable disparity in its implementation on the ground. As First Consul, Napoleon Bonaparte, who clearly understood the significance of control of secondary education as a key to central state control, (107) and "was scarcely interested in the diminution of inequality to be brought about by the education of the masses", (108) set about creating and implementing a different framework of regulation. This was focused on the lycee network begun in 1802, and the Imperial University founded in 1806, which proceeded to educate "the precocious bureaucracy of the administrative apparatus". (109) In spatial terms this meant the clustering of significant educational opportunity in the chef lieu of each département, that is to say lycées and écoles normales, thus creating sufficient social and geographical space between the mass of the population and avenues for upward mobility. Furthermore, the administrative networks for primary and secondary education were dislocated, leaving the former in the hands of the communes, in effect becoming again "parochial institutions"

often under the auspices of the Christian Brothers. (110) As the 'emergence phase' progressed the number of communes without primary schools declined, but in absolute number of institutions the rate of increase was slow, and even by 1848 "in 30 départements, half the boys of school age did not go to school". (111) Needless to say, the pattern of elementary educational opportunity for girls was even more disparate.

The 'constitution phase' of the French system could be viewed as commencing with the reform of 1854 which, inter alia, reduced the number of academies to 16 by aggregating départments and thereby tightening the spatial net by reinforcing the main nodes; once more 'the core at the expense of the periphery'. Defeat at the hands of Prussia further concentrated the national mind, and the Ferry reforms introduced a more expansive period of educational policy. In turn in the early 1880s fees were abolished in State schools and attendance made compulsory from 7 through 13. At the same time religion was banned in public education. Through the Organic Primary School Law of 1886, and the further law of 1887 requiring all communes with populations of more than 500 to provide a separate primary school for girls, the mesh of the elementary network was reduced to a scale of 2 kilometres maximum from home to school, so that by the turn of the century:

".... the entire system was bound together in a graduated hierarchy of powers and controls which enforced upon all grades of education a uniform purpose of exercise, and uniform privileges and safeguards". (112)

For the expansionist policy of Ferry had little to do with individual emancipation through education, and much more to do with securing a republican social order against the designs of the Catholic Church. (113) Curricular reform and the role of teachers had their part to play in this process, and these aspects were related in the earlier innovation of the écoles primaires supérieures, an intermediate sector designed to cope with the aspirations of an emergent lower middle class. This also had spatial implications in that a prevocational step could be taken towards a technical or professional career without leaving home, even in the rural areas. This section became "the main recruiting ground for primary school teachers" who, especially after the curriculum reform of 1887 went forth from the écoles normales to even the remotest communities to ensure that the "rudiments of education were to be given not to ensure greater equality but to acquaint future citizens with their duties". (114) They became known as 'secular missionaries' and played a vital role in the colonisation of the culture of the French peasantry and proletariat as these masses acquired a certain literacy. This, in geographical terms, 'educational surface' remained in essence an intellectual lowland with little or no access to the foothills of the collèges or the peaks of the lycées which remained secure from infiltration as a result of their discrete geopolitical network.

Whereas in Muller's model, the Prussian/German national system entered its 'complementation' phase by the end of the nineteenth century, that of France would not have achieved that level of democratic maturity

until the rationalising reforms of 1959. But it is only fair to remember that such moves had been attempted in the mid 1930s, by which time the systematic achievements of German educational evolution had suffered an aberration at the hands of the National Socialist Party, one outcome of which was to severely dislocate the political geography by expansion, within which 'national' provision would have to operate. However, in both these cases the early establishment of a national system, whatever the particular political motives behind it, led to an educational colonisation of both territory and population that exhibited a spatial logic. Although, as with England, both Prussia and France experienced the economic and social effects of industrialisation throughout the period of national systematization of education, the internal political geographies of their developing systems - while based on aspects of spatial and social diversification - attempted from an early stage to impose a grand design based on a vision of the role of education in nation building.

#### 2.3.4 The Cases of England and Wales

In the case of England the reverse is true and this is in no small part due to the earlier experience of industrialisation and its concomitant socio-economic diversification, though it also has to do with the 'traditional' educational role of an established Church and the related lack of interest of the secular authorities in the harnessing of schooling for the purpose of nationalism, including the central control of curriculum. Nonetheless, as we have seen in both Germany and France in the nineteenth century, the issue of socio-

economic status, and therefore of human geography on the particular forms of territorial control of education was crucial; and so it was in England. The modern state has to do with the geography of regulated space, and, as Dodgshon puts it, is distinguished from the more 'primitive' or 'organic' form of political unit in that the authority rules over people through its rule over territory, not over territory through its rule over people.(115) In so far as the emerging education systems of states contributed to that regulation, the internal political geographies are of interest as we have seen in respect of France and Prussia. But whereas they could be deemed to have central, if not centralised regulations for the provision of forms of primary and secondary schooling from 1802 and 1794 respectively, the equivalent for England did not occur until 1902. Consequently, for that country, we need to shift the focus from the overtly and territorially political to the covert and organically political.

One should, perhaps, begin with the geopolitical context of England, particularly in respect of the British Isles, but also beyond. While metropolitan France at the time of the post-revolutionary political reorganisation was already a unitary state, and Prussia was the prime mover in a process of German unification, the political relationship between England and other national units within the British Isles was already more or less determined. Only the Irish dimension was to change significantly during the emergence and development of national systems of education, and that not until 1922. Broad relationships between England and Wales had been established in 1536, leaving the



latter as a junior partner in a combined state, and between England and Scotland in 1707 after which Scotland continued its educational development under separate and self-governed regulations, though ultimately answerable to Westminster. (116) The dominance of England within the Federation, together with its rapidly expanding colonial empire and related industrial, commercial and military power seems to have overtaken the need to utilise a state education system for the purpose of nation building. The 'Tudor State' with, inter alia, the widespread establishment of town grammar schools had already laid the foundations and, through the creation of an established church, ensured the long standing influence of the Anglican denomination on national educational development. The republican interlude in the late seventeenth century was too brief to effect fundamental change, and so "after 1660 the divergence between English educational development and that on the Continent became more apparent". (117)

The two significant internal geopolitical units in respect of the provision of public services throughout the eighteenth century and into the early nineteenth were the parish and the borough, with only the former having any relationship to the founding of schools for the community. Even then, the coverage was incomplete and intermittent, depending on the interests, whim and resources of the parish priest. But in response to the evident decline in social well-being as a result of the extraordinary pace of industrialisation and urbanisation from the mid-eighteenth century onwards, there were movements and networks developing that included a concern for the education of the

masses. One was the rise of the Nonconformist sects and their links with the emergent entrepreneurial classes.

"Nonconformists made up only about 3 per cent of the population of England and Wales in the 1770s, yet about 50 per cent of the early inventors and main entrepreneurs of the Industrial Revolution were Nonconformists". (118)

The practical effect of the concern of some of the leaders of industry and commerce, together with the influence of the Sunday school movement of the 1780s and of the evangelical thrust of the Church of England, plus the disparate pattern of village schools all served to produce a regional variation in overall provision before the innovation of 'national', though not state, networks of elementary schooling at the turn of the nineteenth century. There seems already in some areas to have developed an 'educational culture', particularly evident in the northern countries of England where even poor families would subscribe to elementary schooling. The relatively high incidence of provision and take up in, for example Cumberland, Westmorland and Northumberland, is ascribed by Marsden to 'contagious diffusion' emanating from proximity to Scotland with its "envied parochial system of schools". (119) With reference to the work of Stone (120), Marsden states that education in the border region:

"... was favoured by the large endowment of elementary schools in the seventeenth and eighteenth centuries, testifying to a long-standing regard for education; the lack of opportunities for child labour before industrialisation took place; and the long, hard winter giving time to attend to educational improvement. As a result boys might stay at school until 13 or 14, three or

four years longer than in the south".  
(121)

Existing provision clearly influenced the diffusion and distribution of the 'British' and 'National' monitorial networks as they developed rapidly in the difficult and disrupted early decades of the nineteenth century, filling in those rural areas as yet poorly served by the churches, and also the newly expanding industrial centres. The Government was clearly content to allow elementary education to be the preserve of a variety of Christian providers, and this established the place of the voluntary sector in English education. Indeed the first significant interest of Central Government in legislating for education came within the Factory Act of 1802 and applied only to 'working children'. Nonetheless demand for elementary education was by then established and the 'organic networks' continued to grow, so that a survey for a Select Committee of the House of Commons found that in 1816: "Of 12,000 parishes in England and Wales, 3500 had no sort of school, 3000 had endowed schools of different grades, 5500 had unendowed schools". (122) The Committee also found that: "in all parts of the country, in villages as well as in the great towns, the poor were increasingly anxious to secure education for their children, and, it may be added, for themselves." (123)

Given that the Government and the ruling elites were just as interested in maintaining their political control as were their counterparts in Prussia and France, and that they understood the significance of education in achieving this aim, why did there not develop a centralised national system in the early nineteenth

century? The answer lies partly in the aforementioned earlier realisation of a unitary state, or at least a workable Federation, leaving no such facilitating role for formal education. It also lies in the formation of a different type of national network of schooling: the public schools, especially of England. As Reisner reminds us, the curriculum of such establishments may not have been overtly nationalistic, or even academically significant, but:

" ... there were other aspects of the life in a great public school that must have been of very great national significance ..... They made personal acquaintances and contracted friendships among the group that was destined by its very selection to furnish the future rulers of England ... who can doubt that the great public schools exerted tremendous influence in giving the sons of the ruling class a national unity, a national loyalty, and a preparation for national service? "  
(124)

This sector remained elite, but widened its scope by responding to the growth of the entrepreneurial and professional classes. As Simon puts it they effected a "symbiosis, or fusion, between the industrial and commercial bourgeoisie and the aristocracy by conferring status on the former".(125) In geographical terms, this meant a massive extension of the network both by the funding of totally new institutions under philanthropic or ecclesiastical auspices, or through the upgrading of some of the town grammar schools. As most of the public schools were boarding establishments, the local connections of upgraded institutions were minimised. So that whereas the influential secondary schools of France and Prussia, the lycées and the Gymnasien, had close

locational ties with the settlement hierarchy, their counterparts in the formation of the national elite in England had a fundamentally different geographical pattern, one of an overlapping series of networks and predominantly rural or small town locations. Bamford has examined the translation from local catchment to a wider national clientele, (126) and this is illustrated in Figure 2.11. Of course, the widening is purely geographical and not social, for a prime concern of these schools was to ensure that the boys "learned respect for their class code".(127) Bamford also illustrates cartographically the expansion of the public school network during the nineteenth century, and this is reproduced below as Appendix C .

Because of this private national network of 'public schools,' with its associated preparatory sector, the evolution of the internal political geography of the English State had no relationship to the creation of parts of a coordinated national education system until 1870. This being so, the School Boards and their Districts provided for in the Education Act of 1870 inevitably acquired an added political significance in being in effect the beginnings of local and community participation in politics. This is not, however, to say that other nineteenth century developments in the evolution of the internal political geography of England had no educational significance, either in their day, or in respect of their legacy for local government areas today.

Whereas the Provinces of Prussia and the Departments of France were created in association with the centralisation of public

FIGURE 2.11 PARENTAL HOME LOCATION OF ENTRANTS TO RUGBY SCHOOL, IN TERMS OF DISTANCE FROM RUGBY : 1675 - 1870

Year	Total Entrants	Rugby/ Environs	<15m	15-50m	>50m
1675	26	14	10	0	1
1700	19	1	8	5	2
1725	6	2	2	1	1
1750	22	5	9	4	4
1775	12	1	3	7	1
1800	25	3	0	3	12
1810	71	2	8	24	26
1820	63	3	3	11	39
1830	113	13	2	27	69
1840	121	13	5	12	89
1850	148	22	1	10	112
1860	143	16	1	13	112
1870	164	21	3	12	108

Abstracted from: T.W. Bamford, Public School Data University of Hull, Institute of Education, (1974): Table 14 (Geographical Distribution of Entrants to Rugby School 1675 - 1870), pp. 48-52.

administration, the Counties of England were, and in many cases are, archaic survivals of ancient tribal areas or kingdoms with boundaries that reflect significant physical features of their day, such as rivers and hills. Most of the rivers were crossed by medieval times, and the later improvements of roads and construction of canals and railways rendered many of the traditional borders anachronistic even by the early nineteenth century when, in association with wider social reform, the problem of local government began to be seriously addressed. At the local level, of course, there had survived the finer mesh of the equally outmoded parish mosaic. Many counties and parishes were at that time fragmented, but perhaps because of the urgency of the social situation, the deprivation and dislocation arising from the industrial revolution, the first geopolitical reforms utilised the existing boundaries. This was the creation of Poor Law Unions in 1834, which "... combined town and country in units based on the mutual interdependence of each ...".(128) However, this apparently enlightened recognition of the realities of human ecology contained within it the germ of self-destruction in that:

"... the towns were regarded as units requiring special police protection, water supply, public lighting, street cleansing and repair, pavements for walkers, control of markets, and much more that came under the general heading of improvements". (129)

Schooling was not included for the reasons of religious political influence, philanthropic activity and paternalism mentioned above.

The creation of the Poor Law Unions, each comprising an aggregation of parishes, did not succeed in breaking down the 'island principle' of local government enshrined in the political identity of the boroughs, the state of which had become of sufficient concern for a Commission of Enquiry to be established. This reported in 1837, and in addition to detailed points on the services provided, made recommendations for external boundary changes and the creation of internal subdivision into wards. As a result of the implementation of the findings, England now had counties, boroughs, wards, parishes and Poor Law Unions all with overlapping boundaries with each other, and indeed even within each category. Education was again excluded from the consideration of the enquiry, though most boroughs by this time contained a great deal of activity in this field. The case of Carlisle, admittedly located in the educationally 'positive' border zone, and a Cathedral city to boot, is described by Adamson:

"The population of the city and suburbs (in 1834) was about 20,000, with a school population of 2,680, a number which may have been taught in eight or nine small schools or departments. The actual number was one infant school, nine private schools "for youth of the higher classes", about forty private schools "such as dames' schools for the lower classes", one National school, one Lancastrian school, one Roman Catholic school, a school of industry and twelve Sunday schools ..... Carlisle at this time also had a mechanics' institute with 350 members, five libraries ... and three public newsrooms. Here is no indifference to education, but wastefulness in conducting it". (130)

This evident thirst for education may have played its part in



retarding the creation of a truly national system of state education, as it alarmed the political and social establishment. Popular learning can be controlled by maintaining a state of ignorance as well as by imposing a compulsion of regulated learning, and in early nineteenth century England the Government imposed high charges as newspapers "to fetter the expression of opinion; they were exacted long after the time when opinion was supposed to be free"; (131) a clear example of the significance of informal education.

The outcome of the 1837 report on the 178 boroughs was to effect significant aerial reductions in 71, enlargements in 54, modest changes in 20 and no change in 33. The new boundaries had no relevance to educational provision at the time, as the first Government grants for the enhancement of popular schooling were limited to the denominational networks and in any case very small. In the same year, 1833, the only serious attempt to create a truly national system of state schools, the Bill proposed by Roebuck, failed. But the authorities of the day were keen to maintain accurate quantitative and qualitative records of the rapidly expanding and urbanising population as two important foundations testify; the Ordnance Survey and the Census Commission. The 1851 report of the latter bemoaned the absence of "a uniform system of territorial divisions in Great Britain" (132), and noted not only the continued existence of the anachronistic counties but also the range of public services for which they had become responsible within their areas, including bridges, police and lunatic asylums but not, at that time, schools. The Commission did attempt to overcome some of the most

asinine boundary anomalies by the creation of new registration districts aggregated into registration counties, the boundaries of which transgressed those of the administrative counties where demographically appropriate. Unfortunately for the later provision of new public services, including education, the registration counties did not survive.

The further acceleration of urbanisation occasioned by the proliferation of railways in the 1840s was also selective and differential. Some of the well located established boroughs became nodes in the new network, but many of the others were overtaken by new centres. The 1851 census recognised 580 towns in England and Wales, including eleven 'counties of cities' and five 'counties of towns'; its historic status later to be recognised in the local administration of public education. This first appeared in the legislation of 1888 which attempted to reconcile the realities of industrially based urbanisation with the traditional political geography through the creation of county boroughs and the consequent adjustment of the administrative shires. Included in the remit for the new authorities was responsibility for the provision of 'technical instruction'. This sector of popular education had been loosely and variously defined and provided for several decades by the Science and Art Department under the auspices of the 'Committee of Council' established in 1839, and decisions as to the location of its 'technical instruction' initiatives inevitably had no rational relationship to the new county areas within which such provision was henceforth to be continued and developed. In any case, the new authorities invented their own

definitions of 'technical instruction', and other elements of state provision of post-primary education remained divided between the Science and Art Department, the Charity Commission and the Board of Agriculture, there being no coordination between these three agencies, or between them and the new counties and county boroughs.

Furthermore, the Education Act of 1870 had provided legislation for a universal system of primary schools, albeit divided between secular and religious providers, which clearly intended that sector to be terminal. So there could be no role for the new counties in engendering articulation between primary and secondary provision and thus creating networks within their respective areas that made continuity geographically accessible. So whether by design or default the contrived convergence of social and geographical distance in the respective national systems of Prussia and France was paralleled in the outcome of the dissonant political geography of the later emerging state education 'systems' of England.

By contrast, in Wales, notionally in a unitary national relationship with England, the new counties were empowered under The Welsh Intermediate Education Act of 1889 to put forward schemes to the Charity Commissioners for secondary schooling. Technically these were designated 'intermediate schools' because they were inserted between the university colleges and the board and voluntary schools. Such a coordinated approach had arisen from the work of the Aberdare Committee in 1880, in turn generated by the spirit of the Cambrian Educational Society founded in 1846. The latter not only supported primary school foundations but also was the prime mover in the

establishment of the University College at Aberystwyth in 1872, while the former inter alia extended the tertiary provision with University Colleges in Cardiff and Bangor in 1883 and 1884 respectively, and was particularly concerned about the dislocation of such schools as existed and the distribution of population. Given this heightened spatial awareness, and taking advantage of the freedom of interpretation of 'technical education' to include 'intermediate schools', the new counties, aided by a Central Welsh Board ensured that a secondary sector was inserted in a rational way. The schools were:

".... either entirely separate for the sexes or else dual or mixed according to locality. In the larger towns separate boys' and girls' schools were the rule; in wide rural areas the more economical form of administration was the mixed school and co-education, or the dual school of two departments under one roof. Dual or mixed, the teachers were both men and women ... (so) the distribution of population was carefully regarded in planning the site of new schools". (133)

Clearly the political will to achieve such continuity and coverage arose from the high level of national consciousness, and awareness of the significance of public education in maintaining and developing it. It also implied a readiness to accommodate upward social mobility through an educational pyramid culminating in explicitly national university colleges which in 1893 came together as The University of Wales. On a smaller scale, and with different methods Wales was to some degree, albeit unwittingly, emulating the approaches of Prussia and France.

In England the division of the Poor Law Union areas into urban and rural categories in 1872, the creation of 61 county boroughs and the County of London in 1888, followed by the subdivision of the remaining county areas into urban and rural districts further entrenched the 'island' principle of political geography which inevitably militated against the rational location and networking of primary and secondary schools after the 1902 Education Act had brought both sectors under the local control of counties and county boroughs, which became for the first time, Local Education Authorities. It is not until this point that England had areas of educational administration comparable to the provinces of Prussia and the departments of France. But even then, because the English counties had retained many outmoded boundaries and inherited an equally anomalous internal structure, plus the 'island' principle as evidenced in the creation of numerous county boroughs, the fragmentation of the new national system was inevitable, as were innumerable catchment anomalies in the border zones of the newly founded LEAs. As Green has pointed out, the first state secondary schools in England (the public grammar schools) emerged from the 1902 Act, "exactly one hundred years after Napoleon created the state lycee". (134) Even then, the location of public grammar school foundations was subject to different geopolitical parameters and to the regrading of some endowed secondary schools, science schools and voluntary foundations (some religious, others secular) to be part of the new local systems. Furthermore, these systems had different attitudes and policies towards selective secondary schooling, as well as very distinctive possibilities for the siting of public grammar schools. Although lycées and Gymnasien were located, and programmed

as 'middle class' institutions, they were not normally so 'organically' related to patterns of urban social segregation as affecting their location and clustering. But this is to anticipate the next dimension of our discussion, the economic, social and cultural. First we should seek to place the spatial formation of the English system in comparison with that of Prussia and France and attempt to apply Müller's model to it.

The development of the three national systems is here being observed from the viewpoint of the 'geography of regulated space', since such systems have, at least in part, to do with social regulation and space adjustment. They are both part of the political geography of the State and also influenced by it. In due course each of the three systems achieves full spatial coverage, first in respect of universal primary education, then of selective secondary education, and then of universal (though segmented) secondary education. They are also influenced by their external political geography, that is to say their boundaries; apparent security thereof; relations with nearest neighbours and wider geographical considerations such as confederations, colonies and their management. In all cases there have been other providers of education in operation, particularly urban councils, religious denominations, philanthropic and other private concerns, and these have to be accommodated or otherwise dealt with if a national system is to develop. The comparison between Prussia, France and England in respect of the political/spatial character of the emergence of their national systems is attempted in Figure 2.12.

FIGURE 2.12 A COMPARATIVE SUMMARY OF SPATIAL DIMENSIONS OF THE EVOLUTION OF NATIONAL SYSTEMS OF SCHOOLING IN ENGLAND, FRANCE AND PRUSSIA FROM c 1800 - 1910

Item	Prussia	France	England
Political Location and Security in the Early Nineteenth Century	Long standing insecurity and Slav/Germanic conflict across the north German plain. Defeat by France in 1806 resulted in nationalist revival and German political aggregation.	Long standing security within mostly 'natural' frontiers. Unity focus strengthened further by republican revolution and victory over Prussia in 1806.	Long standing security of insular location, and accommodations, with Wales and Scotland. Strengthened by victory over France in 1815.
Educational Legacy	National network of primary provision already in place plus wide (urban) distribution of selective but accessible <u>gymnasien</u> .	Highly elitist incomplete and disparate pattern of schooling strongly associated with the Catholic Church.	Aristocratic and remote secondary sector; incomplete and disparate pattern of primary schooling associated with the Established Church
Internal Political Geography Early Nineteenth Century	Hierarchy of political units created (1817-25) overlaying existing public primary and secondary networks.	Hierarchy of political units created post-revolution, and new national network of schooling integrated.	Ancient county and borough boundaries increasingly discordant with demographic change, and so totally unrelated to schooling.
Pattern of Elite Secondary Schooling	Brought into line with international political geography through reduction in number of <u>gymnasien</u> , and in 1810, standardisation of the <u>abitur</u> in creating a national educational surface. <u>Gymnasien</u> operated as a network.	Lycees located at nodal points in the urban hierarchy and therefore in accordance with the pattern of local administration and its professional needs. Creation of the <u>baccalaureate</u> in 1808 forms a national educational surface.	Prestigious boarding school network with virtually no educational links with local communities or the residual patterns of political geography. Lack of standardised qualification means that no national educational surface exists.
Patterns of Emergent 'Middle Class' Secondary Schooling	Complicated and shifting hierarchy of sub-gymnasium schools (eg real-gymnasien, real-schulen, ober-real-schulen, Volksschulen) relegated to provincial/municipal administrations and networks.	Ecoles Normales Supérieures, Colleges and Ecoles Primaries Supérieures carefully located within the centralised hierarchy and designed to constrain aspirations and mobility.	Emergence of technical science and secondary (public grammar schools) in association with local government administrations. Access constrained by widely differing degrees of availability according to local policy.
Relationship to Urbanisation and Industrialisation	Combination of early development of local political units and hierarchy and later industrial urbanisation enables national and local administrations to respond and adjust to the social geography.	Systematic hierarchy of internal political geography well established prior to industrial urbanisation. Rules about school size and journey to school ensure a degree of correspondence.	Early industrialisation and late reform of internal political geography combine to produce almost complete lack of correspondence between public education provision and the new social geography.
General Political Geography and the Political Geography of Education	Longstanding network of <u>gymnasien</u> later transformed into an educational surface by standardised <u>abitur</u> transcends the fragmentation of German states and therefore contributes considerably to effecting a unified nation with an adequate supply of suitable professionals. National Departments (Ministry) of Education founded in 1817, but towns remain key units of political geography and educational provision and are strengthened after 1870.	Pre-eminence of lycee network in post-revolutionary France in accord with both the emerging urban hierarchy and the internal political geography. Early standardisation of the <u>baccalaureate</u> and the creation of academies from aggregated departments makes for a spatially based educational hierarchy at the core of republican administration. Centralising pyramid topped by the Imperial University 1808.	Prior achievement of national cohesion leaves no role for public education in state formation. Role of established church appropriates the task of popular provision but spatially incomplete. Only national education surface is that of elite private secondary schools. Elementary public education based on overlapping networks of various providers until 1870. Convergence of state education and political geography not until 1902.

As far as applying Müller's model to the English case is concerned, it may reasonably be suggested that the first phase was not completed until 1902 when the foundation of LEAs made possible the "integral organisation" and "articulation" that characterises the second phase. This could be said to occupy the period up to 1944 or just after, to allow for the implementation of the major reform of that year, with phase three comprising the 1950s and beyond. Of course, Müller's focus was on Imperial Germany and, as mentioned above, the subsequent political history, and geography, of that country was so disturbed as to create a succession of radical changes culminating in the reunification of Germany in 1990. Nonetheless the outcome is the survival of the key underlying secondary level institution upon which the education of the professional elites depends, in this case the gymnasium. The French lycée and the English public school likewise continue to maintain their status and functions. The segmentation of the secondary sector, necessary to accommodate the diversification of expanding industrial economies and related social aspirations is evident in all three cases, and has its geographical implications. Consequently the discussion will move now to the socio-economic domain.



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CHAPTER THREE  
ECONOMIC, SOCIAL AND CULTURAL DIMENSIONS

3.1 INTRODUCTION

In the latter part of chapter two we were concerned with aspects of the political geography of emerging systems of state education. It was evident in the discussion that in all three cases there was considerable disparity in the provision of schooling on the ground and that the rationalisation of such patterns as existed depended on the nature and implementation of policies of internal administrative reform. These in turn varied in respect of the relationship between the political geography and the human geography, as key components of the latter entered into situations of increasing complexity and rate of change. In general this relationship is rarely concordant as the social dynamic is never completely constrained by political forces, even in the most centralised of totalitarian systems.

At the heart of this social dynamic is the dissemination of information and ideas which in so-called pre-industrial societies was effected through oral traditions of informal education within a local scale of operation. Translation from this restricted state into situations of at least potential development requires inter alia the enhancement of the quality of communication in conjunction with an extension of the spatial and temporal dimensions. An important element of this process is the acquisition and spread of literacy.



This can be examined technically (1), or through an anthropological perspective (2) as well as in historical terms (3), but here an attempt will be made to view such developments through the lenses of economic and social geography. This will be carried out mainly, but not exclusively, with reference to England and Wales so as to follow directly from the previous chapter, and leads on to a more sharply focused section on education, urbanisation and urban form. Subsequent consideration of relationships between education, migration and culture is more widely based in respect of examples but returns to the smaller scale as the chapter is concluded with consideration of the social dynamic as a key to the synthesis of geography, education and human ecology with reference to suburban England.

### 3.2 LITERACY, ECONOMY AND SOCIETY

#### 3.2.1 The Spread of Literacy and the Problem of Geographic Scale

As mentioned above in relation to the emergence of the modern alphabet (4), while the changing geopolitical context influenced its organised dissemination, the thrust behind the innovation and its diffusion had to do with the economic intercourse of trading communities in Levantine cities. This was by no means the earliest form of literacy but it was a significant stage in the evolution of education, especially as it came to influence the European domain.

The significance of the spread of literacy through Europe was evident before the emergence of even the earliest of the nation states discussed in the previous chapter, and its importance for western

development has long been skilfully illustrated by Cipolla (5). He relates examples of indices of literacy levels, using the crude national parameter, which is nonetheless instructive, but also recognises the significance of the first and second urban revolutions:

"Growth of an urban society and growth of schools and literacy were closely related phenomena. The areas that experienced higher rates of economic expansion and more revolutionary social change were also the areas in which schools and teachers were relatively more numerous." (6)

Clearly the municipal, and later national, networks and systems of schooling were important for the spread of literacy, but as Furet and Ozouf have shown in their substantive work on the differential development of literacy in France (7) other factors such as cultural prejudice and trading imperatives were extremely influential. They discuss the overbearing concentration of cultural and educational forces in Paris, commenting on the more pejorative loading of the term 'provincial' as compared with England, and also graphically illustrate the greater incidence of literacy north and east of a line from St Malo to Geneva.

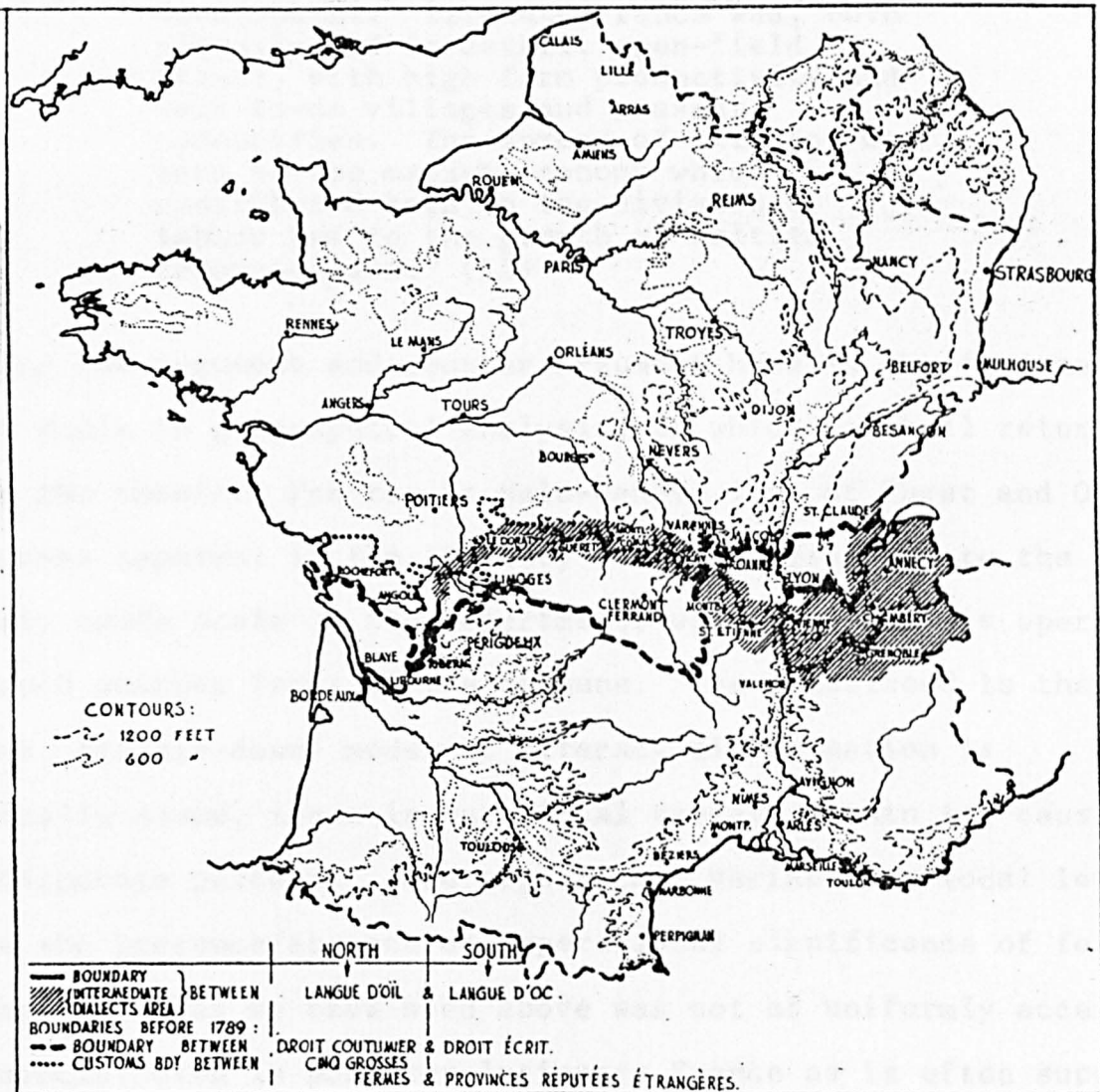
Although not remaining at the crude national scale of reference, Furet and Ozouf are operating in very broad terms in respect of the differential acquisition of literacy as between two "halves" of a very large political unit. But as well as discussing such forces as the battle for minds between radicalism and conservatism in the reformation and counter-reformation, they also identify more local

factors such as peasant aspiration in the form of entering into contracts and commercial accounts. While recognising the value of their perception of the significance of micro-economic factors, Siddle (8) takes Furet and Ozouf to task for failing to recognise the strong incidence of such factors in their poorer (ie southern and western) "half" of the country as well as to the north of the St Malo-Geneva line. Indeed he claims there is no real evidence of a "southwards diffusion of literacy" in France, (9) and seeks instead to show "the long practice of the written law", as a profound cultural force supporting 'pragmatic literacy' in the constructual complications arising from the transfer of land in a property owning peasantry. In so doing he is alluding to, though he does not reference, the classic work of Paul Vidal de la Blache (10) and his recognition of a more north-south divide between the Langue d'oïl with its customary or common law, and the Langue d'oc where written law, based on the old Roman legacy, operated (see Figure 3.1).

Siddle goes further to challenge the contention of Furet and Ozouf that it was necessary for literacy to become embedded in the dynamics of urban society before being capable of diffusion to rural areas. He evokes the notion of the innovative periphery, already mentioned above, and goes so far as to suggest with some irony that:

"It is more than possible that the cultural heartland was continually rejuvenated by aspiring literate migrants from those 'dark actual wastelands' to the south of the line from St Malo to Geneva". (11)

FIGURE 3.1 THE MORE ROMAN AND THE LESS ROMAN FRANCE  
ACCORDING TO VIDAL DE LA BLACHE



Source: Paul Vidal de la Blache, La Personalite Geographique de la France, Manchester University Press/Hachette (1941), p ix.

The fact that Siddle challenges Furet and Ozouf's conventional view of a 'top down' dissemination of literacy on the basis of a single case study of the Canton of Montmin in Haute-Savoie is itself criticised by Heffernon (12) who clearly agrees with the idea that:

"The spread of literacy by and large conformed to the laws of uneven economic development: literate France was, both globally and in detail, open-field France, with high farm productivity and well-to-do villages and peasant communities. The spread of literacy was born of the market economy which contributed both to the division of labour and to the growth of written communication." (13)

Underlying the argument and counter argument here is the fundamental issue of scale in geographical analysis, to which we shall return later in the thesis. For the St Malo-Geneva line of Furet and Ozouf only becomes apparent if the literacy data is aggregated to the relatively crude scale of the department, whereas Siddle is operating at the much sharper focus of the commune. The likelihood is that while the 'trickle-down' model of literacy dissemination is theoretically sound, there is much local variety within it, causing widely disparate patterns. One significant variable at local level would be the presence/absence and operational significance of formal schooling, which as we have seen above was not as uniformly accessible or influential even in post revolutionary France as is often supposed. A major factor affecting the efficacy of elementary education, once implanted, would be the level and nature of informal educational operations in any given location or area. In Siddle's view, at least in the case of Haute Savoie in the seventeenth century, land contracts

and the acquisition of pragmatic literacy, through the mediacy of the notary, were a greater motivation than formal school, through the mediacy of the teacher. (14)

In England too, the eventual, and by comparison with France more irregular, evolution of a schooling network was laid on an existing and disparate pattern of pragmatic literacy. Much depended on the aforementioned "laws of uneven economic development", expressed geographically in terms of differential land use and levels of prosperity. With respect to the adoption of agricultural innovation in the seventeenth century, Overton found that while the oral mode was certainly operative, both written correspondence and printed literature were also significant in the dissemination of new ideas and practices:

"For the 20 years after 1660, roughly 70 per cent of adopters can be classified as literate ... and it is likely that the majority of adopters could have read the literature if they wished." (15)

Overton's study had to do with innovations in relation to turnips and clover in East Anglia and by definition was not concerned with the literacy level of the population in general within that region which, according to both Stone (16) and Lucas (17) did not rate highly even in the nineteenth century. But this goes to show that an interactive relationship existed between economic, social and educational (of all three types) forces which contributed significantly to the regional identities that, according to Langton (18), preceded but were enhanced by the Industrial Revolution.

### 3.2.2 Spatial Variations in Literacy and Education: Eighteenth and Nineteenth Century England

Much of the distinguished work of W.B. Stephens has been concerned with charting and explaining the development of literacy and schooling in England both before and during the industrialisation and urbanisation of the country, (19) and illustrates clearly the potential contribution of the economic and social historian to the historical geography of education.

Like Siddle in respect of France, Stephens is at pains to stress the significance of geographic scale in the assessment of patterns of literacy. He illustrates this well in his article on seventeenth century Cornwall, (20) and in respect of figures at the levels of the country, the hundred and the parish. Whereas a county wide illiteracy rate of 83 per cent is given (together with Westmoreland the worst case in England in 1642), the percentages for the hundreds range from 66 to 74, and for the parishes from 33 to 86. He goes further to discuss the more organic gradient of literacy which climbs from its slough in West Penrith to its peak on the south-east border of Cornwall, proximate to the more prosperous Devon markets. This literacy gradient is of course the reverse of its topographical counterpart and reflects the range of agricultural levels within the county:

"This would accord with the probability that educational standards were higher in wealthier than poorer communities."  
(21)

Even the Cornish towns, "little more than overgrown villages" exhibited an average illiteracy rate of 54 per cent which although better than the rural average nonetheless emphasised the influence of the remoteness of the county from the emergent networks of trade. Furthermore, it is noted that the significance of the gentry in providing elementary schooling at this time, discussed below in respect of Hurt's analysis, (22) was constrained by the relatively small estates of this class in Cornwall. The merchant class, also important in the foundation of schools was likewise stunted and highly clustered, and the incapacity of potential providers is illustrated by the fact that "there were no endowed elementary schools founded between 1641 and 1820" in the county of Cornwall." (23)

The observations of Stephens on the state of literacy in Cornwall, while inevitably just a vignette and therefore idiosyncratic, readily illustrate the main factors behind the marked disparity in educational levels and the provision of schooling that characterised the English case right up to the last quarter of the nineteenth century.

Throughout the intervening 300 and more years there was an immense improvement nationwide, though again differential, but the issues of: location, place on the networks, levels and types of economy, degree and nature of urban development, occupational structure and the disparate capacities and inclinations of the providing classes remained the key ones. This would also have been true of Prussia before the eighteenth century and of pre-revolutionary France. It is simply that in those cases the establishment of an internal political geography associated inter alia with the provision of a national



system of schooling occurred much earlier than in England, as discussed above. However, it should not be naively assumed that the establishment of regulated space for the operation of national or sub-national systems assured the equitable provision of any type or level of education. The factors mentioned above, and others, continued to operate, though their relative significance changed both temporally and spatially, and the later establishment of a political framework in England enables the continued examination of their operation to be most instructive in respect of the geography of education.

Over the two centuries following the 1642 returns on which the Cornish figures were based, levels of literacy improved considerably, though the rate of change was irregular and the distribution disparate. In the case of neighbouring Devon, from an overall illiteracy figure of 70 per cent in the mid seventeenth century (with parishes ranging from 53 to 87), the proportion dropped through 34 per cent in 1840 to 8 per cent in 1884. Despite this apparently steady improvement:

"The figures for the rural parishes were, however, worse in the decade 1835-44 .... an indication of a growing cultural divide between town and country". (24)

Yet among the towns only Ottery St Mary suffered an increase in illiteracy, with in most others, significant foundations of new schools, especially between 1830 and 1850 and in the City of Exeter whose regional significance and prosperity distorted the county average. Such important market and cultural centres were indeed the only type of urban settlement to exhibit marked improvements in literacy at the height of the industrial revolution. In the mass

urbanisation of the industrial north, levels decreased considerably as such:

"... towns had so far outgrown the means of instruction that the educational efforts made had effected no improvement." (25)

They also presented opportunities for child labour on a massive scale. Ab initio products of this period such as Swindon and Middlesborough were not noted for their educational profiles, and it may be that:

"... in the early stages of industrialisation opportunities for social advancement were not necessarily connected with the acquisition of schooling, so that for a period, investment in education was not so attractive." (26)

Such a contention would only be true of those, usually mass, urbanising areas concerned with manufacturing, for where trading was the predominant urban function this had a mutually beneficial relationship with schooling which in such circumstances became more instrumental in that: "the keeping of accounts and records and the ability to communicate by letter were useful". (27)

Both Stephens and Langton comment on the importance of both the improvement of roads and, especially, the creation of the canal network for the enhancement and clustering of trading and manufacturing complexes: "Dense patches on the network thus developed highly integrated economies largely separate from each other", (28) and very particular reciprocal relationships were developed which enhanced regional consciousness. In respect of Birmingham and its environs:

"Quite apart from the material benefits conferred by the canals themselves, the various activities connected with their construction thus exerted considerable influence on the energy and self-consciousness of the West Midlands." (29)

So we have in late eighteenth and early nineteenth century England, before either the mass urbanisation of the railway age, or the period of liberal reform leading inter alia to the first governmental intervention, albeit indirect, in the provision of schooling, an intense period of marked differentiation as between different types of urban and different types of rural economy and human ecology. Levels of literacy and patterns of schooling exhibited increased irregularity and complexity in geographical terms, with differentials of occupational structure and economic prosperity being the key underlying factors. In such circumstances of acute disparity and profoundly locale-specific patterns, we find the soil that nurtured the roots of unequal educational provision which run deeper than Marsden's larger scale analysis of disparities in the diffusion of monitorial schooling is necessarily able to accommodate.(30)

Nonetheless with the establishment and development of the networks of the 'British Society' and the 'National Society' supplementing the existing stock of elementary schools, the availability of schooling should have become an increasingly significant factor in the changing patterns of literacy, though as Stephens cautions, "the extent of day schooling", as evidenced by the 1851 census, and even attendance figures, still begs the question of the effectiveness of that schooling in combatting illiteracy. He goes on to illuminate further

the complexity of the changing settlement geography and the apparently inconsistent relationship between economy, society and education; observing in respect of the report of a Royal Commission of 1867-8 that:

"... the commissioners investigating child and female labour in agriculture reported in 1867 that the demand for education among the labouring classes in country districts in Nottinghamshire and Leicestershire 'is exceedingly active ... but as we approach the neighbourhood of Nottingham and Leicester seaming and framework knitting absorb almost the whole population while the large overgrown villages in the suburbs of the towns ... are most ill-supplied with schools. The girls especially can begin such work as young as 6 or 7 years old and many never attend school at all'"  
(31)

so that in this shifting and indeterminate zone of nascent suburbia and fast fading rurality would seem to exist the lowest levels of literacy: an educational 'no man's land'. There were numerous and transient 'rural industrial slumberlands' at this time promoted by the fine grained network of rail transportation that had burst upon the scene over the previous quarter century, and promoted the "more rapid communication of people and ideas". (32)

The value of, and need for, small scale spatially oriented studies of the complex relationships between literacy levels and mid-nineteenth century suburbanisation is well illustrated by the work of Grafton in respect of the environs of Liverpool (33). The studies, based on a linkage of census returns and marriage registers in 13 'townships', clearly show that the provision of schooling was only one of many

factors affecting literacy levels in a rapidly changing urban and suburban social geography.

"Analysis at township level can reveal those factors which are both conducive to and inhibit the acquisition of literacy; these include the experience of varying social and economic environments, be they rural, suburban, mining and so on, a birthplace analysis of each township, and a survey of each township, and the theme of marriage distance. (34)

Among Grafton's findings were a literacy profile ranging from a modest 60 per cent in Liverpool itself, up to 70+ per cent in the middle suburbs and down to 30-50 per cent in the rural fringe. Much is made of geographical mobility and levels of literacy, building on the earlier work of Perry, using the theme of 'marriage distance'.(35) The greater the proportion of the resident population to have been born locally the lower the literacy level, and this problem tended to be strongest in "those communities distant from the main arteries of communication, turnpike roads, navigable rivers, canals and railways" (36), that is to say in the interstices of the emerging and variable lines of transportation and communication.

Hurt has examined the provision of schooling in rural areas at mid century, based on the findings of the 'Newcastle Commission' published in 1861, which included a "county by county" list of: "Proportion of the children on the books of the public elementary schools to the total population." (37) He acknowledges the crudity of the county as a unit of scale for this purpose but uses it merely as a broad introductory spectrum in which "agricultural counties headed the

list". Hurt does not subscribe to the differential attitudinal explanation of regional variation somewhat favoured by Langton, but suggests instead that, at least in regard to the rural areas of England, disparities in the incidence of elementary schools had more to do with the variable response of "the social groups that were the readiest to support the voluntary schools", (38) namely the landowners, the farmers and the clergy. The economic factor was the determinant: with the indifference of the farmers to schooling being strongly influenced by the potential withdrawal of cheap child labour; the incapacity of many of the clergy based on the heavy demands on their limited funds; and the reaction of the landowners being related to the number of landlords in any given area. Because a larger number of potential patrons of elementary schools would each be giving less, more support could be expected from the 'gentry class'; that is to say the stratum of rural landowners with estates of 3000 - 10000 acres. There was a:

"tendency for counties with the best educational record to have more elections than the national average and thus appear .... to be less subject to the control of any one great family or grouping of families....." (39)

With reference to Hertfordshire, one of the better cases, this was evident not only in the countryside, but also in the towns, which tended to have better records of elementary (voluntary) school foundation where the "parvenus and the nouveaux riches" were in control. These groups, together with the gentry class were, therefore, largely responsible for such significant improvements in

the levels of literacy as occurred in mid-nineteenth century England if one accepts the conclusion of Lucas that:

"..... fairly adequate schooling at one period in a particular county brought a return in the form of an improved literacy still discernible in that county at a much later date." (40)

Figure 3.2 illustrates the state of illiteracy, on a county basis, in 1870 as well as the proportional decrease in illiteracy between 1840 and 1870. The effects of the radical expansion of the metropolitan focused rail networks may be mooted, as well as the continued remoteness of some peripheral areas in respect of this revolutionary geographical development. This was particularly marked in the case of Wales where:

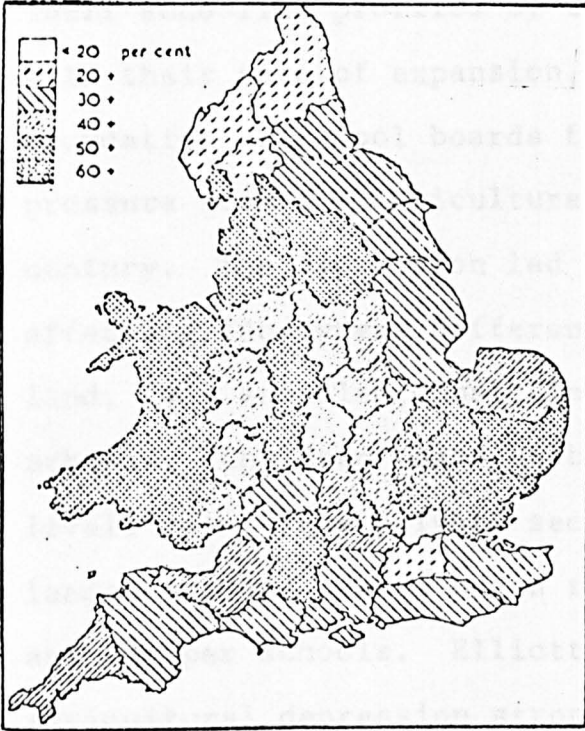
"A fundamental drawback in the (voluntary) system was that the Welsh population was too poor and scattered to support a system of permanent day schools". (41)

Hence the 'circulating schools' of the eighteenth century and the drastic and aforementioned actions of the Cambrian Educational Society in the nineteenth. (42)

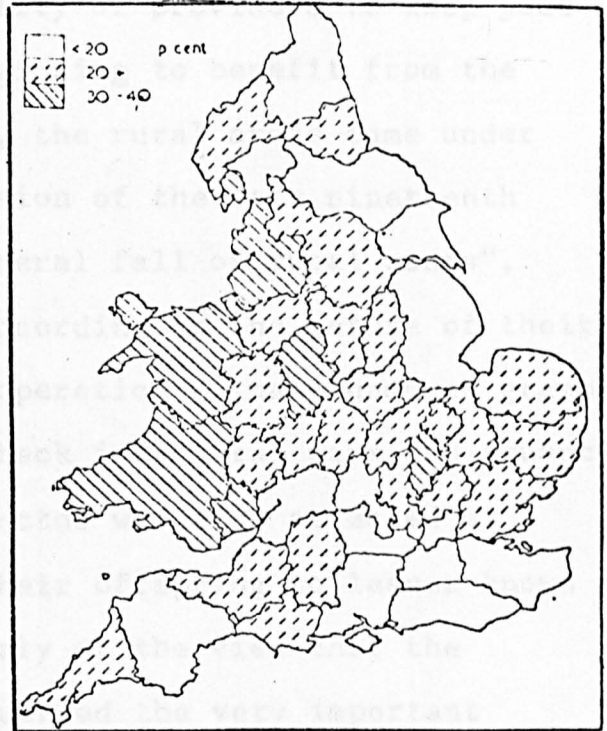
So while the predominantly rural counties continued to exhibit relatively good profiles in terms of levels of literacy and incidence of voluntary elementary school foundations, and were further boosted by the long standing educational activity of their market and county towns, they contained not only areas of decline proximate to the expanding manufacturing centres but also considerable internal disparity due to the variable activities of their 'providing classes'.

FIGURE 3.2 SPATIAL ASPECTS OF THE PATTERN OF LITERACY IN ENGLAND AND WALES IN THE NINETEENTH CENTURY

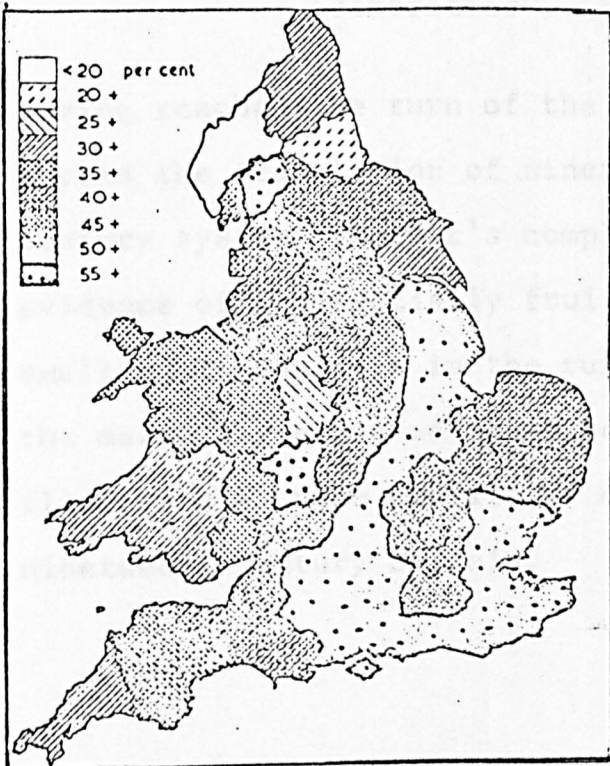
Percentage Illiterate in 1840



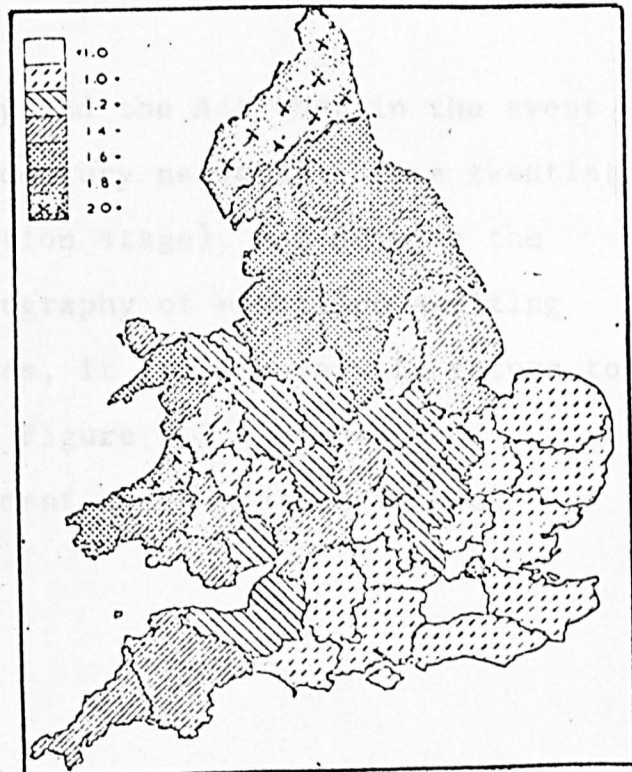
Percentage Illiterate in 1870



Percentage Decrease in Illiteracy from 1840 - 1872



Ratio of Illiterate Brides to Illiterate Grooms c 1850



Source: G.R. Lucas 'The Diffusion of Literacy in England and Wales in the Nineteenth Century', Studies in Education, III : 3, University of Hull Institute of Education (1961), pp. 240 - 248.

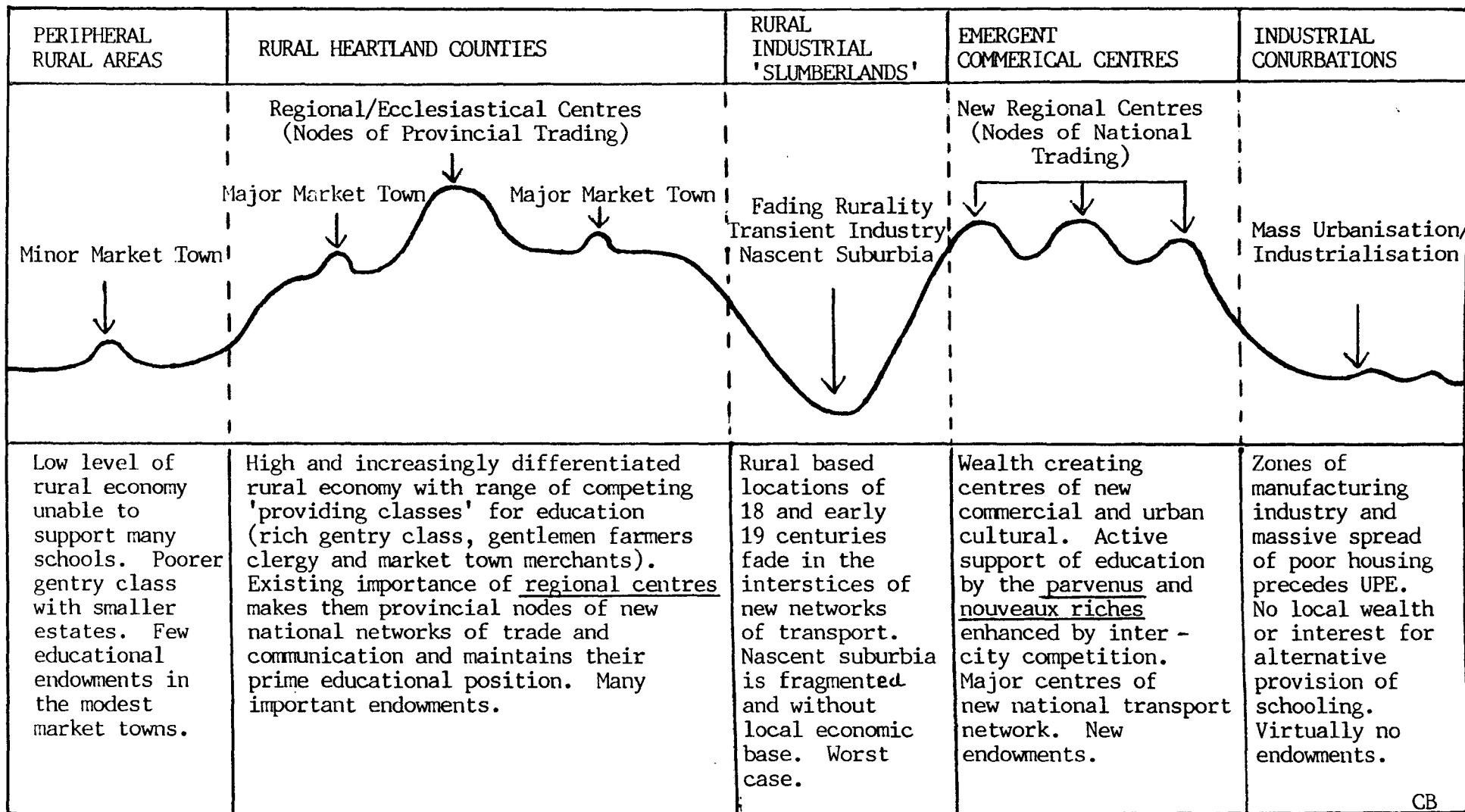


Furthermore, just as the areas of mass urbanisation, depressed in their schooling profiles by the inability of providers to keep pace with their rate of expansion, were beginning to benefit from the foundation of school boards from 1870, the rural areas came under pressure from the agricultural depression of the late nineteenth century. The depression led to a "general fall of rural rents", affecting landowners differentially according to the nature of their land, (43) and also constraining the operation of many endowed grammar schools. Children began to be drawn back into rural work and truancy levels rose. The private secondary sector was also affected as landowners and others began to send their offspring to lesser known and cheaper schools. Elliott is clearly of the view that the agricultural depression strongly influenced the very important Education Act of 1902 which:

".... placed Church schools on the rates and placed secondary education under the control of the Local Education Authorities". (44)

Having reached the turn of the century and the Act that in the event marked the translation of nineteenth century networks into a twentieth century system, (Muller's complementation stage), and despite the evidence of a potentially fruitful geography of education awaiting small scale analysis in the rural areas, it is necessary to return to the massively expanded urban sector. Figure 3.3 attempts to illustrate a crude profile of environment and education in mid nineteenth century Britain.

FIGURE 3.3 PEAKS AND TROUGHS IN LITERACY AND SCHOOLING IN THE MAJOR ECOLOGICAL ZONES OF MID-NINETEENTH CENTURY ENGLAND



### 3.2.3 Urbanisation, Urban Geography and Educational Provision: Selected Nineteenth Century Examples

As is already evident, the idea of an urban-rural dichotomy which may have been a credible concept in classical and medieval Europe, and in which the origins of formal education in the locations of the first urban revolution may be found, becomes a redundant concept in the modern era of the industrialised states. As the endless complexities and variations of urban society manifest themselves in the social dynamics of these evolving human hives, they incorporate the essential urbanity of formal education in both their forms and their functions. With respect to nineteenth century England and Wales, we are fortunate to have the benefit of the work of one of the few geographers to have applied the distinctive skills and concepts of the field to the analysis of educational provision, and indeed only the second to be cited in this thesis, (46), namely W.E. Marsden.

As Marsden rightly observes, the educational dimension of the rapidly developing and changeable urban societies of nineteenth century England has been largely overlooked by urban historians, and the same might well be said of the generality of historians of education. There are exceptions of course, but even then the essentially integrative potential of the geographical approach is missing. Spatial variations are observed on a large, usually county, scale and there are innumerable case studies of the development of education in particular places, (47) but neither the broad brush nor the fixed microscope is what is required. In his major work, (48) Marsden

articulates the cross-disciplinary approach splendidly in the introduction and four subsequent chapters, where he attempts to analyse: interactions between schooling and shifting socio-economic patterns; increasing territorial (including residential) segregation and its relationship to schooling; the increasingly tertiary occupational nature of the 'later' industrial revolution with its massive demand for "clerkly diligence"; and the concomitant emergence of the lower middle classes with their related educational needs.(49)

In so doing, Marsden employs the geographical concepts of spatial variation, scale, sphere of influence and diffusion allied to the sociological idea of 'social distance', operative at both the personal and family level and the aggregate level in the form of socio-spatial reference systems; taking us towards the behavioural geography of 'social space' where, inter alia, as Buttimer puts it: " .... schools .... stand out as focuses in the mental maps of their clientele." (50) Marsden comments on the ecological approach of the Chicago school of urban sociology, quoting Park, one of its pioneers in his assertion that: " human relations can always be reckoned with more or less accuracy, in terms of distance." (51) Residential segregation is seen in this approach as "symptomatic of the struggle for survival" (52) in Darwinist terms. The essentially geographical approach of Marsden will be here synthesised with two other outstanding contributions to the literature of the history of urban education in Britain, (53) in order to try to effect a dynamic review of the main spatially significant forces and patterns emerging in the differential

development and operation of formal education at all three levels in nineteenth century England.

Although Figure 3.3 may succeed in some degree in illustrating a selected range of relationships between society, economy and literacy/education, it is inevitably a static illustration or "snapshot". By default, it fails to capture the intermediate situations, neither is it able to evoke the dynamics of the role of education in the process of urbanisation and of the differentiation of urban society. To assist in capturing this vital dimension, Smith turns to the Durkheimian vision of "transformations in the conditions of collective existence ..." as illustrated by phenomena that "occur throughout the entire extent of society but take on diverse forms", according, inter alia to "geographic location". (54) Although the perception of 'geographic' is somewhat primitive in today's terms, and despite the fact that Durkheim did not include educational phenomena among his illustrations, Smith is able successfully to apply the vision and relate social facts to morphological change. In part he succeeds due to his sensitivity to the fundamental geographical concept of scale, its sociological parallel of hierarchy, and their linkage through networks involving "competences which are themselves exploitable within power relationships". He also recognises the spatial concept of nesting, which is not just a "Russian doll" model, but more a perception of differential integration between components of a social system in which education can play a significant part.

"By furnishing the principal channel through which people pass from the level of the household to the level of nationally organised structures, the

education system promotes integration amongst different levels. This contribution complements the more widely recognized effect of the education system in tending to maintain distributive inequalities which are expressed at several structural levels".  
(55)

So education is not merely concerned with social reproduction a la Bourdieu, (56) but is also a prime mover in social change not only at the individual but also at the collective level. There is also of course the tension between the two that is inevitable and inherent in the establishment and operation of state systems of schooling. Secondary and tertiary education especially, with their more heightened and direct links to scientific and technological developments, provided areas for the mutual socialisation and interaction of multiple elites.

With reference to Birmingham and Sheffield, Smith is able to illustrate how contrasts in terms of industrial structure and scale interacted with existing and emerging political forces to produce highly distinctive educational outcomes. The significance of the canal era and network in educational terms has already been noted, and Birmingham was at its hub. On the basis of a variety of local natural resources and the arrival of raw materials and products from elsewhere, a markedly differentiated occupational and industrial profile was developed by the mid-nineteenth century, giving rise to a substantial and variegated business class. Furthermore, the eclectic nature of its industrial and residential evolution, (57) resulted in the close proximity of the diverging and multiplying social classes.

Contest mobility was encouraged through the industrial sponsorship of mini networks of maintained schools and the participation of the masters of industry in local politics.

By contrast, Sheffield, which grew later and faster than Birmingham, had a more concentrated and massive economic structure and a greater social and geographical distance between the classes. Whereas Birmingham had a nine strong consortium of secondary schools in the form of the King Edward VI Foundation, Sheffield had just three, and even these found it difficult to survive, merging into one by the early years of the twentieth century. Instead the School Board, founded promptly in 1870, soon became a unitary force setting in motion a strong tradition of municipal provision. Clearly such markedly different internal political structures would lead to different criteria being employed in decisions leading to the location of both primary and secondary schools, and the developing of educational networks of which they formed part. But both were part of an economically based challenge to the old county hierarchies by the new urban regimes whereby:

"... the master coordinates of social relations and the institutional order within the cities became not kinship, nor patronage but universalistic criteria expressed in the cash nexus and bureaucratic regulation. The single class suburb and the elementary school at which attendance was compulsory were two major expressions of these increasingly important modes of integration." (58)

While broadly true in sociological terms, the above statement belies the increasing complexity of suburbanisation, which had begun to develop even before urbanisation ceased to be a major movement. For as Marsden puts it: "The territorial mobility of nineteenth century people was remarkable" (59) as economic diversification and increased availability of mass transportation proceeded apace, and as a result of which widely differing demographic profiles between and within urban areas directly affected the amount and type of schooling developed, whether municipal or voluntary.

Much of Marsden's work is concerned with the detailed examination of particular cases - the only way to operate at the appropriate geographical scale - illustrating the spatial manifestations of the dynamic interaction of: economic status; social aspiration; urban growth and transportation; inter-denominational competition; official differentiation and therefore status allocation in secondary provision; and the use of fee levels to exclude potential pupils from 'undesirable' groups. The most acute problems and attempted solutions related to the burgeoning lower middle class for whom the elementary schools did not proceed far enough in age, and the 'third grade' secondary schools arising from the Taunton Commission of 1868 (60) did not materialise in sufficient numbers.

"The dilemma was resolved by the emergence of a new type of school, the higher grade school, most notably in the manufacturing districts of the north...

Two basic types of higher grade school emerged .. the Bradford model, a selective one attracting the children of thoughtful and better-to-do working people ...Such schools were located



peripherally in socially respectable areas ... the second model was exemplified by Sheffield, where a centrally-placed higher grade school intended for 'deserving and clever children', took pupils from all over the city ....." (61)

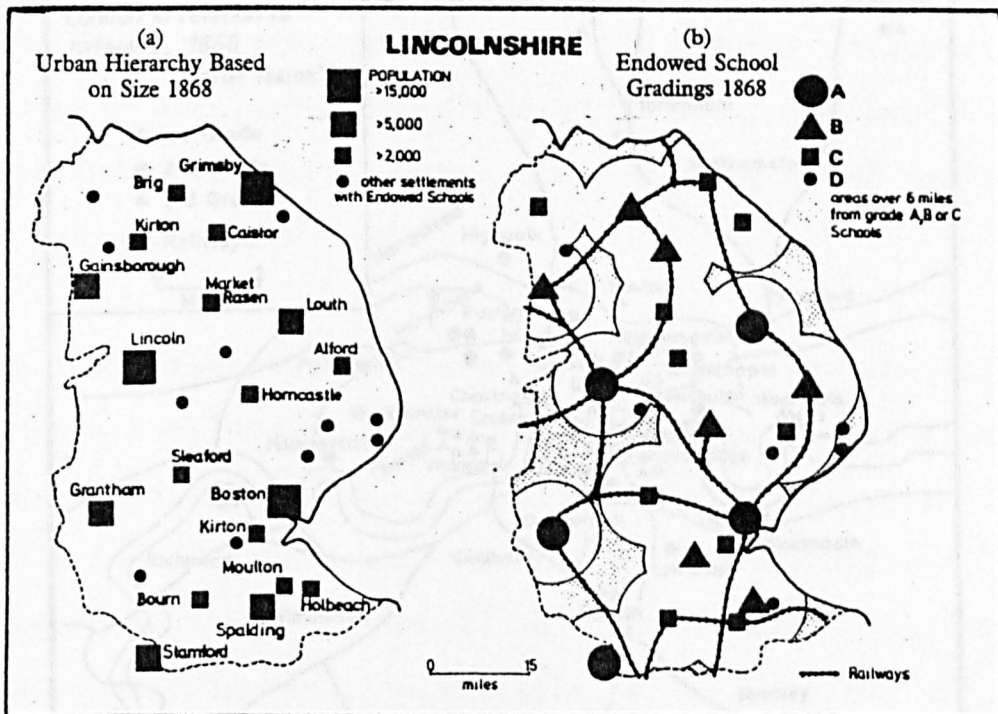
The range of occupations comprising this 'exploding' lower middle class meant that their geographical distribution was extremely widespread though also differentiated and disparate. The type of school available to them to meet their prime needs for "very good reading, very good writing, very good arithmetic" depended on the particular locality. There might be no choice, or there might be several possibilities: the best elementary schools (up to 13); higher grade schools; 'third grade' schools; endowed grammar schools; and in some fortunate locations, the prestigious 'schools of science', with access enhanced by the scholarship system. This geographically complex situation reached its peak in the decade 1895 to 1905 with a massive increase in the number of scholarships; the pattern becoming even more inequitable as authorities varied markedly in their awards policy. An excellent and recent overview of the highly charged and spatially disparate emergence of a diversified secondary sector in England has been provided by Roach (62), which includes revealing case studies of endowed school movements in Bristol and Birmingham, and higher grade school developments in Bradford, Sheffield and Manchester.

The operation of the Taunton Commission, its formalisation of a hierarchy in secondary provision, and the aftermath of the report

engendered a number of interesting attempts at the spatial organisation of schooling, there obviously needing to be a different threshold of population in the age range for each of the grade types envisaged. Brereton proposed a structure along the lines of the French pyramid with provinces (academies) divisions (departments), counties (cantons) and unions (communes), (63) but in practice this was unworkable, inter alia due to the long distances that would have had to be covered by students of first and second grade school outside the major conurbations. Furthermore, the scheme was based on the existing county structure which, as already mentioned had been rendered inappropriate by the transgression of massive urbanisation. Marsden provides two excellent illustrations of the significance of the rapidly developing rail network in providing the logistics for applying the Taunton Scheme to the existing reality of disparate provision, and especially of endowed schools. These are reproduced as figure 3.4 and 3.5 (64) The longer diurnal migrations by train involved middle class boys reaching first grade schools. As shown by figure 3.5 in London this meant commuting back in from the affluent suburbs, whence the middle class had migrated from the inner city. In some other locations the opposite occurred. In respect of secondary education by the time of the Bryce Commission (65) in 1895, despite the fact that:

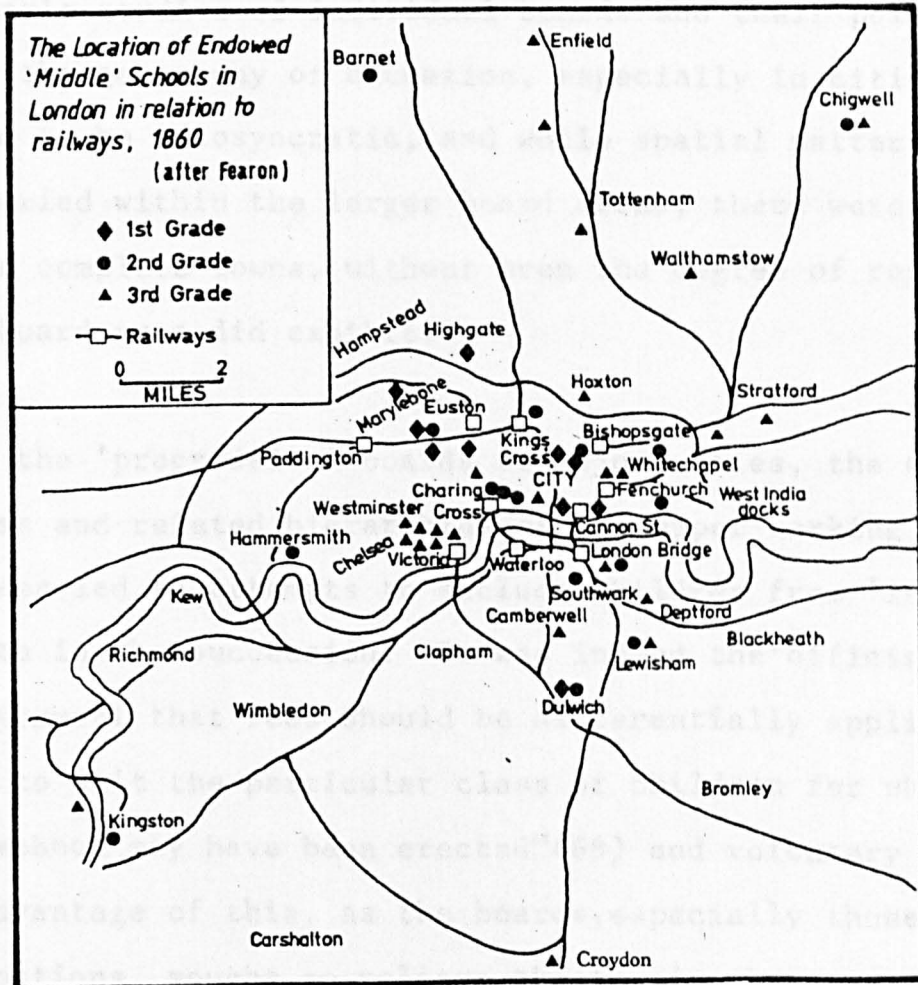
" ... considerable aggregate advance had been made in educational provision for the urban middle classes ... there remained disconcerting variations in access, both geographically and in quality of provision." (66)

FIGURE 3.4 URBAN HIERARCHY, ENDOWED SCHOOL GRADINGS AND THE RAILWAYS IN LINCOLNSHIRE : 1868



Source: W.E. Marsden, Unequal Educational Provision in England and Wales: the Nineteenth Century Roots, The Woburn Press (1987), p. 122.

FIGURE 3.5 ENDOWED 'MIDDLE' SCHOOLS IN LONDON IN 1860  
IN RELATION TO RAILWAYS



Source: W.E. Marsden, Unequal Educational Provision in England and Wales: the Nineteenth Century Roots, The Woburn Press (1987), p. 123.

As mentioned in the previous chapter, the creation of the first real territorially delimited education authorities, the School Boards arising from the 1870 Education Act, rather than leading to a greater conformity or equity in elementary education provision, tended to add to the spatial disparity in this field. As with market towns, there are innumerable studies of individual boards and their policies. (67) In terms of the geography of education, especially in cities, each board tended to be idiosyncratic, and while spatial patterns of schooling varied within the larger board areas, there were irregular tracts, even complete towns, without even the degree of regulated space each board area did exhibit.

Even within the 'progressive' boards of major cities, the acute status consciousness and related hierarchies of the upper working and lower middle classes led to attempts to exclude children from 'inferior' social strata in the succession. It was indeed the official view of central government that fees should be differentially applied:

" ... so as to suit the particular class of children for which a particular school may have been erected"(68) and voluntary schools took full advantage of this, as the boards, especially those of the major conurbations, sought to relieve the tension between their obligation to cater for the masses, and the need to attract the aforementioned and fiercely competitive lower middle classes.

Further disparities arose from reactionary pacts between vested interests to exclude boards entirely, resulting in a deterioration in the stock of school buildings in such areas. In the case of

Stockport, the board was even dissolved with the result that: "... a large and populous district was without schools, that the schools were inconveniently placed and that denominational fees were too high ..." (69), a not untypical situation in regressive Cheshire and similar prosperous 'county' areas adjacent to zones of massive urban growth. By contrast in the major conurbations the: "... value of sites for schools shot up so dramatically that the voluntary system could not have coped. " (70) Inevitably this was most marked in the metropolis where, under the vigorous policy of the London School Board to transform the manners and morals of the manual working class there'sprouted' 500 elementary schools occupying "500 acres of valuable land" (71) while the voluntary sector stagnated. This board was fired with the evidence of acute poverty and educational neglect contained within the social surveys of Charles Booth, but these reports also criticised the London School Board for taking the houses of the poor in order to clear at least fifty sites for new elementary schools; a poignant yet unavoidable geographical transformation if such schools were to be made accessible to the masses in localities of extraordinary densities of slum settlement. Indeed Rubinstein records that the same Charles Booth proclaimed that: "Each school stands up from its playground like a Church in God's acre ringing its bell" (72), and also quotes Philpott's colonising metaphor of: "planting a fort in an enemy's country ... the symbol of tyranny and oppression". (73)

The achievements of the London School Board were monumental, not least, literally, in the field of cultural geography as communities

were often transformed by the establishment of a school. Whereas in 1871 there had been a mere 1,118 pupils in the schools of this board, by its ending thirty years later there were about 550,000, a growth in real terms for outstripping the population increase over that period and indeed combatting the flight of the middle classes noted above in relation to the third grade secondary schools. The higher grade schools developed by the London Board were pioneers of: "... one of the most relevant and forward looking developments in English educational history", (74) in some degree a parallel to the German realschulen. But whereas the realschulen formed part of an officially accepted hierarchy in an organised system, the higher grade schools represented a more organic response to educational evolution in the urban jungle where, in the case of England, social forces prevailed over economic. In eliminating the school boards, the 1902 Education Act:

"... gave a new lease of life to the educationally relatively obsolete but socially reputable voluntary elementary sector; a sector that had proved itself intrinsically incapable of keeping pace with the wide-ranging and intensifying social demands both for a more comprehensive and for a more finely-tuned provision of schooling in increasingly complex urban environments." (75)

Such environments are fruitful subjects for the examination of the simultaneous interaction of social forces at all levels of scale from family through neighbourhood to city, country and even international dimensions and the mediating role of different forms of education in

the relationship between these social forces and urban morphology. Smith compares Birmingham (UK) and Boston (USA) in this respect (76), and finds that while the business elites dominated the development of popular schooling in both cases, the Boston group were clients of the municipal high schools while their Birmingham counterparts were operating a paternalist interest, and presiding over a fragmented system at both primary and secondary levels that was formed in the image of subtle gradations of class and their manifestation in terms of social geography. Class based neighbourhoods developed of course in Boston but with associated networks of schooling differentiated in terms of degree rather than substance. Whereas the segmentation of secondary education was based on selection in England with parallel sectors and geographically separate locations, in the USA "the first public high schools appeared in Boston in 1821" (77) and by the last quarter of the nineteenth century were beginning to make a significant impact in curricular as well as social terms. As Timmons puts it:

"... it is what happened inside the American high school which is most important for the future of education, not only in America but throughout most of the world. It was during this period that an early form of comprehensive education was created within the high school. The way in which this came about is instructive not only because it illustrates how, in the future, education systems in advanced societies would have to allow for the growing aspirations of wider sections of society, whilst at the same time acting as agents of selection within those societies..." (78)

and by 1917 there was even federal government support for vocational



education in all high schools. Furthermore the combination of an increasingly non-selective secondary system and a multiplicity of local (town) school districts enhanced the amount and the quality of interaction between the high school and its local community. So although there was still a strong neighbourhood, and therefore social class, identity with each such school, this may even contribute to the role of recreational and cultural centre for the community.

All this is central to the dynamic of urban geography and related to qualitative urban growth and sectoral expansion based on media of mass transportation, in the case of Boston the 'streetcar', (79) making for clear cut residential segregation. As we have already seen, in English cities the railways carried selected students to their chosen schools often outside of their communities at secondary level. Marsden illustrates such journeys of "train boys" both from the affluent periphery into the "unfortunate central location" exemplified by Manchester Grammar School, then "an island between the chemical fumes rising from the polluted river Irk and the moral poisons exhaled by the casual street sellers and prostitutes of Long Millgate", as well as from the decaying core to the suburban fringe as exemplified by the catchment of Merchant Taylors School, Crosby.(80)

Smith, goes further to link the 'social facts and morphological change' as differentially exhibited in his selected American and British examples, to the political geography of the day in that:

"... the continuing and increasing importance of the national and metropolitan power structure meant that a town like Birmingham developed in

quite a different way from a town like Boston. Whereas the great American cities in Massachusetts and elsewhere continued to be enormously important not only as centres of industrial wealth but also as political stock exchanges in their own right, Birmingham became a provincial backwater." (81)

and yet, as we have seen, he finds Birmingham distinctly more independent of the county and metropolitan establishment circles than was Sheffield in the late nineteenth century while at the same time having a meritocratic link with that establishment through those scholars proceeding from the King Edward VI Schools to 'Oxbridge' and a metropolitan position. But such connections enabled the Birmingham business elite to mount a defence against central bureaucracy, an influence not enjoyed by Sheffield. (82) So whereas Birmingham may have compared unfavourably with Boston in Smith's analysis, it compared favourably with Sheffield. This is not so much a graduated scale as a matter of the geopolitical scale of the comparison. The discussion has also highlighted the significance of the local frame of reference for the illustration of the spatial realities of educational provision for the clientele, of whatever social class and further examples will be given when considering the 'urban geography of education' below.(83)

We shall now turn, initially still within the context of urban England but mostly in respect of wider geographical scales, to a central issue of spatial differentiation in education, namely that of human

mobility. In relation to education this can be retroactive or proactive and may operate at many levels.

### 3.3 EDUCATION, MIGRATION AND MODERNISATION

#### 3.3.1 Introduction : Some Interactive Aspects of Education and Migration

In the course of our exploration thus far of some of the avenues of educational development, direct observations have been made from time to time of the phenomenon, and significance, of migration. The fact that much of this observation is implied and that the examples range so widely across the temporal and spatial selection above, serves to illustrate the universal and fundamental character of migration to much that has to do with the geography of education. Indeed the essence of both fields as given in Figures 1 and 2 in the first chapter showed each of them to be primarily concerned with movement: the former with the dynamics of spatial interaction; the latter with the dissemination of information and ideas. Disparity produces the tension that provides the force for ongoing spatial modification in which education in its various forms can be both cause and effect. In view of the centrality of migration to the theme of this thesis it will continue to manifest itself in various forms throughout the remainder of the text, but at this stage it will be appropriate to consider a model for its analysis. This is provided by Figure 3.6, which is essentially concerned with a scale relationship between two major components, temporal and spatial, with an application to

**FIGURE 3.6 SIMPLE MIGRATION AND EDUCATION PROGRESSION ACCORDING TO DURATION AND 'DISTANCE' WITH AFRICAN EXAMPLES**

Permanent					5
Long Term				4	
Medium Term			3		
Periodic		2			
Duurnal	1				
↑ DURATION	Local	Provincial	International (Regional)	International (Metropolitan)	Intercontinental
DISTANCE →					
EXAMPLE ↓					
1	Daily journey from home to primary school and back can deter female participation in primary education in rural areas.				
2	Residential secondary school often the only post primary possibility outside the urban areas (or for reasons of status, e.g. Bo School).				
3	Higher education in 'neighbouring' countries (eg. Anglophone Cameroonians in Nigeria); also regional universities (e.g. former Makerere and UBLS).				
4	International student flow, more at postgraduate level/ professional training (neocolonial metropolitan flow tendency eg francophones to France; anglophones to UK).				
5	'Brain Drain' of African intellectuals and professionals (e.g. to medicine in UK and to African Studies Centres in (black) USA universities				

examples of educational phenomena. The five scales selected for illustration on Figure 3.6 will be exemplified briefly below, but it must be noted that there are innumerable gradations within and between each of them, and furthermore that the motivational dimension will be introduced to the discussion more in the following section. (see Figure 3.8)

Beginning with the primary sector at about the same time, as Marsden's aforementioned work on travelling to school in nineteenth century England (84), we find of course a more basic relationship between education and migration based on the introduction of universal primary provision backed by the sanction of compulsory enrolment and attendance. For the UK this has been illustrated in a study by Houghton-Evans and Catenby (85) which follows the issue of 'walking distance to school' from the 1870 Education Act through to 1979, thereby incorporating changing circumstances in respect of both behavioural and political geography. The 1870 Bill stipulated a 'reasonable' walking distance for a child of primary school age as being no more than one mile, but by the time of enactment this had been extended to 3 miles, apparently in order to enable non attendance to be sanctioned if a child were legally employed. In both 1876 and 1881 the maximum walking distance was reduced to 2 miles so that many potential pupils were still neither enrolled nor attending, especially in rural areas. Even as late as 1906-7 a Board of Education report noted that:

"... there was a markedly lower percentage attendance in Wales compared to the rest of the country, presumably in consequence of the difficulty of attending in bad weather". (86)

For it was not until 1907 that the new Local Education Authorities were permitted, let alone required, to provide transportation to school. Nonetheless the 1918 Education Act returned to a 3 mile maximum on the grounds of allowing for topographical variations as between authorities and catchments, but in 1933 it reduced again to 2 miles but only for pupils under the age of eight. By this time danger from motorised traffic had become an issue,(87) to which was added the problem of fatigue as affecting academic performance, identified in 1948. All the time it would seem that parental perceptions of acceptable maximum walking distances were reducing in scale and by 1979, according to a University of Leeds survey, parents regarded a maximum of 1200 yards as the threshold. By this time of course about 80 per cent of the UK population was living in a modern urban environment, and one of the post war 'new towns', Milton Keynes, had even been planned and constructed on a basic grid the scale of which was calculated on an examination of the maximum distance between home and school that parents could be expected to walk their 5 year olds four times each day.

While in the nineteenth and early twentieth centuries the migrations associated with the establishment and operation of primary and secondary schools in European and comparable state systems became part of an increasingly complex urban social ecology, at the same time the colonial expansion of some of these states carried within it a dual educational migration of a vastly different spatial order. The large scale component comprised the translation of a model of educational provision to parts of the world to which it was culturally alien and

economically dysfunctional. We shall return to this macro dimension below, but at the local level of the individual school foundations and their 'catchments' we find quite different spatial forces at work.

According to Pollock (88) one of the difficulties facing the successful establishment of a formal school system to replace the traditional mode of non-formal learning in Africa was the radically different spatial parameters involved. The traditional mode was at once local and 'non-place' in that it was an organic component of an integrated and open community system, not a derived, 'private' and spatially discrete operation.(89) Furthermore, the proliferation of mission initiatives with their numerous mini networks and inter-denominational rivalries led to a most irregular spatial distribution of primary schools, which, due to both economic and political constraints in most of the developing world, has still not been extended to form a universal sector geographically accessible to all primary age children. This results in one of the factors constraining the take up of primary provision being excessive walking distance, so that even the most basic temporal and spatial educational migration can be prohibitive. With reference to rural East Africa, Gould was able to identify the clear operation of a 'distance-decay' factor in respect of primary enrolment and attendance.(90)

Whereas in Marsden's examples of diurnal schoolboy journeys to and from selective secondary schools in Lancashire and London took place in the context of urban rail networks, and a degree of choice as between institutions, translation to this sector in Africa was for a

tiny minority and for most involved moving away from their community altogether, at least term by term. As with the primary sector, the location of secondary schools owed much to the whim, chance and competitive drive of individual missions, so that the outcome was irregular in spatial terms and the consequent educational migrations fortuitous, even extraordinary. There was, however, some relationship with the emerging settlement pattern engendered by the colonial economy so that:

"Service facilities in rural areas tend to be concentrated in particular localities creating nodes of development even in areas of dispersed population ... Many innovations spread into rural areas from the towns and diffuse through a hierarchy: In such cases the presence of lines of communication and centres of population is important in speeding up the diffusion process. Large concentrated villages with road links to nearby towns provide more opportunities for rural people to come in contact with new ideas than do small dispersed homesteads". (91)

There is an obvious parallel here with the earlier patterns of colonial settlement in Europe and the role of the settlement hierarchy in influencing the emergence of educational networks and the diffusion of ideas and innovations, and we shall return to this broader issue below. Here we must note the beginnings in the African context of migrational forces set in motion by the establishment of schools that not only resulted in diurnal and periodic migrations of young people as a routine consequence of enrolment and attendance, but also engendered the phenomenon of academic emigration. Furthermore, enrolment and continuation at both primary and secondary schools in



areas of European colonialism involved the payment of fees. Some parents and other relatives would, and still do, migrate to other places to earn money to support the schooling of their offspring and kinsfolk, which would often in turn necessitate outmigration, especially at secondary level. So, in terms of its traditional community and ecology, the human group will be doubly deprived.

The necessity for most secondary students outside of the major cities to attend boarding schools, inevitably led to large migrations of a periodic nature. Such schools were often highly academic, and in East Africa had a further exclusivity thrust upon them in the 1920s by a strong vocational bias in the system as a whole, and a spatial plan for its implementation:

"In the early twenties there was a strong anti-academic bias; the aim was to establish a network of village schools, with one central school in each province affording some post-primary education." (92)

Even in the major urban areas of African and other third world regions the strong migrational imperative arising from an incomplete secondary sector plus multidenominational and multicultural considerations makes for massive diurnal migrations. Some of these are problematical, for example the risks for teenage girls making cross-conurbation journeys by hitchhiking - there being little or no public transport - or failing to reach school at all due to being discriminated against by male bus drivers.(93) As pointed out by Bell (94) in respect of Kampala, the primate cities of African states tend to become de facto

spatially segregated according to ethnic and tribal clustering, with associated implications for differential educational development.

Bell's work is one of two of particular interest that take us on to the next level of migration, regional, and in association with higher education; both are focused on the case of Uganda, the other being by Goldthorpe.(95) Bell ascribes the relative neglect of education as a pro-active factor in migration to the problem of scale in geographical analysis, whereby:

"Aggregate level studies focus essentially on the structural characteristics of movement, that is the volume, distance, direction and timing"  
(96)

This tends to overlook the essential issue of motivation, with which the educational factor is closely aligned. She continues:

"Only through analysis of the so-called 'micro' level, that is at the level of the individual and small group, will the true effects of modern development on traditional society be identified". (97)

The influence of education on migration in Uganda seems to have been well established pre-independence when, by the standards of former British colonies, an unusually complete and operative hierarchy of institutions was developed. This included the relatively early idea of a university (1925), though this did not materialise until 1949. Nonetheless the generic institution, a technical college, may be taken as the genuine seed of Makerere, and it is interesting to note that all of the inaugural intake were from the Ganda tribe of whom Goldberg

enthuses: "No comparable body of educated Africans exists anywhere else in East Africa".(98) However, as the college was located in their territory this was very much a matter of geographical good fortune, but as Appendix D shows, the catchment of Makerere extended into Kenya in the 1930s and into Tanganyika and Zanzibar in the 1940s and 1950s, which meant that the distances over which students would migrate were steadily increasing. Nonetheless tribal concentrations in the origins of successive cohorts were observable, many emanating from pockets of Christian mission settlement and consequent educational advantage. This very disparity in colonial influence and legacy inevitably created migration, but as Makerere ceased to be the only university focus, students from Kenya and (then) Tanganyika began to move in the direction of Nairobi and Dar es Salaam: with the founding of new elite institutions, new cores and new peripheries were created.

Goldthorpe examines some of the factors behind the disparities in origin of the Makerere students over the years in terms of: inequalities of opportunity; parental literacy; kinsmen's education, but the wider range of the sample gathered by Bell and her disaggregation of it into a) university students and professionals b) school students (standard 6), both groups by gender, nationality and (Ugandans only) by region, yielded considerable analytical benefit from operating at the individual level. University students were further subdivided according to 'arts' and 'science' as well as by year. In this way she was able to demonstrate the complex intersection of factors bearing upon migration decisions and

perceptions of the desired destination, with various educational indices and attributes clearly playing a significant role. Yet it was also very clear that other geographical factors had influential effects. For example it was found that the 'Northerners' had a "diffuse pattern of preference" as compared with other groups:

"Until recently the poor quality of communications has hindered personal contact between Northern peoples. Such contact among Eastern, Western and Southern groups with a shared Bantu cultural and linguistic tradition and a long history of economic interdependence may have served to structure a more integrative view within these groups "  
(99)

It became clear from this study that there was a close and positive correlation between past mobility and spatial preferences, so that each experience has a qualitative effect on likely further migrations - a profoundly geographical finding which indicates the importance of a cumulative interaction between migration, information and perception, though personal experience may produce both positive and negative images of places. It is this grassroots migration with education playing both push and pull roles that underpins the broader phenomena such as information flow and cultural diffusion.

A return to a section of Goldthorpe's study will serve to move the discussion on to the next level of educational migration; medium to long term and intercontinental. He found that the most common reason for Makerere graduates to go beyond the national borders was for further study and that, as expected, the majority went to the United

Kingdom, within which certain institutions seemed to figure prominently (see Figure 3.7 ) though apparently not to such a degree as with "colonial students" generally. (100) Although there is still some degree of old metropolitan focus in the academic destinations of those higher education students who enrol on 'out-country' programmes, the whole area of international student flow has developed into a phenomenon of massive scale and complex spatial patterns of new relationships. (101)

It is perhaps in the smaller, and especially insular, colonies that the interaction between geography, education and outmigration was most intense. For example in the case of the then British West Indies, the relative compactness of many of the territories resulted in an early achievement of universal primary education, and although secondary schooling was highly selective, there was normally relative ease of geographical access. As Foner put it in respect of Jamaica: "the greater opportunity for rural children to attend secondary school has paradoxically reduced the worth of such an achievement" (102), and this led to the urbanisation of a significant number of young people qualified to secondary leaving certificate level. Furthermore, the high academic profiles achieved by the scholarly elite and the limited opportunities for gainful employment in small concentrated economies led in turn to a disproportionate degree of academic emigration.

A prime example of this would be the Caribbean island of Grenada in the 1960s and 1970s under Eric Gairy, the archetypal 'mimic man': (103)

FIGURE 3.7 STUDY ABROAD LOCATIONS FOR MAKERERE GRADUATES UP TO 1959

United Kingdom: (a) Universities							
London	..	..	..	..	..	..	45
Cambridge	..	..	..	..	..	..	28
Oxford	..	..	..	..	..	..	22
Bristol	..	..	..	..	..	..	35
Exeter	..	..	..	..	..	..	25
Other English provincial universities	..	..	..	..	..	..	48
(Durham 11, Hull 9, Liverpool 7, etc.)							
Scottish Universities	..	..	..	..	..	..	35
University of Wales	..	..	..	..	..	..	28
Queen's University, Belfast	..	..	..	..	..	..	4
(b) Other							
Legal (Inns of Court, etc.)	..	..	..	..	..	..	18
School of Oriental and African Studies	..	..	..	..	..	..	8
Houghall (agriculture)	..	..	..	..	..	..	14
Loughborough (engineering and co-operation)	..	..	..	..	..	..	9
Teacher training colleges	..	..	..	..	..	..	12
London Polytechnics	..	..	..	..	..	..	6
Hendon Police College	..	..	..	..	..	..	4
Ordination at Canterbury	..	..	..	..	..	..	2
All others	..	..	..	..	..	..	45
All who have at some time studied in U.K.							341
United States of America							
India and Pakistan	..	..	..	..	..	..	23
West Africa	..	..	..	..	..	..	4
South Africa	..	..	..	..	..	..	15
Eire	..	..	..	..	..	..	5
Trinidad (Imperial College of Tropical Agriculture)	..	..	..	..	..	..	6
Canada	..	..	..	..	..	..	2
All other countries	..	..	..	..	..	..	5
(Holland, Belgium, Ethiopia, and the American Universities at Beirut and Cairo, one each.)							

Sources: Makerere College Register, revised to the end of 1959 from College Newsletters and other sources. Study abroad in this table implies attendance at a recognized place of higher education for a course of study extending over one academic year or more.

Source: J.E. Goldthorpe, An African Elite: Makerere Students 1922-60, Oxford University Press and the East African Institute of Social Research (1965), p. 66.

"The onset of Gairyism only intensified these tendencies. Education became an almost magical concept, associated with going away, becoming a 'big man', identifying even more closely with the eurocentric and metropolitan vision and creating a dream of alienation from work, production and the people." (104)

In fact Gairy's obsession with the export of professionals was based on a long history of Grenadians working abroad which in turn was a function of the relatively large number of grammar schools founded by various missions, itself an example of the clustering of educational facilities. Grenadians tend to be disproportionately represented in professional occupations throughout the Commonwealth Caribbean, and even beyond, though this attribute is also true of Barbadians and likewise due to a long history of academic education, though intensified and made accessible for rather different reasons than in Grenada. (105) There are, of course, other examples of small communities with limited resources and spatial/environmental constraints looking to formal education to enhance social and economic well-being and thereby creating an education/migration culture. (106)

A related form of educational migration that falls into the fourth type is that of teacher export, which is a major feature of the educational output and national economics of a number of states, rather larger than the small cases mentioned above. Among the more notable examples are Indian and Polish science teachers in West Africa, Irish teachers in the U.S.A. and UK and, especially, Jordanian teachers throughout the Middle East. Indeed, in the case of Jordan, the production and export of teachers may be seen as a major component

of the economy. (107) Less regular and concentrated in destination would be the deployment of teachers on Peace Corps or V.S.O. programmes.

The fifth dimension identified in Figure 3.6 is that of educational relationships and patterns derived from long term/permanent settlement in the country of destination. For while Todara (108) rightly points out that the vast majority of migrants are motivated by the economic factor, in both 'push' and 'pull' terms, some are drawn by education, and others include educational assumptions or expectations in their calculations. For all, there are educational implications, and also implications for education in both 'importing' and 'exporting' countries. These implications take a variety of forms, and many are problematical, in particular the rate of urbanisation in developing countries and the: "positive relationship between the educational attainment of an individual and his or her propensity to migrate from rural to urban areas." (109) This is partly a function of heightened awareness of modern sector opportunities and partly of the holding of qualifications valued by potential employers in this sector. Unfortunately, within the national parameter of such countries, the employment opportunities for educated manpower, so strongly enhanced by the post-independence indigenisation of the civil service and optimistic assumptions of the role of formal education in creating economic growth have markedly declined, and with them the opportunities for capitalising on individual, community or even state investment in schooling. This, in turn, enhances a related phenomenon, the 'brain drain', which is neither peculiar to developing countries,



nor due only to economic considerations, but does constitute a very explicitly educational form of migration.

As indicated above, neocolonialist relationships often exist between former colonial powers and their ex-colonies, and these include the continued operation of educational links and networks after independence, but the wider market has begun to affect the traditional routes and destinations. Ransford Palmer has examined this wider catchment in respect of the migration from LDCs to the USA which since the mid 1960s "has been particularly striking".(110) Palmer's analysis lends support to the conventional wisdom that if investment in formal educational production exceeds the capacity of the economy to absorb it, then migration (at this level, emigration) results. His attempts to interpret the patterns of third world immigration into the USA on the basis of educational levels reached and distance travelled are, however, only partially convincing, and betray a degree of geographical naivety. He indicates, for example, that whereas 42.6 per cent of the immigrants from India to the USA from 1969-1976 were technically and/or professionally qualified, the respective figures for some of the other countries of origin were: Egypt (35.8); Philippines (26.7); Thailand (19.2); Korea (14.6); Chile (13.6); and Mexico (1.0). He seeks to explain this pattern in the following terms:

"Since distance indicates the cost of travel, it is safe to assume that the better educated are better able to meet these costs, hence their greater share among the emigrants to the USA. In contrast, only 1 per cent of the vast Mexican emigration into the United States was classified as professional

and technical workers, which underscores the pattern that the nearer the developing country to the United States, the smaller the share of professional, technical, and kindred workers among its emigrants to the United States." (111)

This, in geographical terms simplistic, conclusion, while theoretically sound economics fails to perceive important qualitative points. For example : why were the vast majority of Caribbean and Bangladeshi immigrants to the UK from ill-educated rural communities? What effect did the geopolitical relationship between Chile and the USA during the period in question have on the flow of well qualified people from the former to the latter? To what extent would the relatively well developed urban economy of Mexico and the presence of a Spanish medium market in Central and South America for its educated emigrants also affect the quality of Chicano migrants into the U.S.A.? Each of these three questions introduces an additional geographical perspective on the complex of relationships between education and migration at the international level, and each pertains to aspects of the legacy of colonialism, (112) one of the themes of the next section of the thesis.

In concluding this introductory discussion on aspects of the interaction between education and migration based on the five selected dimensions of time and space, it is necessary to remember the range of motivational factors that may operate within the simple progression from local/diurnal to intercontinental/permanent. Figure 3.8 is an adaptation of the typology of Jansen (113), formulated to provide a

FIGURE 3.8 APPLICATION OF EDUCATIONAL DIMENSIONS TO JANSEN'S TYPOLOGY OF POPULATION MOBILITY

Relation	Migratory Force	Class of Migration	Type of Migration	
			Conservative	Innovating
NATURE and MAN	Ecological Push	Primitive e.g. aboriginal societies	Wandering Ranging	Flight from the land
EDUCATION DIMENSION EXAMPLE	Education unable to resolve problems	Informal Community-based Education	Instrumental 'non-place' education	Dysfunctional urban-fringe education
STATE (or EQUIVALENT) and MAN 1	Migration Policy	Forced e.g. refugees; slaves	Displacement (e.g. (Palestinians))	Slave Trade (e.g. (Transatlantic))
EDUCATION DIMENSION EXAMPLE	Little or no regard for education	Severe dislocation of education	Stagnation/decline of literacy/schools	Cultural Colonisation/ Missions
STATE (or EQUIVALENT) and MAN 2	Migration Policy	Impelled	Flight	Coolie Trade
EDUCATION DIMENSION EXAMPLE	Variable regard for education	Desire and ability to retain identity	Retention of values through new schools	Cultural Colonisation/ Missions
MAN and his NORMS	Higher aspirations	Free	Group	Pioneer
EDUCATION DIMENSION EXAMPLE	Education high among reasons for migration	Receptive to new opportunities	UK Research Science 'brian drain' to USA	Educational innovation on periphery
COLLECTIVE BEHAVIOUR	Social Momentum	Mass	Settlement	Urbanization
EDUCATION DIMENSION EXAMPLE	Tendency for better educated to migrate	Transmission of existing values (inc. to education)	Culture clash between informal and formal	Outstrips capacity of systems

CB

Source of original table: Clifford J. Jansen, Readings in the Sociology of Migration, Pergamon, (1970), p. 65. (Education examples added by the writer).

framework for the conceptualisation of population mobility. The writer has added educational dimensions to each category. Jansen's 'migratory forces' may be simplified into: forced, induced or voluntary migrations. Like the temporal and spatial dimensions this is also of course a gradient within the 'induced' category covering a particularly wide range. Forced migrations may involve movement or they may not: the former illustrated by the slave trade and displaced refugee communities; the latter by changes in boundaries while people remain in situ. This could involve a change of nationality and national education system (eg as in the Baltic States after their incorporation into the USSR), or might operate at a more local scale (eg by the creation of new estuarine counties in England - Avon, Cleveland, Humberside, Tyne and Wear - and therefore new LEAs); also the abolition of ILEA and the creation of new LEAs in the Inner London boroughs such as Southwark and Wandsworth (see Figure 3.20 below).

In the formative stages of development - educational and economic - the issue of urbanisation and the colonising role of the city has been mentioned above, with reference to classical and medieval Europe. Traditionally there has been a phased model of migration from local to international whereby:

"... in the large view of population movement, the city in developing countries is both a terminal point for internal migration and a crucial way station for those who later emigrate."  
(114)

To what extent these migrational phases are mediated by or through

education is a question to which there is no regular answer, especially as the motivation to migrate is only educational in respect of a minority. Nonetheless the propensity of those with some educational profile to migrate, already noted by Todaro, and reinforced by Roberts (115) in respect of Latin America, is facilitated by the tributaries of the school network that branch out into the countryside and drain its talent towards the towns and cities. As Preston has observed in the case of rural highland Ecuador:

"The nature of the schools provided depends very much on the community to be served. Schools in canton capitals and larger population centres are always complete in that they offer six grades. Such centres normally also have a secondary school. Establishment of a complete primary school is the objective for parish centres, but there are still many without the full complement of teachers and some that do not offer all six grades. Schools in the outlying parish districts, often only accessible by foot are likely to have only one teacher, or maybe two. The number of children attending the single teacher schools varies enormously from place to place and the number of grades taught rarely exceeds four." (116)

But, like all other networks, it is the movement along it that is significant, and due to other factors such as non enrolment and wastage the flow of potential emigrants likely to be motivated by education alone to leave the countryside for the town is small by comparison with those leaving for other reasons.

### 3.3.2 Colonialism, Migration and Modernisation: the Educational Dimension

European colonialism included a massive dissemination of the distinctive educational model derived from Classical Greece and still retaining its major biases of: urban over rural; male over female; and elite over masses. As we have seen in the previous chapter, this model was adapted to the perceived roles of formal public education in the European nation state, and the systems of primary, secondary and tertiary institutions were developed in effect to colonise the knowledge and awareness of the citizens. In most cases the translation of the model was almost contemporaneous with the spread of colonialism overseas. Indeed, in some cases within the British Empire the idea of popular education was propagated earlier in the colony than in the 'mother country': the American colonies, later to form an independent USA being the prime example.

There is a considerable literature about various aspects of the educational dimension of European colonialism, but despite the fundamentally geographical nature and implications of the exercise, it rarely takes a spatial view. Even at the macro level it tends to be nationally discrete, so that the creation of a new, and in general imposed, political geography in vast tracts of what is now 'the third world' is rarely examined in comparative terms, including the 'historical geography of education' resulting from the efforts of the colonising powers to effect a cultural affinity between colony and metropole despite the numerous ethnic and tribal disparities within

each dependent territory. In effect vast 'educational surfaces' were being created and much of the literature is equally generalised, while also being predominantly concerned with the so-called 'Old Commonwealth'. (117) Some elements of this stock are concerned with networks of direct or diffuse educational influence such as examination boards, educational administration and masonry. (118) Many are case studies on a national scale or of particular institutions or individuals. The fundamental work of Christian missions in the development of networks of formal schooling within the broader themes such as colonial socialisation and cultural imperialism is covered in all these ways, (119) though only rarely does the spatial scale and methodology employed enable us to see the patchwork quilt emerging.

For this to become apparent an integrative anthropological approach is necessary, that will be capable of illustrating the economic and ecological dimensions of mission colonisation, as well as the religious and political. A good example of this is a paper by Charles Gullick and John Crane on the educational and political role of Christian missions in Belize in the early to mid nineteenth century. (120) At this time, Belize was, according to Lowenthal's classification, a society "stratified by both colour and class and containing sizeable ethnic groups in large measure outside the colour-class hierarchy." (121) British Honduras as it then was contained probably the most complex plural society in the Caribbean region:

"American Indians, mestizos, and Black Caribs-African in ancestry, Indian in language, Creole in culture - complicate a basic Creole structure in British

Honduras. Indians and mestizos, earlier excluded from the local power system, have combined with other non-Creole elements that lean more towards Central America than the West Indies. These groups are generally Roman Catholic, Spanish speaking and anti-British, unlike the West Indian Creoles. All value whiteness, but colour lines are less significant in British Honduras than are divisions based on religion, language, and cultural tradition." (122)

The cultural geography arising from this situation was extremely complex, but the relatively large area of Belize permitted aerial differentiation. This included a social class distribution associated with denominational differentiation. For obvious reasons, the Roman Catholic missions were earliest established and of course virtually unrivalled in surrounding hispanic states and colonies. The Anglican presence, associated with British rule and the white elite, was first felt in 1776, while in the second and third decades of the nineteenth century, Baptist and Methodist missions were established with, like the other denominations before them, differential association with the various social classes, to some extent replicating the structural connections in England, as well as "perpetuating in other lands the conflicts that existed in metropolitan and other colonial territories." (123) As in other dependent territories this did not mean a simple translation of individual and interactive mission relations direct from Britain. This was only part of the diffused and received 'blueprint', which was further mediated through additional factors, notably: the mission situation in nearer neighbours; global mission policy of each denomination and its economic implications; and



internal/inter order tensions, sometimes involving locations, languages and cultures in other European countries. Consequently the factors bearing upon educational policy in any particular zone of mission had already received a profoundly idiosyncratic character from their particular genealogies and now they were to be juxtaposed in a unique matrix of indigenous and ecological circumstances.

In the case of Belize, the political and mission situation in the then British West Indies (124), as well as in Hispanic Central America (125) were sieves through which the metropolitan messages were moderated, with Jamaica (126) and Guatemala (127) being particularly significant. From these received positions, and through a succession of individual personalities in the field, the Christian denominations in Belize sought to convert particular sections of the 'local' population as well as each other. The Anglicans concentrated on the white mainly urban elite, and their creole (coloured) relations, and were therefore part of the established political system, operated uniquely in this colony through a Public Meeting System, a Superintendent and the Magistracy. The Roman Catholics, already operating in the region had had a general influence, but especially on the Garifuna (Black Caribs deriving from Saint Vincent), while the Baptists focused on slave populations and Methodists on free peoples outside of the elite. These distinctions inevitably led to a set of geographical operations whose patterns were associated with the spatial distributions and interactions between the various 'indigenous' groups.

These geographical patterns were in turn derived from political and economic considerations on the part of the elite:

"Whilst the settler elite in the Caribbean initially believed that slaves could not serve two masters, God and man, this gradually gave way to the recognition that religion - especially non-conformist protestant religion - promoted work, stopped idleness and curtailed insurrection. In retrospect it can be seen that religion in Belize was very much geared towards the essential settler mode of production of timber extraction which was peaking in the early decades of the nineteenth century". (128)

Conversion and the maintenance of denominational loyalty was directly related to the acquisition and exploitation of "cutting lands", which added an element of economic geography to the factors influencing the emerging geography of education in Belize. Whites, almost entirely in the small elite, sent their sons to Britain, mostly Scotland, and set up the only school in British Honduras prior to the arrival of the non-conformists, which was in Belize City and for the Creole (coloured) sons of settlers. It was run on the 'Madras' monitorial system.

The establishment of schools by the missions in this colony was also indirectly influenced by economic and geographical factors in that the nature of the mode of (timber) production undertaken by their natural adult constituency was both periodic and remote:

"With so many people away the conversion of adults meant expensive, lengthy, hazardous boat trips to the cutters' banks. It was easier to stay in Belize

and teach the children, who might in turn inspire the adults to read the Bible". (129)

This was, of course, mainly a problem for Baptist and Catholic operations, the Methodists operating elsewhere with the "free blacks".

There was also a spatial differentiation in mission education activity according to operational style and management structure, including the sources of finance. Whereas the Baptists had a highly devolved arrangement with each mission station almost free standing, the Methodists had to defer to a regional office in Jamaica, the Anglicans to Britain and the Catholics to their various Order hierarchies in Europe. This created a problem for the Baptists who needed to be on the cutting banks and other interior settlements but could only raise sufficient money by spending the majority of the time in Belize City. As a compromise several 'preaching stations' were set up in the interim but had an irregular and precarious existence. Nonetheless, because the Baptists were "... men possessed of scholastic attainments far superior to those of the majority of Wesleyan missionaries", (130) they gathered considerable ethnographic information and engendered a particularly academic legacy for the dual culture that was being formed by and for the peoples with whom they worked, especially as they used indigenous catechists.

The Methodists were neither of the elite, nor of the people; they explicitly targeted the middle ground, which in Belize meant the merchants who could also provide the river transport for their

peripatetic style. The location of schools therefore reflected the geographical priorities of individual sponsoring merchants. From, 1832 they had their own boat, and significant missions with schools were established at both Mullins River and Charrib Town, with the latter becoming a stable educational centre under a particularly effective local convert. With this education-led diffusion, inroads began to be effected into the already Catholicised Garifuna communities, where Shamanistic rituals were also retained. Still, 150 years later this religious pluralism is sustained, with the Methodist dimension supplying the formal education component, despite continued failure to convert the Garifuna away from Catholicism. According to Gullick and Crane, this:

" ... preference for the middle status Methodist education reflects their rejection of Black and Slave society and their self classification above them in status." (131)

It is clear from the case of Belize that most denominations, while having conversion as their prime objective, were forced to work through schooling which in turn was strongly influenced by the, normally exploitive, economic geography of the colonisation. One of the most distinctive elements of this in the Caribbean, as elsewhere, was the development of plantation economies and societies, often associated with slave or indentured labour.

In Rooke's studies (132) of the formative period of educational provision in the British West Indies, she comes to the general conclusion that:

"... the contribution made by missionaries during the period of slavery and apprenticeship can be best understood in an educational context."  
(133)

Plantations had been established in the region for more than 200 years before the emancipation and then apprenticeship of the slave populations created a new situation. (134) Prior to 1833 very little had been attempted in most territories by way of schooling due to the opposition of the metropolitan government and its Established Church, as well as of the plantocracy. As in Belize, so in the islands the various missions tended to target particular groups and classes and indeed varied significantly in their reaction to slavery which "... hindered the progress of Christian teaching" (135) by forbidding literacy, and in their interaction with the plantocracy which in general opposed them. Consequently, while in Jamaica the Baptist Missionary Society made educational and evangelical progress in the towns, all other missions working on or close to plantations had very little impact. Furthermore as most schools only began during the apprenticeship period and were few and far between, in reality only a minority of the population, probably no more than 10% experienced formal schooling:

"Although many apprentices travelled miles to attend schools these must have been only the very eager. Geographical distances between schools the lack of manpower to build and staff them and the relative novelty of instruction must have proven to be real impediments".  
(136)

Although emancipation and apprenticeship meant relative freedom, the plantations remained, and many still do, ongoing as an important contributor to exports and as occupiers of the best valley lands. In Jamaica there was space for freed slaves to develop subsistence agriculture (137) but in Barbados there was none, because the topography of the island permitted almost complete coverage with sugar plantations so that there was little free land available to emancipated slaves. In any case the scale, holistic ambiance and stability of this colony seems to have contributed to a more liberal view on the part of the plantocracy as to the welfare, including education, of the population at large. The human ecology of Barbados has been neatly encapsulated by Lowenthal's description: "Barbados is a city where sugar grows in the suburbs" and where "almost everyone is accessible to the dissemination of ideas as well as goods and services." (138) As early as the mid-eighteenth century an accommodation was reached between planters and workers, even some slaves, which extended basic educational opportunity.

In the mountainous Windward islands, plantation owners were left with the only cultivable land as newly freed communities tried to establish themselves on the steep interfluves. This not only placed them in isolation from the emergent nodal settlements but also resulted in the subsequent primary schools being located on highly accidented, even precarious sites, where they mostly remain. (139) So in addition to 'mission disparity' sometimes in the form of clustering for competition, the forces of human ecology also conspire to create a

distinctive geography of primary schooling in each of the former British West Indian territories.

In the case of Trinidad the establishment of plantations only just preceded emancipation, consequently that particular legacy was less divisive than elsewhere. As Camacho has it: "In Trinidad rural is not so rural", (140) and despite the relatively large scale of the island, the various communities were accessible to the missions, and the particular associations that developed have endured with evolving spatial patterns of provision as the overall composite system emerged through both dependent and independent phases of political growth. For example the focus of evangelical and educational work for the Canadian Presbyterians who arrived late on the mission scene in 1868 had to be with the thus far untouched East Indians of the deep centre south of Trinidad. (141) By 1911 they had 61 schools on the island and were giving unprecedented opportunities for girls. With the subsequent urbanisation of the society and attendant educational reform, the schools of this mission are more widely located including in the capital where they have the most effective and prestigious girls' secondary schools in the 1990s.

As mentioned above in respect of the various Christian missions at work in early nineteenth century 'Belize', their capacity to undertake field work, including education, depended differentially on the geographical dimensions of their organisational structure, especially outside of the territory itself. This included: whether and where they had other missions; what their fortunes were; and how this

affected strategic decisions for the Denomination, Society or Order in question. For the Caribbean missions in general, the near coincidence of the emancipation with the shift of metropolitan, colonial and mission interest to Africa and Asia (142) was a severe constraint.

With respect to Africa, there was an additional and direct link with the Caribbean that contributed to the transfer of focus for many missions, namely the return of freed slaves from the New World to the Old, though rarely to the precise location of origin. This movement is selected by Hildergard Johnson in her substantive contribution (143) to Missionsgeographie, and therefore also the geography of education, as one of the key formative influences on the locational pattern of Christian missions in Africa in the nineteenth century - and inevitably West Africa in particular. In addition to the geography of freed slave resettlement, other factors selected by Johnson are: disparities in the diversity and distribution of the indigenous population; the role of relay ports and overland routes; the evolution of mission fields.

Although there were some attempts, not one of the numerous Christian missions to sub-Saharan Africa arrived via an overland route, such was the completeness of the desert barrier at that time. So not only did they move inland from a landing point, they relied upon imports through that 'relay port' to sustain their activities. Of such ports, the eponymous Freetown was the supreme example, where in 1787, 270 freed slaves of a ship's complement of 400 survived the passage from England, having already crossed the Atlantic Ocean from the West



Indies. (144) In the spirit of emancipation and recompense, land was purchased the following year and by 1790 the St George's Bay Company stated clearly in its founding objectives for the new settlement that schools would be opened: "for reading, writing and accounts; and to receive and instruct the children of the Natives if sent to the schools." (145) Of course, the sub-Saharan colonisation by Islam had already reached what was to become Sierra Leone, though the innumerable tribal groups retained their indigenous languages and Shamanistic religions. So with the arrival and consolidation of a Christian colony there began the broad geographical dichotomy that characterises the countries of West Africa.

In the case of Sierra Leone this dichotomy was accentuated by the distinctive Caribbean culture of the black settlers and the near insularity of the mountainous Freetown peninsular where, in the fervour of mission activity the roots of key educational institutions were planted. Foremost among these was Fourah Bay College, founded in 1827 and sited, as if to symbolise its function of enlightenment, on the summit of the massive ridge separating the then small colony from the interior. Within the Christian settlers there was also a cultural divide, between the 'British' blacks from Nova Scotia and the 'American' blacks from the newly independent U.S.A. Even though both were Protestant, care was taken to locate the latter at Cap Meswado, while the Catholics too had their separate station on the Freetown peninsula. In effect Freetown became an 'educational/mission entrepot' where in this case the value added re-export was to be: "Africans who served in many other territories." (146) They were

teachers, but they were also Christian cash croppers responsible for the first modernisation of the rural economy, for example as far afield as Abeokuta in Yorubaland (147). Here cotton plantations were created on a totally different principle from that underlying the slave based extensive production of the same crop in the southern U.S.A.

There were other relay ports, notably Fernando Po, leased by Britain from Spain in 1827 and serving as an entrepot for mission work in Calabar and Douala, and for the Roman Catholics there was Libreville where:

" ...the Congregation of the Holy Ghost established the important center of Sainte-Marie de Gabon in 1846, from which emanated Lambarene on the Ogooue Loango with Kakamoeka farther inland and Huila, a highland center in Angola reached from Mocamedes in 1885. After erecting stations in Landana, Banana and Borna, the Holy Ghost Fathers acquired Linzolo near Brazzaville, a commanding site at the south end of Stanley Pool ..." (148)

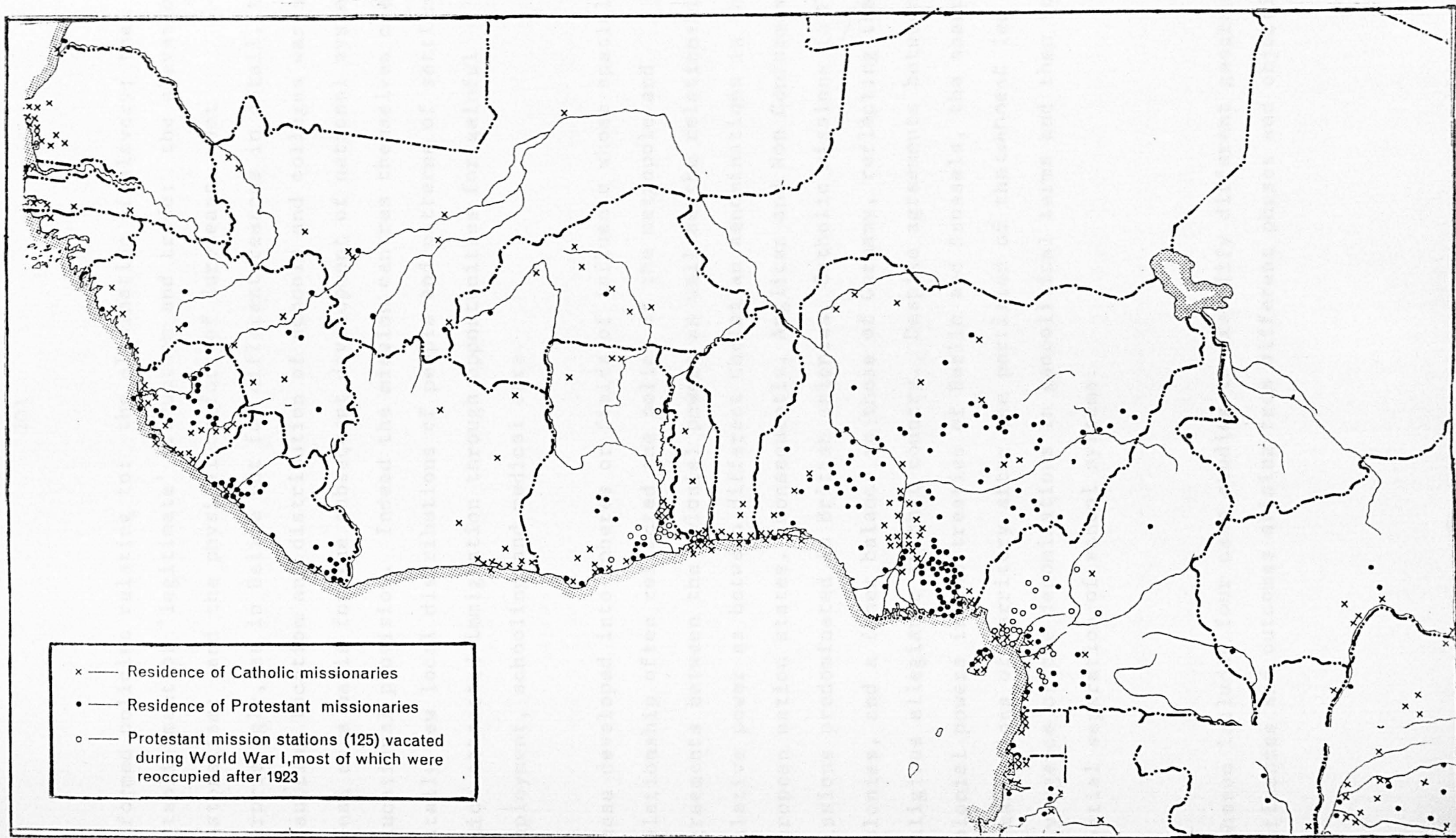
which was the prime site for which many other denominations were striving by exploring the waterways of the Congo Basin.

Education, for both children and adults was at the forefront of the mission colonisation, but it was instrumental and economy led. In Africa at least there was the drive to replace the slave trade with legitimate trade. This required the identification of caravan routes and the establishment of villages at strategic points where, inter

alia, schools were founded for freed or rescued children. So the maritime entry, the relay port, the river system and the caravan route all formed part of the essentially geographical sequence of the first phase of European educational colonisation in Africa where the "older mission stations are cultural landmarks." (149) Once established, the missions began to set their sights on the major concentrations of population, though many of these were already Islamic with, especially in the case of Britain and Germany, the Moslem elite collaborating in colonial administration. Major efforts were made to convert Ugandan tribes to Christianity and hence halt the advance of Islam, while Rwanda Burundi found itself at the focus of converging lines of Catholic and Protestant advance. In both cases therefore, a geographical concentration of missions and related educational developments occurred. Figure 3.9 provides an overview of the Missiongeografie of West Africa in the 1920s.

There were other more basic and mercenary considerations involved in some places, for example such concentrations of educational activity as were developed on the Akwapim-Togo mountains, the Jos Plateau and the Usambara highlands owe "as much to their climates and scenic attractions for Europeans as to dense populations on defensive sites." (150) Behavioural perceptions were also involved in some cases where missions targeted pastoralists rather than cultivators in view of the pastoral dimensions of some Biblical texts. So it would appear that the spatial patterns of the formative period of mission education networks owed less to the pre-existing disparities in indigenous population distribution than to clearly defined and geographically

FIGURE 3.9 LOCATION OF CHRISTIAN MISSION STATIONS IN WEST AFRICA IN THE 1920s



Abstracted from: Hildegard Binder Johnson, 'The Location of Christian Missions in Africa', *The Geographical Review*, LVII : 2 (1967), pp. 168 - 202.

informed policies relating to: the elimination of slavery; the establishment of 'legitimate' production and trade; the elevation of pastoralism; and the physical comfort of Europeans. Not surprisingly, as in Belize but for different reasons in detail, the resulting location and distribution of schools and colleges was not ideal as a basis for the subsequent development of national systems of educational provision. Indeed the mission centres themselves created totally new local distributions of people and patterns of settlement which attracted immigration through opportunities for gainful employment, schooling and medical care.

These developed into spheres or fields of influence whose spatial relationship often reflected the policy of the metropole and agreements between the colonial powers as well as the relationship and relative power as between different Christian denominations in the European nation states. Consequently, Anglican and Non Conformist missions predominated in British colonies, Catholic missions in French colonies, and a finer balance in those of Germany, reflecting the dual religious allegiance in that country. Despite agreements between the colonial powers in the treaties of Berlin and Brussels, the sharp demarcations of territory after the partition of the continent led to a divergence of the denominations in geopolitical terms and then to the spatial separation of school systems.

Johnson includes four case studies to exemplify different geographical influences and outcomes arising from different phases and objectives

in respect of the legacy of mission activity for contemporary African geography. These are summarised, and comprise Appendix E , but we shall now focus on another case in Yorubaland which introduces additional factors with fascinating geographical implications, namely the insightful and aforementioned study by Adeniji of the educational dimensions of the Agege Plantations in the early decades of the twentieth century.

As with Gullick, Rooke and Johnson, Adeniji also places education at the forefront of mission policy and activity, with absolute priority given to adult literacy in the case of Yorubaland. But it was tied closely into a form of 'agro-economic education' whereby the African rural population would be able to break free not only from slavery and exploitation but also have the appropriate skills and attitudes to effect an agriculture-led modernisation of the region. As mentioned above this took the form first of cotton plantations which inevitably crashed after the end of the American civil war - an ironical outcome of the historic linkage between Africans and America. But as Adeniji shows: "... the agro-economic education imbibed by the Yoruba farmer was not destroyed." (151)

The Agege-Ifako Agricultural Institute was one of a number of such ecologically based enterprises inspired by West Indians or descendants of West Indians who had received western education through the vigorous mission work emanating from Freetown in Sierra Leone. The aim was to draw interest and support from the influential social classes so as to effect a real relationship between urban and rural.

So the Institute "admitted the cream of Lagos society alongside illiterate farmers", thus placing the "half hearted illiterates and crass illiterates" together with the educated elite. (152) The thrust of the curriculum was very closely focused on cocoa growing with content ranging from the elementary, to high level research into biological, technical, and economic innovation. It is estimated that at least 10,000 students, the majority Yoruba farmers, passed through the Institute and many then dispersed within Yorubaland and beyond not only to work in 'agricultural extension' but also:

"... to propagate Christianity, especially in parts of Ekitland where the newly imported religious faith spread like bush fire." (153)

They worked through both 'Consultancy' and 'Correspondence', the latter being operated literally as actual written communications with underprivileged farmers, and therefore an early form of distance learning. But the dissemination of information was not only from urban to rural, and continued well into the 1950s with the influence of the Institute on the establishment of 'Farm Settlements' in the important towns.

So here we have an educational phenomenon with multiple geographical dimensions, focused on the productive land, deriving its impetus from the Creole dynamic of Freetown but designing its own realistic curriculum for a form of local modernisation and development that pulled urban and rural together. It was achieved in the face of European opposition and designed in part to demonstrate African

ownership of economic and social development by creating a positive self-image, a capacity for experiment and innovation, and a resistance to urbanisation as the only way forward.

The significance of the internal ownership of the development of the rural sector and especially cash crops, in nineteenth century West Africa, clearly owes a great deal to the spirit of recovering ownership of culture and identity that was activated by the return of Afro-Caribbeans. In the West Indies as we have seen, the plantations were entirely exploitive and even after emancipation left a legacy of land tenure and operation that gave rise to bizarre patterns of settlement and related educational disparities. The small scale and accidented topography, of many of the islands, when added to the survival of plantations, effected an enforced inertia on the locational pattern of primary schooling. But even where such additional constraints were absent, the tendency for reinforcement of formative spatial patterns as the system expands is common. For example, as Dada noted in respect of the post-independence universal primary education programme in Nigeria, it: "tended to reinforce and replicate the gaps and disparities in the national picture of educational provision". (154)

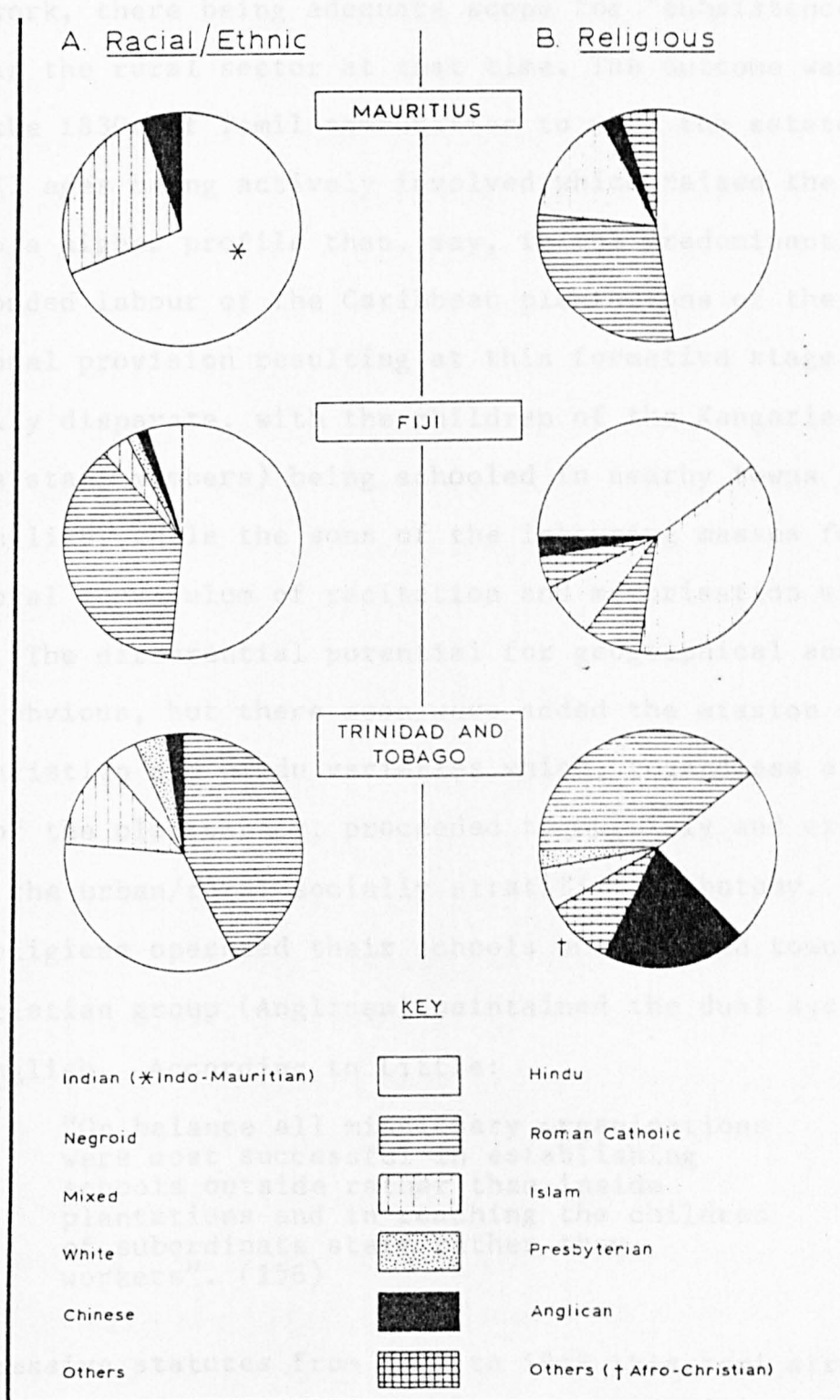
Another formative influence on the development of legacies for the geography of education through migration was the dispersal of sub-continentials. It has been noted above that the alienation from the plantation of emancipated black West Indians in many of the Caribbean Islands was accentuated with the arrival of indentured labour from the



Indian sub-continent. They referred to the newcomers as 'East Indians', so as to distinguish from themselves, though in the case of the Netherlands Antilles and especially Surinam this terminology was, and remains, confusing due to the importation of labour also from the 'Dutch East Indies'! More problematical was the early evidence that the communities from India adopted a positive reaction to Western schooling and there developed an intercultural divergence in educational profiles that became evident spatially in view of the differential distribution of the two ethnic groups. The East Indians of the Caribbean were a mere part of the near global diaspora of sub-continents, a particular scale of migration that has other examples, such as the Jews and the Chinese. But the particular relationship between Indians, plantations, other occupational possibilities and education varied from place to place, as did the proportional effect on the ethnic structure of the colonial population. Nonetheless strong parallels, and therefore good opportunities for comparative study, exist between small island states from the different tropical island zones (see Figure 3.10), and form part of a high incidence of pluralism in the small island communities. (155) With the larger territories receiving indentured labour from India, a range of human ecological implications became evident which in turn influenced the geography of education. We shall therefore take examples from Sri Lanka, Fiji and Malaysia.

In economic and migrational terms, with attendant implications for schooling, the collapse of the initial seasonally based coffee plantations in Ceylon, and their rapid replacement with permanently

FIGURE 3.10 COMPARISON OF RACIAL/ETHNIC AND RELIGIOUS STRUCTURE AS BETWEEN MAURITIUS, FIJI AND TRINIDAD AND TOBAGO



Source: Colin Brock 'Probl  ms of Education and Human Ecology in Small Tropical Island Nations', in: Colin Brock and Raymond Ryba (Eds), A Volume of Essays for Elizabeth Halsall : Aspects of Education, 22, University of Hull Institute of Education (1980), pp. 71 - 83.

operative tea plantations is significant. It was partly due to blight, but also to the resistance of indigenous rural communities to plantation work, there being adequate scope for 'subsistence affluence' in the rural sector at that time. The outcome was the arrival in the 1830s of Tamil communities to work the estates, both sexes and all ages being actively involved which raised the issue of education to a higher profile than, say, in the predominantly male, adult and bonded labour of the Caribbean plantations of the period. The educational provision resulting at this formative stage was geographically disparate, with the children of the Kangaries (subordinate staff members) being schooled in nearby towns in the medium of English, while the sons of the labouring masses followed a religious/moral curriculum of recitation and memorisation within the plantation. The differential potential for geographical and social mobility is obvious, but there soon were added the mission schools of Buddhist, Christian and Hindu varieties which, regardless of the opposition of the plantocracy, proceeded to multiply and expand, building on the urban/rural socially stratified dichotomy. Whereas the Asian religions operated their schools only in the towns, the dominant Christian group (Anglican) maintained the dual system, though both used English. According to Little:

"On balance all missionary organisations were most successful in establishing schools outside rather than inside plantations and in reaching the children of subordinate staff rather than workers". (156)

Despite successive statutes from 1907 to 1948 this semi structured disparity remained and became intensified with the disenfranchisement

of the Tamil communities on the Independence of Sri Lanka. Even the land reform Acts of 1970s which led inter alia to the integration of the state schools into a national system did not deal with the ingrained disparities in respect of buildings, materials, teacher quality and quantity, and though moderated to some degree in the 1980s, these still remain as a profoundly geographical legacy of colonial intervention. Since plantations are the responsibility of a different ministry of government from that dealing with the schools within them and their links with later phases outside, there is a discordance in respect of the geography of political economy and the geography of education which is further complicated by differential attitudes of plantation owners and managers: " ... there is a far greater heterogeneity among schools inside plantations than outside in the rural regions." (157)

Nonetheless the educationally disadvantaged situation of Tamil plantation communities can still be seen in comparison with the national averages for Sri Lanka for literacy rates, wastage rates, proportion of untrained teachers and the pupil-teacher ratio. Moreover the first (primary) cycle of schooling is plantation-based, making access to the next phase more difficult than it might otherwise have been. (158) It would seem clear that the poor educational profile of Tamils in Sri Lanka, relative not only to the majority host population but also to Indian expatriates elsewhere in the diaspora, has more to do with the dissonance between the economic and political geographies of the country than with any innate or cultural antipathy for Western education.

The position of Indians in Fiji is different again though still related to the colonial implantation of extensive agriculture, in this case sugar estates. From the outset in Fiji, constraints were imposed on the Indian immigrants in respect of land holding. Under British colonial rule: "Fiji's economic development was founded on a tripartite arrangement: European capital, Fijian land and Indian labour", and although "the livelihood of the communities was interdependent, their association was not as equals".(159) So the major export became largely a European and Indian affair, while public administration rested upon European and Fijian cooperation. This situation encouraged Fijian Indians to seek economic and social advancement in the modern urban sector, through the vigorous take up of educational opportunities. This became apparent as early as 1944 in 'The Stevens Report' (160) where official statistics show that of the 228 boys enrolled in the secondary sector, 150 were Indian, and 25 of the 29 girls were European. Although from the mid 1960s there was a considerable expansion of the secondary sector, by the mid 1970s Indian boys still outnumbered their Fijian counterparts by 2: 1. Furthermore there had been a massive growth in Indian female enrolment at this level, and with higher birth rates on their side, both male and female enrolment rates have been 'pulling away' from the Fijian rates. Given the longer standing record of the Indians in Fiji in respect of schooling it is not surprising to find that the absolute number of candidates pressing for university places favours the Indians at the ratio of about 4:1. (161).

All this takes place through geographically distinctive educational locations and routes, indeed, according to Whitehead:

"The precise nature of Fiji's education system has been determined by the geographical layout of the territory, the mixed racial composition and contrasting cultural backgrounds of the population, and by the legacies of British colonial education policy. The far-flung distribution of the Fijian Islands has always posed a communication problem and necessitated the building of many small schools, while racial distinctions have given rise to segregated schooling and frequently to wasteful duplication of facilities. Finally, the British implanted an education system based on the voluntary school principle. While this idea fostered local interest and initiative in the establishment and running of schools, it also gave rise to serious qualitative deficiencies in many of them, to the encouragement of racially distinct schools, and to inadequate provisions for schooling especially in rural areas". (162)

One would of course wish to take issue with Whitehead's initial and naive adoption of geographical determinism, but that apart, the passage illustrates very well the increased capacity for spatial disparity in educational provision which arises from the conjunction of the range of qualitative factors operating in this case, and especially from the aspects of land tenure, social segregation and extreme devolution of responsibility for the provision of schooling.

The fourth case from the Indian diaspora, that relating to West Malaysia, will be used to further illustrate the relatively poor educational profile of plantation communities, and also to move on to

other dimensions of human migration with great significance for the geography of education, namely lines of transportation, urbanisation and urban social segregation.

The influx of Indians, mainly Tamils, in Malaya followed that of the Chinese tin miners of the mid nineteenth century, and was focused on the period 1890 to 1920 and the rubber plantations developed in the western foothill zone along the railway line ... "which ... ensured easy accessibility to the ports for export". (163) In the 1920s Indian labour was also used on the newly established palm oil plantations. The north-south railway constructed at this time was associated with the emergence of "immigrant dominated inland towns" -sited where this line intersected with older east-west rail and river routes. During the years of economic depression, and especially 1931-34, there was a net outflow of Indians, and their numbers were further reduced by way of being selected for forced labour on the Siam-Burma railway by the occupying Japanese in the early 1940s. Between 1946 and Independence in 1957 there occurred a massive ethnically differentiated urbanisation phase. While there had already been the beginnings of a drift towards local and regional urban centres on the part of the non-Malays, this was accelerated, regulated and enforced by the colonial administration which had also been responsible for creating separate systems of formal education for each of the major ethnic groups. As has been noted, the Indian communities of Trinidad and Fiji were involved in urbanisation associated with an improvement of educational profiles and the subsequent acquisition of modern sector employment. In the Sri Lankan case this has not happened due

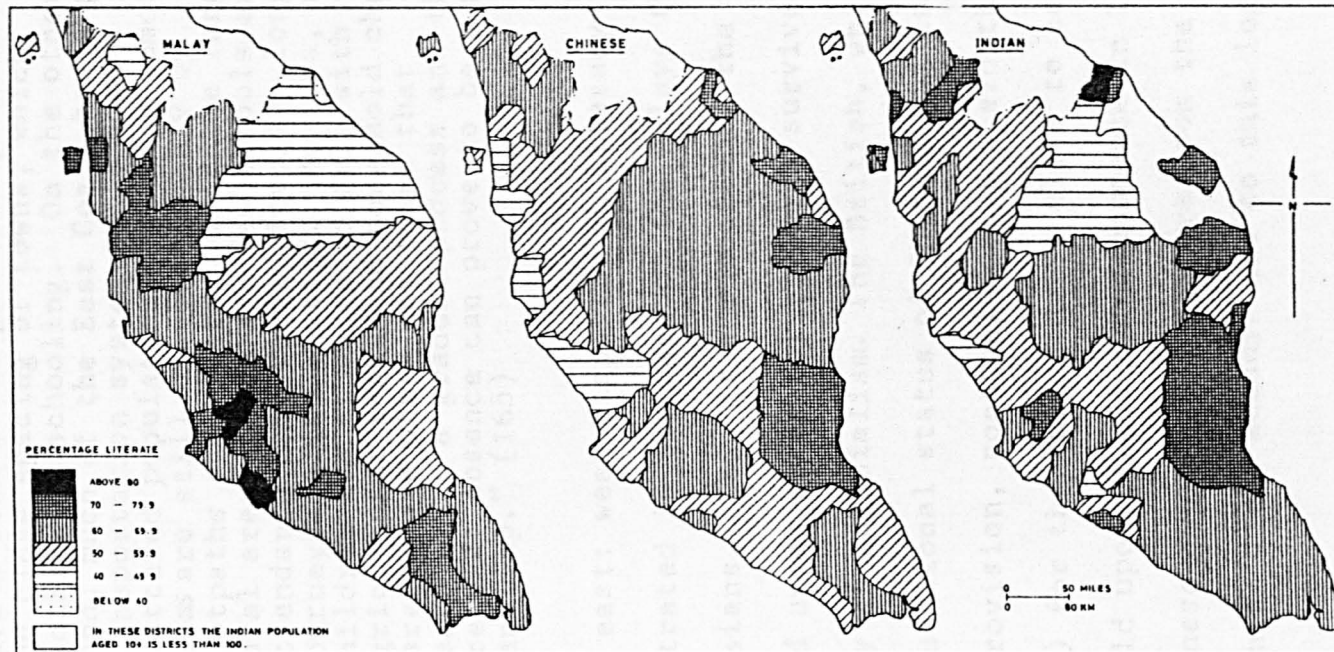
to the geopolitical proximity to India and related social tensions within the country, and as seen from Little's account the Tamil plantation communities there still have an educational profile inferior to that of the majority group , the Sinhalese.

In peninsular Malaysia, where the Indian sector of society is, post-independence, relatively free from locational restrictions on residence imposed on them under British rule, there was, by 1970, a significant regional disparity in respect of literacy, as illustrated by Figure 3.11. It will be seen that the main zones of Indian rural/plantation settlement in the west are, by this index of education, poorer than the minority Indian groups in the east. Jones and Sidhu suggest that, for both Chinese and Indian West Malaysians, in addition to the plantation legacy (now only educationally apparent in the older age groups), there has been a tendency for the major urban centres in the west to attract illiterate and semi-literate migrants as well as those who have qualified for modern sector professional employment. Furthermore, in the east where they are a small minority they may both: "have stressed education in order to preserve their cultural identity." (164)

Figure 3.11 also enables the reader to compare spatially the literacy patterns of the three main ethnic groups of West Malaysia, and shows the Malay position to be the opposite to that of the Indians and Chinese; that is to say, literacy rates are lower in the east where the Malays form the numerical majority, though as Jones and Sidhu



FIGURE 3.11 THE GEOGRAPHY OF LITERACY IN PENINSULAR MALAYSIA IN 1970



Source: Manjit S. Sidhu and Gavin W. Jones, Population Dynamics in a Plural Society : Peninsular Malaysia, UMCB Publications (1981), p. 215.

point out there are important intrastate disparities. For example, in respect of Malays:

"The more urbanized foothill districts west of the Main Range have higher literacy rates. This is not surprising as these economically developed areas have a well developed transport network and close spacing of towns, which facilitates schooling. On the other hand, much of the East Coast has a poor transportation system and a more scattered population, and many remote areas are still accessible only by footpaths and rivers. In these largely rural areas there are few schools and attendance necessarily involves long journeys, often on foot. Besides, rural children are expected to help with agricultural tasks and household chores; parents are often not aware that learning is a gradual process and that frequent absence can prove to be a major handicap." (165)

Furthermore, the east: west disparity in literacy is more marked and spatially concentrated in the case of the Malays than with the Chinese and Indian Malaysians. This is a function of the political dominance of the middle and upper class Malays which survived Independence and is a clear legacy of colonialism. The British, while indirectly favouring the educational status of Chinese and Indians through English medium provision, nonetheless also laid the educational foundations (166) for the ruling Malay elite to cement their political position and build upon it after Independence in 1957. The early secession of Chinese dominated Singapore from the independent federation was in no small measure due to this legacy.

As Brock and Cammish found in a survey conducted in six developing countries, the economic and social impediments facing the enrolment and retention of girls in the school system are still strongly in place and both supported and illustrated by geographical factors, especially the spatial disparities and incompleteness of even primary provision and the related issue of distance between home and school. (167) In respect of gender, Malaysian Indians have a chronologically mixed educational record. The turn of the century immigrant plantation communities were predominantly male, but by the 1920s and 30s there were significant numbers of Indian females with a higher literacy profile than either the Malays or the Chinese at that time, a position that was still held at the time of Independence. However, the period between the cessation of Japanese occupation and Independence was one of rapid rise in female literacy rates, especially among Malays and so: "by 1970 Indian females had actually been surpassed by other races in the youngest age groups." (168) While the Chinese advance in this respect was related to their dominant commercial position in the larger urban centres and the growth of modern sector employment for both sexes, the Malay equivalent was a more politically motivated enhancement of female educational opportunity so as to ensure a competitive, even dominant position for Malay females in the rapidly increasing high level 'manpower' sector, especially the Civil Service.

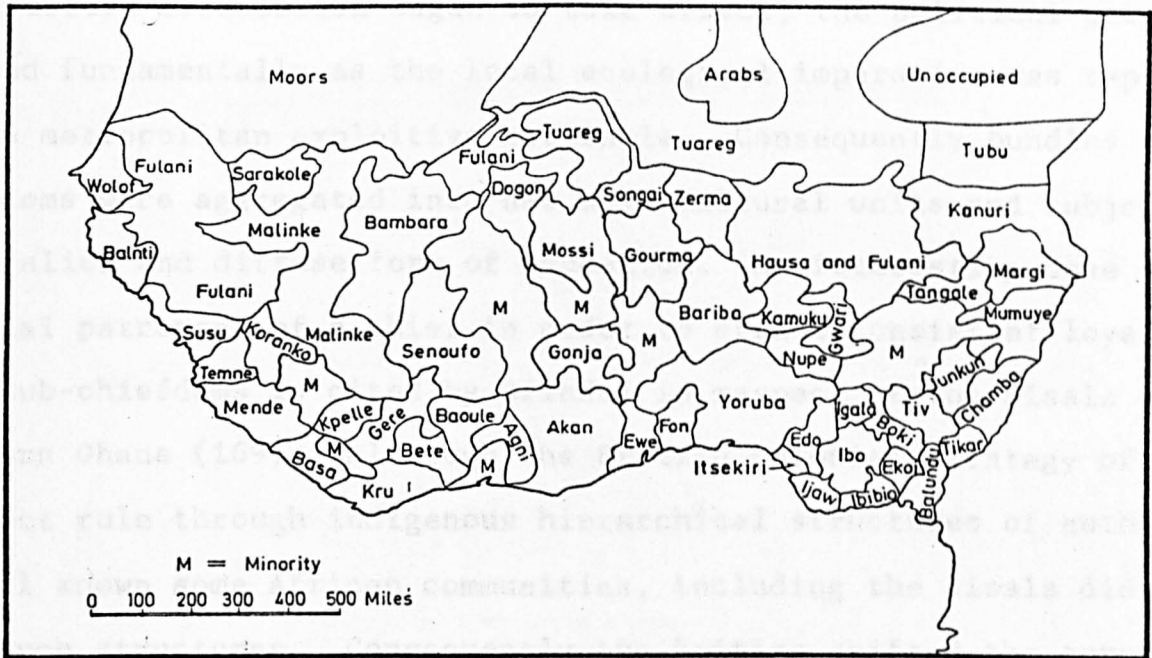
While the discussion of the Malaysian variant of the Indian diaspora originated with the indentured labour migrations of the late nineteenth century and therefore paralleled the observations on

aspects of the educational experience of sub-continental plantation communities in Trinidad, Fiji and Sri Lanka, it will also be consciously used to introduce additional dimensions to the commentary, which have spatial significance in educational as well as other respects. These dimensions include : intercultural comparisons and interactions; social structures, especially class; and gender, and are obviously apparent in rural as well as urban settings. This part of the discussion will also be extended to that aspect of migration that is, perhaps, most crucially linked with education, namely urbanisation, to which we shall now turn.

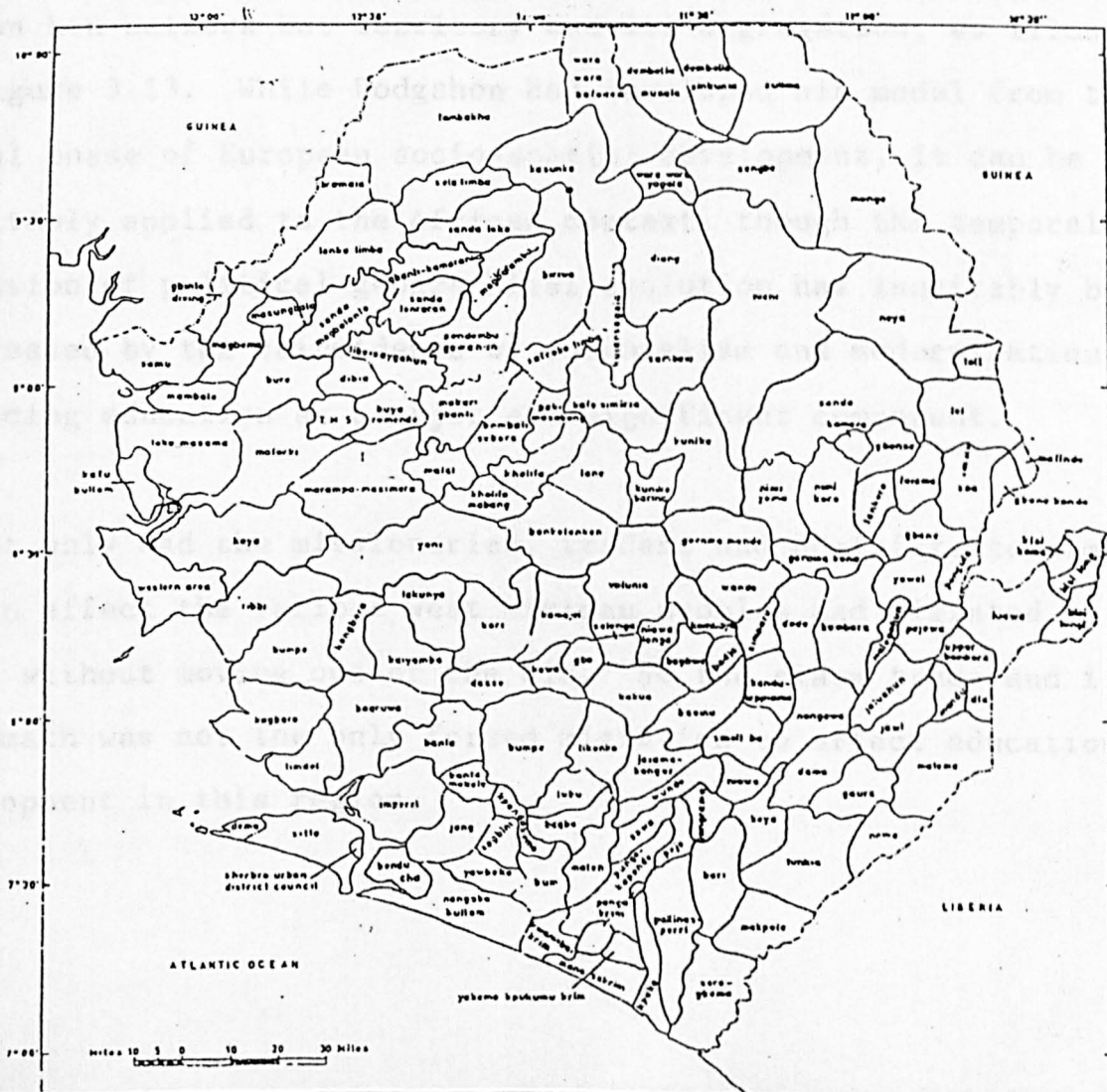
### 3.3.3 Intercultural Patterns, Urbanisation and Urban Education

Intercultural interaction and its spatial manifestations are of course implicit in much of what has been discussed in the preceding, mainly rural, section. Almost all of the literature on intercultural/multicultural education addresses the issue in an urban context, which is given, and furthermore a metropolitan context where much of the migration behind the creation of that context has been long distance, long term and recent. Before addressing that context, we need to remember that in developing countries in particular the rural societies are distinctly multicultural, and were often so well before any indentured or slave labour was introduced. Consider, for example the number of major ethnic groups in West Africa, and within these the innumerable chiefdoms of just one small component like Sierra Leone (see Figure 3.12). In such situations, mutually unintelligible vernaculars may be juxtaposed, each one being the language for just a few square miles and the medium for a discrete system of traditional economically instrumental education.

FIGURE 3.12 (a) WEST AFRICAN ETHNIC GROUPS



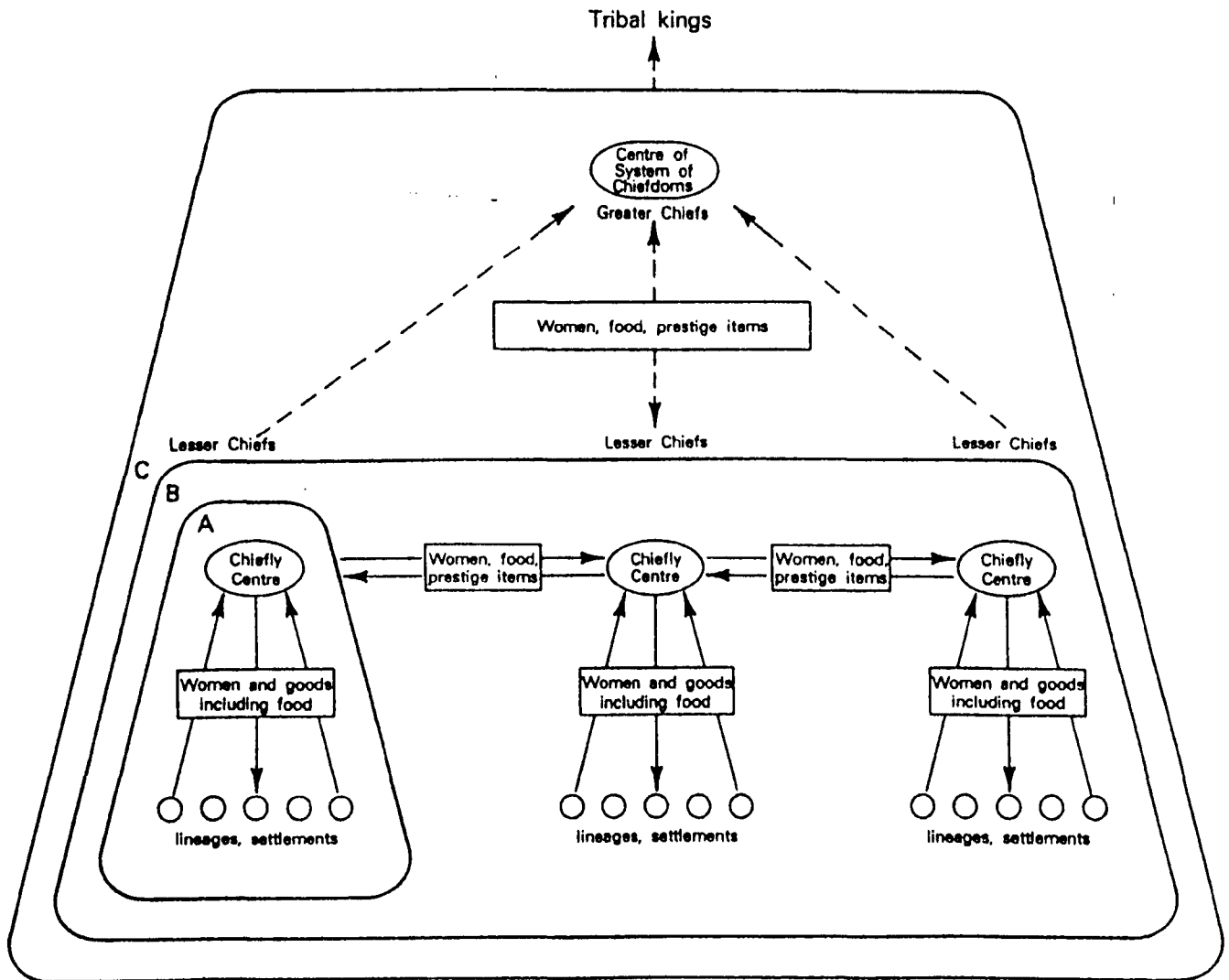
Source: W.B. Morgan and J.C. Pugh, West Africa, Methuen (1969) p. 16.

FIGURE 3.12(b) THE CHIEFDOMS OF SIERRA LEONE

When western colonialism began to take effect, the political geography changed fundamentally as the local ecological imperative was replaced by the metropolitan exploitive rationale. Consequently bundles of chiefdoms were aggregated into new multicultural units and subjected to an alien and diffuse form of education. An interesting case of colonial patronage of a chief in order to effect consistent loyalty from sub-chiefdoms is cited by Grindal in respect of the Sisala of Northern Ghana (169). Although the British colonial strategy of indirect rule through indigenous hierarchical structures of authority is well known some African communities, including the Sisala did not have such structures. Consequently the British shifted the target of their patronage to the sub-divisional level in order to ensure support for any emergent or imposed paramount chief. It would seem that the result was similar to Dodgshon's aforementioned shift from rule based not on kin network but territory and its aggregation, as illustrated by Figure 3.13. While Dodgshon had developed his model from the tribal phase of European socio-spatial development, it can be profitably applied to the African context, though the temporal dimension of political geographical evolution has inevitably been compressed by the coincidence of colonialism and modernisation, including education as a major and significant component.

So not only had the missionaries, traders and administrators moved in, but in effect the various West African peoples had migrated into a new world without moving out of the old. So the slave trade and its aftermath was not the only forced migration to affect educational development in this region.

**FIGURE 3.13 KINGS, CHIEFS AND LESSER CHIEFS : EARLY HIERARCHIES AND THE BEGINNINGS OF NODALITY**



Note: The development of early hierarchies can be seen as passing through three phases. The first (A) involved the emergence of chiefs over a tribe and the creation of a chiefly centre. The second (B) involved the creation of symmetrical relations between chiefs. The third (C) saw the emergence of a system of chiefdoms, with one chief being ranked higher than others.

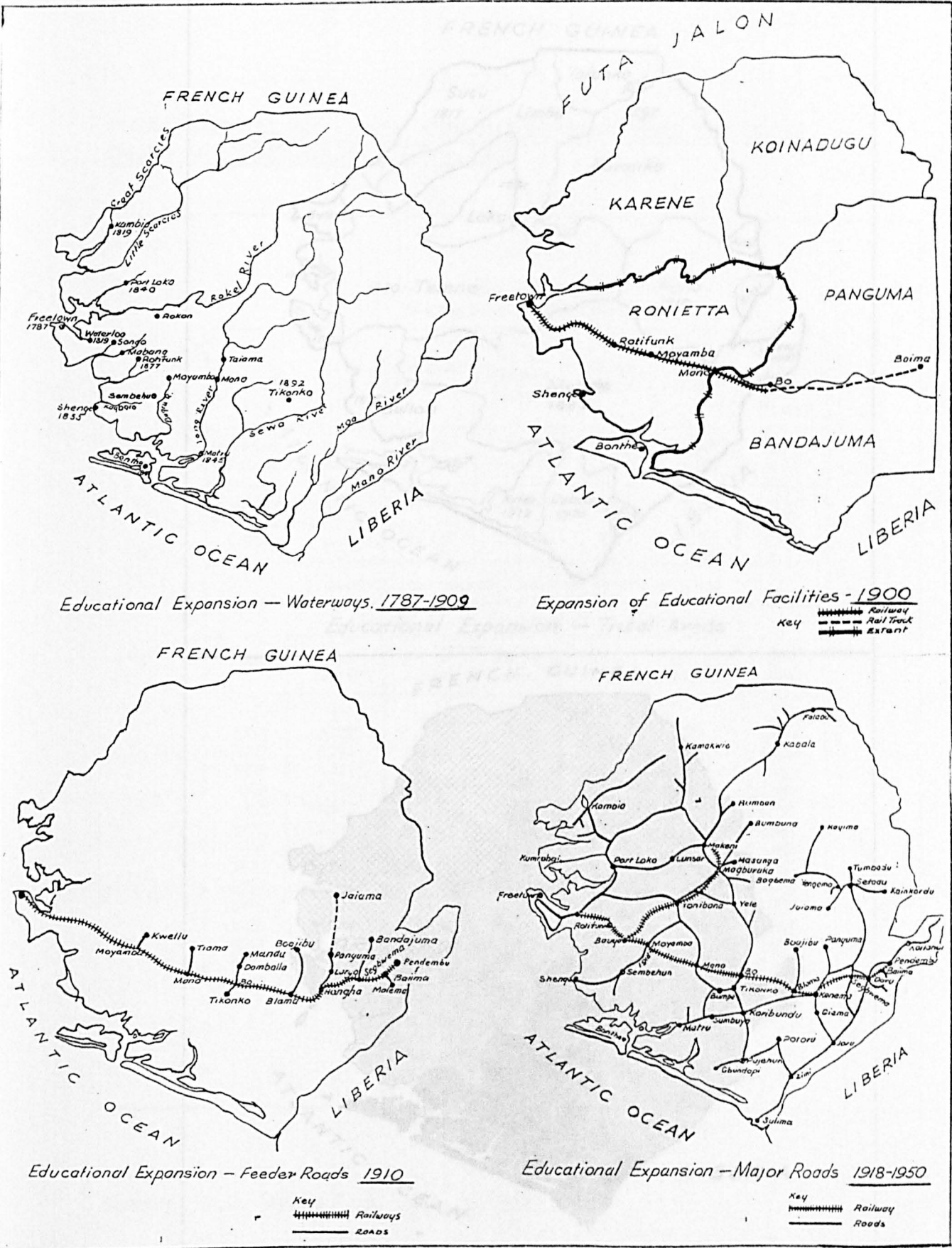
Source: Robert A. Dodgshon, The European Past : Social Evolution and Spatial Order, Macmillan (1987), p. 92.

The sequence of maps scattered through Sumner's substantive work (170) on the evolution of western education in Sierra Leone, when brought together in sequence (see Figure 3.14) illustrate well both the linear and the areal dimensions of clustering and aggregation. Within the broad but precise new political geographic dichotomy of Christian minority 'Colony' and Islamic majority 'Protectorate', the realignment of educational activity into nodal points on an evolving transportation network from river to rail to road, but retaining all three, can be seen. The outcome on the eve of Independence was a sharply differentiated pattern comprising : an extraordinary cluster of educational institutions in the peninsular colony, many of a very high order including Fourah Bay College with its Durham degrees; a modest but significant growth of schooling in the Southern Region of the Protectorate; and a virtual absence of western schooling in the Northern Region. Figure 3.15, abstracted from Sumner, illustrates this clearly.

The relatively high number of schools in the Southern Region of the Protectorate as compared to the Northern was a direct effect of mission and governmental penetration and settlement along the spine railway and its feeder roads, with the regional centre of Bo, at a major intersection of routes, becoming a focus of educational activity. Indeed the founding of the elite Bo Government School for the sons of chiefs in 1905 was virtually contemporaneous with the coming of the 'iron road' and its feeder systems; the means by which the favoured students were delivered to this West African 'Eton'. Geographically this is a parallel, albeit on a limited scale, of the

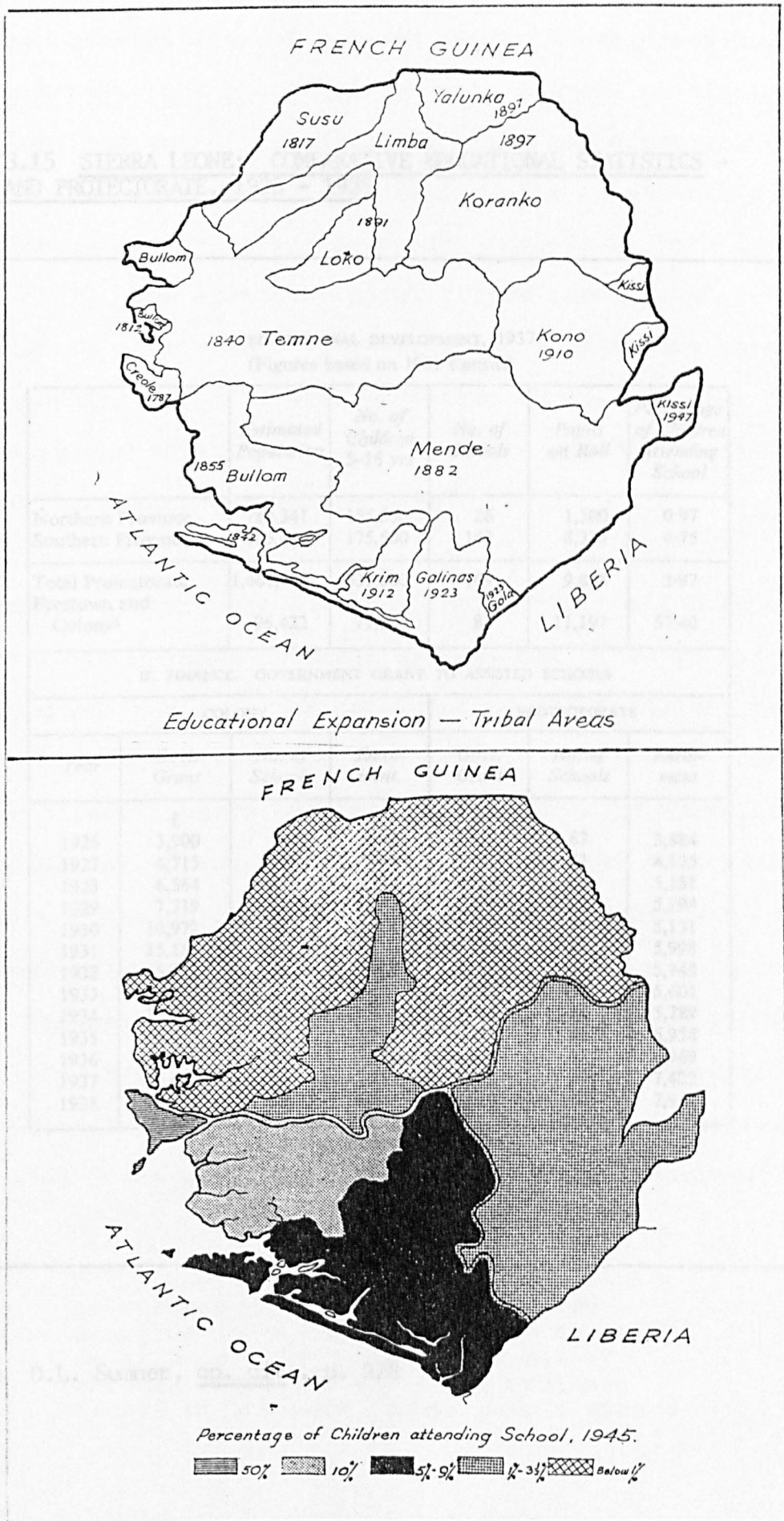


FIGURE 3.14(a) EDUCATIONAL EXPANSION BY RIVER, RAIL AND ROAD IN COLONIAL SIERRA LEONE



Source: D.L. Sumner, Education in Sierra Leone, The Government of Sierra Leone, 1963.

FIGURE 3.14(b) FURTHER ASPECTS OF EDUCATIONAL EXPANSION  
IN SIERRA LEONE



Source: D.L. Sumner, op. cit.,

FIGURE 3.15 SIERRA LEONE: COMPARATIVE EDUCATIONAL STATISTICS -  
COLONY AND PROTECTORATE, 1926 - 1938

I. EDUCATIONAL DEVELOPMENT, 1937 (Figures based on 1931 Census)						
	<i>Estimated Population</i>	<i>No. of Children 5-16 yrs</i>	<i>No. of Schools</i>	<i>Pupils on Roll</i>	<i>Percentage of Children Attending School</i>	
Northern Province	782,341	155,500	26	1,500	0.97	
Southern Province	885,449	175,500	143	8,328	4.75	
Total Protectorate	1,667,790	331,000	169	9,828	2.97	
Freetown and Colony <sup>1</sup>	96,422	19,500	86	11,197	57.40	
II. FINANCE. GOVERNMENT GRANT TO ASSISTED SCHOOLS						
COLONY				PROTECTORATE		
<i>Year</i>	<i>Govt. Grant</i>	<i>No. of Schools</i>	<i>Enrol- ment.</i>	<i>Govt. Grant</i>	<i>No. of Schools</i>	<i>Enrol- ment</i>
	£			£		
1926	3,900	58	7,140	2,517	67	3,884
1927	4,715	56	7,689	2,509	63	4,125
1928	6,564	47	7,126	2,796	75	5,151
1929	7,719	49	6,407	2,858	85	5,194
1930	10,972	48	6,901	2,902	91	5,131
1931	15,158			4,870	86	5,998
1932	15,333	51	7,068	5,219	86	5,943
1933	16,122			4,942	84	5,601
1934	16,308	50	7,112	4,498	84	5,789
1935	16,972	61	7,912	4,781	85	6,958
1936	16,978	55	7,921	4,679	81	6,969
1937	17,489	57	8,112	5,022	97	7,422
1938	17,773	52	6,026	4,921	98	7,962

<sup>1</sup> Excluding Sherbro Judicial Area.

Source: D.L. Sumner, *op. cit.*, p. 228

aforementioned observations of Bamford on the already developing relationship between the growth of the rail network in nineteenth century England and the differential location and expansion of elite schools, (171) and of Marsden in respect of the relationship between suburban railways and selective secondary schools in both London and Lancashire. (172) The essential point is the capacity of new means of transportation to effect an even greater social distance through selective schooling. In the case of Sierra Leone, not only did the railway "foster the education of Protectorate youth", it also "opened the doors of the Colony schools to them". (173)

We may therefore picture the emergent transportational network of colonial Sierra Leone as a drainage system, not of water but of educated young persons from the catchment of the interior, with its watershed as the boundaries with surrounding territories, disgorging not into the Atlantic Ocean but into the academic hothouse of the Freetown peninsula. Given the cultural identity of that peninsular, and indeed its geographical scale and topography, this was in effect a second, though voluntary, translation of rural Africans to the Caribbean! Furthermore, Freetown, and Fourah Bay in particular, was as already noted a significant exporter of educated manpower throughout West Africa. According to Little, Creoles "became the most highly educated group of Africans in the whole sub-continent". He continues:

" .. Creoles found ready employment in government departments and trading agencies in the other colonies as well as at home. In consequence, either through migration or in the ordinary course of business, these people spread

out widely over the whole West African littoral. All the way from the Congo in the south to the Gambia in the west they constituted, in many cases, little oases of westernized culture. They and the local families with whom and into whom they married played a major part culturally, professionally and commercially during the earlier stages of urban development". (174)

Freetown had also become the staging post for further studies in Britain; and Bo School began to attract the sons of the elite from all the anglophone parts of sub-Saharan Africa.

As far as the City of Freetown itself is concerned, the educational clientele became increasingly multicultural as massive urbanisation took place, involving illiterate rural groups from diverse hinterland cultures as well as longer distance major groups, such as the Fulas, seeking enhanced commercial prospects from the urban economy. For despite the undoubted educational attraction of Freetown, as Mabogunje puts it:

"Irrespective of the type of colonial city being considered, one common characteristic is that for most of the colonial period their economy was centred mainly on trade .... facilitated by the development of a modern transportation system based initially on the railway ..... In general rail construction was concentrated in regions which could produce exportable crops, while regions which were only capable of producing local food surpluses tended to be neglected.(175)

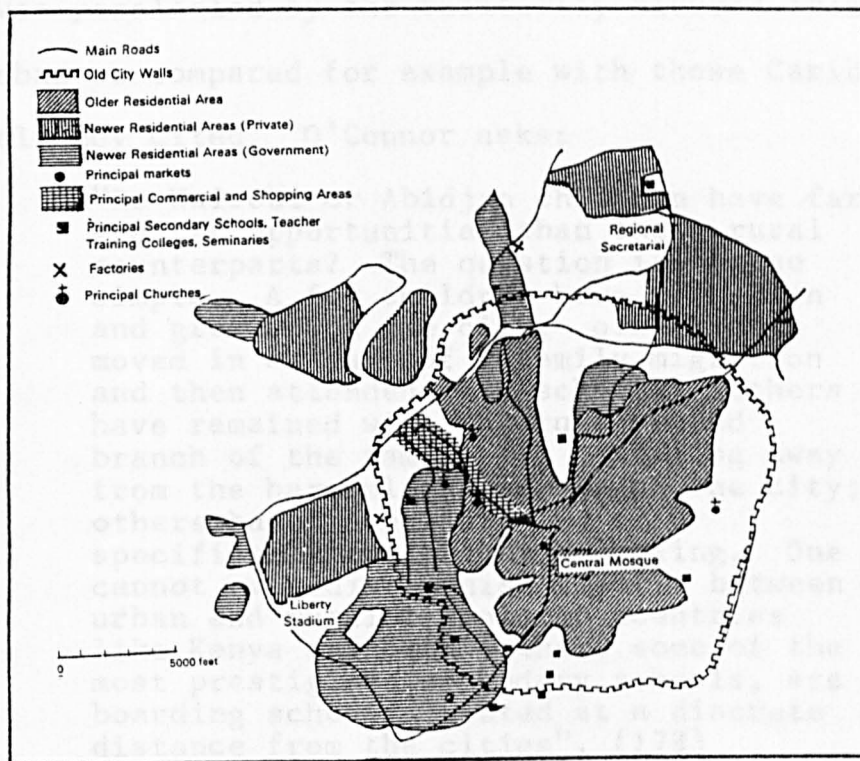
While accepting that the economic factor was dominant in African urbanisation, as elsewhere, and despite O'Connor's assertion that: "No

towns are primarily educational centres", (176) it must not be overlooked that education is a service industry and, given its essentially urban and hierarchical spatial organization, tends progressively to be focused on towns and cities. Consequently the indices of urban status and hierarchy include the more prestigious and selective forms of education, especially universities.

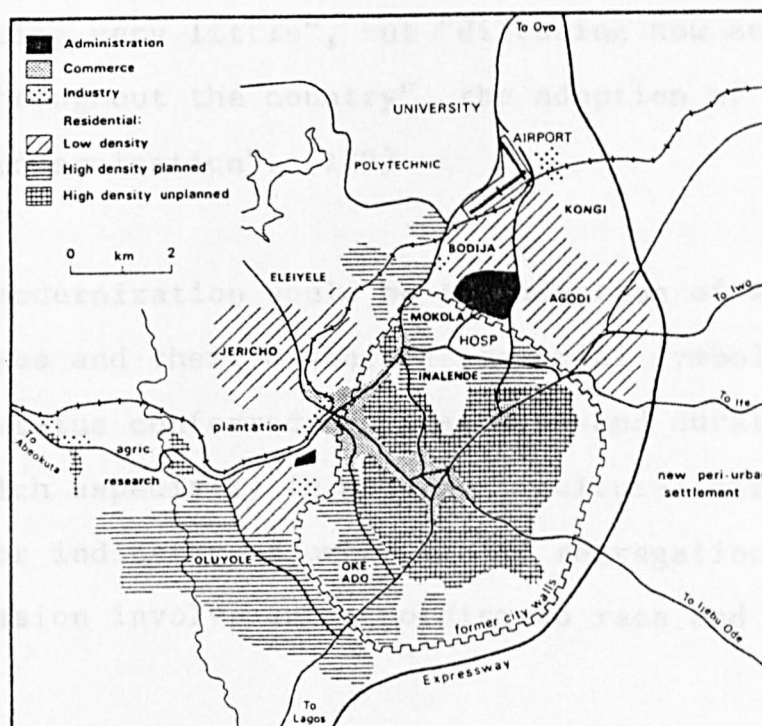
Most of the standard works on African geography and sociology (177) highlight the significance of migration and urbanisation for development but generally have little to say about the interactive role of education in this process. This is partly because of the pre European urbanisation of some areas, for example Yorubaland, based almost entirely on trading with towns closely integrated with their respective rural hinterlands, and often with specialist craft profiles. Urban education here was an extension of traditional instrumental training to particular craft skills, and although there were often quarters set aside for strangers there was at that time little intercultural interaction. This was, however, enhanced by the dual influence of the British colonisation in both improving transport and communication, and introducing an educational lingua franca, English. The structure and morphology of such towns also took on a dual pattern. For example Ibadan had both a traditional local market (Iba), and a modern central business district (Gbagi), as well as a clustering of secondary schools, colleges and seminaries within the walls while the University and Polytechnic were without (see Figure 3.16). This accommodation of traditional and colonial juxtaposition in the majority of African towns and cities not strongly affected by



FIGURE 3.16 TWO MAPS OF THE PHYSICAL STRUCTURE OF IBADAN  
SHOWING THE LOCATION OF IMPORTANT EDUCATIONAL INSTITUTIONS



Source: N.C. Pollock, *Studies in Emerging Africa*, Butterworths (1971), p. 27.



Source: Anthony O'Connor, *The African City*, Hutchinson University Library (1983), p. 197.

the influx of extra continental labour, other than the European minority, was paralleled by the relatively blurred transition from rural to urban as compared for example with those Caribbean and Asian locations already cited. O'Connor asks:

"Do Nairobi or Abidjan children have far greater opportunities than their rural counterparts? The question is not so simple. A few children have been born and grow up in the city; others have moved in as part of a family migration and then attended city schools; others have remained with the rural-based branch of the family for schooling away from the harmful influences of the city; others have moved into the city specifically for better schooling. One cannot even distinguish clearly between urban and rural schools in countries like Kenya and Uganda where some of the most prestigious secondary schools, are boarding schools located at a discrete distance from the cities". (178)

Nonetheless, even in the African context, Mabogunji identifies the 'colonial city' in particular, and especially its formal and informal educational ambiance, as being a prime agent of cultural imperialism: "itself producing very little", but "diffusing new and alien tastes and culture throughout the country", the adoption of which "came to be equated with modernization". (179)

Part of this modernization would be the adoption of western social class structures and their associated material symbols, including the differential status conferred by categories and durations of schooling, which especially in more multicultural circumstances becomes a major indicator of urban social segregation. With its variegated mission involvement according to race and class, together



with the long standing inter island migration characteristic of the Eastern Caribbean, that region provides unusually rich examples of urban social segregation very susceptible of multivariate spatial and locational analysis. The substantive work of Clarke in San Fernando, Trinidad pioneered the application of correlation and linkage analysis to spatially differentiated urban communities. (180) Such an essentially geographical methodology could be profitably used in respect of African towns and cities, though the selection of variables would have to be modified. In the case of San Fernando, Clarke chose eighteen variables aggregated into five categories: race, religion, family, education and occupation. For obvious reasons the component variables for each category were specially significant in the Caribbean context; for example those concerned with family reflecting the matriarchal structure. The correlation coefficients as between the eighteen variables are shown in Figure 3.17, and in order to establish broad patterns of interrelationship the highest and second highest coefficients in each column have been underlined. From this, the linkage diagram comprising Figure 3.18 was constructed which immediately highlights two groupings:

"One focuses on the strong negative correlation between negroes and East Indians; the other is structured by the emphatic bond between secondary education and males in non-manual occupations, and by the strong negative relationship between these two variables and persons having less than standard six education. The former group reflects the most important pluralistic qualities of the urban community, the latter the principal features which pertain to stratification." (181)

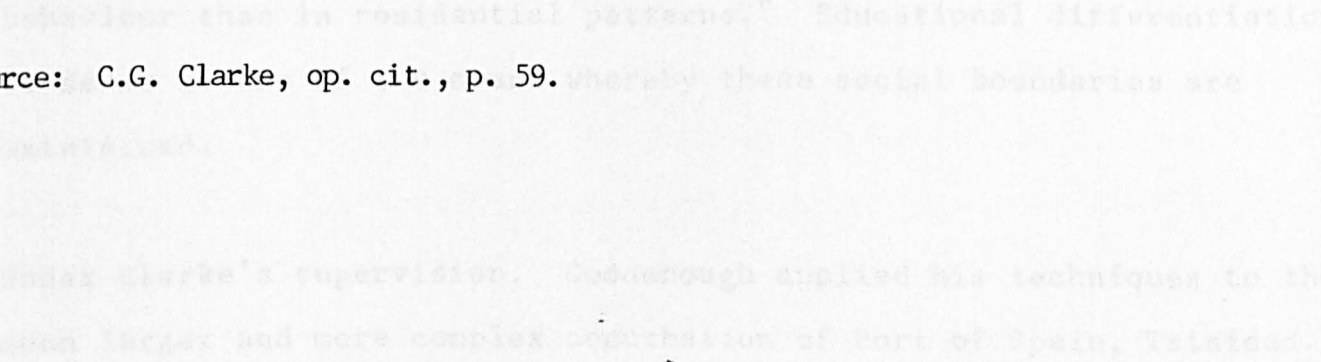
FIGURE 3.17 CLARKE'S VARIABLES FOR EXAMINING PLURALISM AND STRATIFICATION IN SAN FERNANDO, TRINIDAD  
(Matrix of Spearman rank correlation coefficients)

Variables	Negro	East Indian	Chinese	Mixed	Denomina- tional Christian	Other Christian	Presby- terian	Hindu	Moslem	Female Head	Female, Common law	Female Visiting	Female Married	Second- ary School	Less than Standard 6	Standard 6 and 7	No education	Males in non- manual occupa- tions
Negro	1.0	-0.67	-0.41	-0.25	0.62	0.41	-0.47	-0.46	-0.38	0.40	0.28	0.56	-0.34	-0.52	0.30	0.58	-0.35	-0.61
East Indian	-0.67	1.0	0.25	-0.09	-0.37	-0.16	0.58	0.79	0.50	-0.26	0.05	-0.40	0.20	0.06	0.17	-0.51	-0.65	0.16
Chinese	-0.41	-0.25	1.0	0.41	-0.29	-0.19	0.24	-0.02	0.23	0.13	-0.15	-0.25	-0.10	0.43	-0.27	-0.17	-0.26	0.58
Mixed	-0.25	-0.09	0.41	1.0	-0.25	-0.15	0.15	-0.35	-0.04	0.26	-0.13	0.11	-0.29	0.42	-0.48	0.23	-0.33	0.53
Denomina- tional Christian	0.62	-0.37	-0.29	-0.25	1.0	-0.38	0.05	-0.39	-0.43	0.35	0.19	0.57	-0.17	-0.33	0.27	0.45	-0.12	-0.41
Other Christian	0.41	-0.16	-0.19	-0.15	-0.38	1.0	-0.06	-0.16	-0.09	0.10	0.32	0.22	-0.19	-0.48	0.25	0.46	-0.06	-0.43
Presbyterian	-0.47	0.58	0.24	0.15	0.05	-0.06	1.0	0.26	0.09	-0.05	-0.13	-0.08	0.31	0.19	-0.06	-0.13	0.31	0.30
Hindu	-0.46	0.79	-0.02	-0.35	-0.39	-0.16	0.26	1.0	0.34	-0.43	-0.01	-0.49	0.29	-0.10	0.15	-0.54	0.67	-0.04
Moslem	-0.38	0.50	0.23	-0.04	-0.43	-0.09	0.09	0.34	1.0	-0.17	0.02	-0.36	0.05	-0.02	0.06	-0.21	0.26	-0.14
Female Heads	0.40	-0.26	0.13	0.26	0.35	0.10	-0.05	-0.43	-0.17	1.0	-0.01	0.46	-0.65	-0.02	0.03	0.34	-0.37	-0.09
Female, Common law	0.28	0.05	-0.15	-0.13	0.19	0.32	-0.13	-0.01	0.02	-0.01	1.0	0.23	-0.36	-0.44	0.71	0.06	0.37	-0.56
Female Visiting	0.56	-0.40	-0.25	0.11	0.57	0.22	-0.08	-0.49	-0.36	0.46	0.23	1.0	-0.29	-0.32	0.24	0.44	-0.10	-0.40
Female Married	-0.34	0.20	-0.10	-0.29	-0.17	-0.19	0.31	0.29	0.05	-0.65	-0.36	-0.29	1.0	0.14	-0.20	-0.12	0.14	0.24
Secondary school	-0.52	0.06	-0.43	0.42	-0.33	-0.48	0.19	-0.10	-0.02	-0.02	-0.44	-0.32	0.14	1.0	-0.74	-0.39	-0.33	0.88
Less than Standard 6	0.30	0.17	-0.27	-0.48	0.27	0.25	-0.06	0.15	0.06	0.03	0.71	0.24	-0.20	-0.74	1.0	0.13	-0.49	-0.75
Standard 6 or 7	0.58	-0.15	-0.17	0.23	0.45	0.46	-0.13	-0.54	-0.21	0.34	0.06	0.44	-0.12	-0.39	0.13	1.0	-0.40	-0.28
No education	-0.35	0.65	-0.26	-0.33	-0.12	-0.06	0.31	0.67	0.26	-0.37	0.37	-0.10	0.14	-0.33	0.49	-0.40	1.0	-0.29
Males in non- manual occupations	-0.61	0.16	0.58	0.53	-0.41	-0.43	0.30	-0.04	-0.14	-0.09	-0.56	-0.40	0.24	0.88	-0.75	-0.28	-0.29	1.0

— highest coefficient in each column  
-- second highest coefficient in each column

Source: C.G. Clarke, Pluralism and Stratification in San Fernando, Trinidad, in: IBG Special Publication, Social Patterns in Cities, Institute of British Geographers (1973), p. 57.

The emergent pattern is sharply pluralistic as between Negro and Ewe



These two groups alone portray seventeen variables within which five nodes are identifiable: "East Indian and non-manual occupations; negro; less than standard six education; secondary schooling." (182) The emergent pattern is sharply pluralistic as between Negro and East Indian and their respective satellite variables, and for the latter shows how the originally rural associations between religion and education mentioned above in relation to Harricharan and La Guerre were translated to the urban setting. Clarke proceeds to map the "spatial aspects of some of these ecological correlations", and is able to illustrate that "the racial and religious groups that are adjacent to one another in the socio-economic scale are also close to each other spatially". In order to avoid problems of overgeneralisation through aggregation (difficult to achieve in strictly historical studies as seen above in relation to literacy in France), Clarke undertook a parallel social survey of a representative sample of the population of San Fernando through which he was able "to check some of the ecological evidence and to probe the value systems of the major racial and cultural groups". This enabled him to come to terms with the minutest scale of the urban mosaic and confirm the observation that even where juxtaposition is extreme to the point of being interspersed "social boundaries are more clearly expressed in behaviour than in residential patterns." Educational differentiation it seems is one of the means whereby these social boundaries are maintained.

Under Clarke's supervision, Goodenough applied his techniques to the much larger and more complex conurbation of Port of Spain, Trinidad.

(183) By taking sample censuses from the earliest in 1842, through that of 1930 and on to 1960, she was able to take 'time bytes' from the evolving urban complex and thus add an important developmental dimension to Clarke's approach. Mapping of the earliest census data shows marked social stratification and spatial differentiation as between the groups as designated in that census, which of course predated the arrival of the 'East Indians'. They were inevitably peripheral in the early stages of their urbanisation "set spatially apart" .. where they "established temples, celebrated Hose, grew cane, kept cows ..." and gradually "became integrated into the urban structure as suppliers of vegetables and milk". (184)

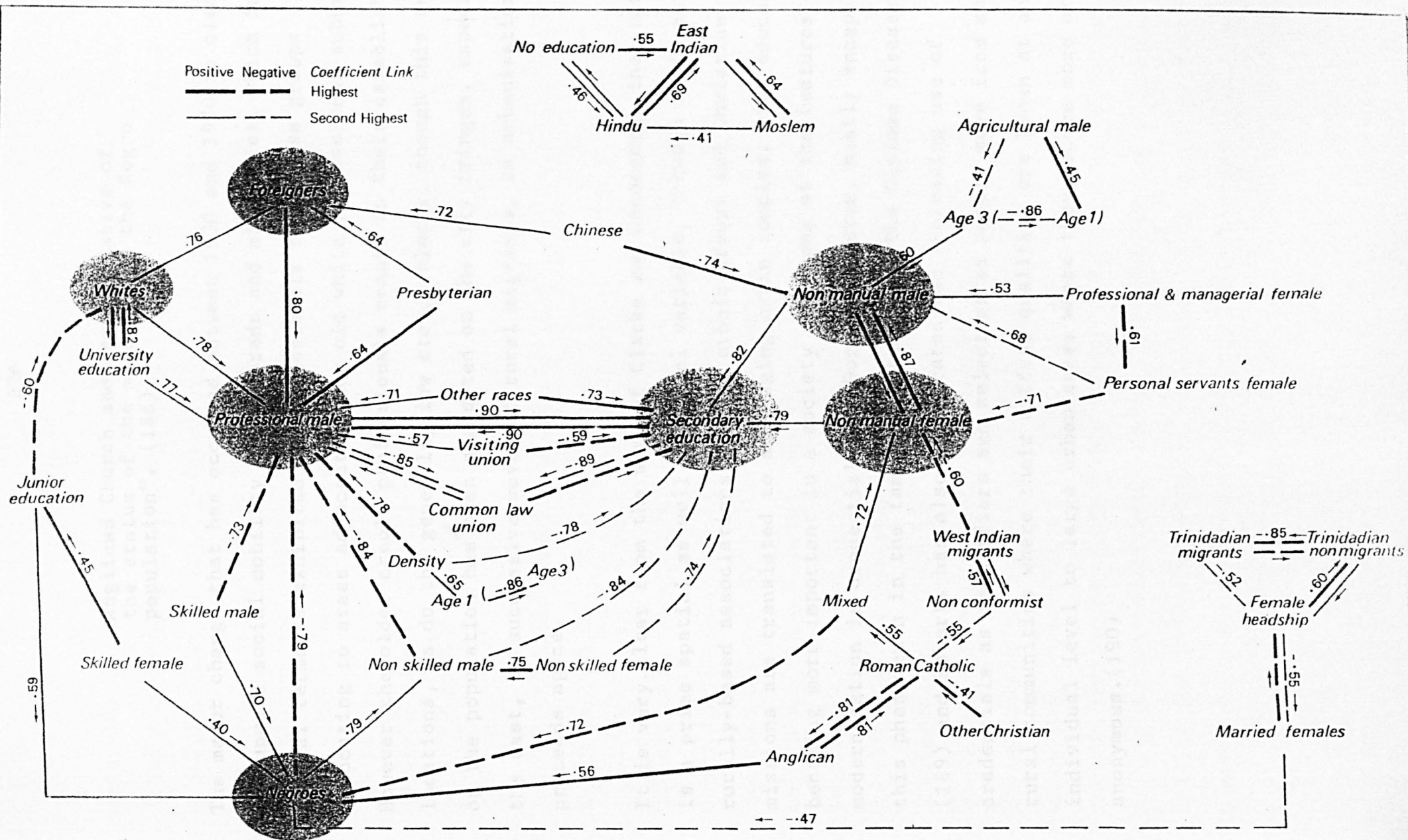
Goodenough found that by the 1930s despite increased social mobility and more positive attitudes to education, especially secondary schooling for example among the East Indians, urban social segregation had been reinforced with additional racial variables operating peripherally to a major spatial split between Catholic and Protestant. These important additions during the early twentieth century were: increased East Indian urbanisation (Presbyterian), new minority trading groups - Chinese, Syrian, Lebanese and Venezuelan (all aligning with the Catholic Church) - and new Negro immigrants, mostly from the proximate Windward Islands (Anglican) who were significantly isolated from the Trinidad - born Negroes who were Catholic, and furthermore " ... trapped in the vicious circle of low literacy levels, low occupational expectations, low pay and poor housing, all of which restricted social mobility." (185) Within the small islanders there was already a dichotomy between the Barbadians and others, based

primarily on their superior educational profile derived from the early established and widely accessible provision of subsidised schooling already noted above. By 1931 there was a clear gradient of well being from the north-west of the city to the south-east, which was even reflected in the proportion of Barbadians within the small island group. The position of 'British West Indians' in relation to Trinidadian born blacks was, and is, analogous to that between the same group and American born blacks in the USA. It is, perhaps not surprising that the first black supreme commander of the entire armed forces of the USA is the son of Jamaican immigrants.(186)

Moving on to analyse the 1960 census data, Goodenough found that: "the role of factors like educational attainment and socio-economic status are now far more important than formerly in differentiating groups and ecological areas". (187) When Clarke's linkage methodology is applied to the correlations for 1960, the outcome is as illustrated in Figure 3.19. In words:

"The social structure that emerges from the analysis is composed of a segmented Creole group with the Indian and other minorities aligning themselves with the upper portion or stratum of the Creoles. The Creole upper stratum is characterised by a division into two parts, the upper part being associated with professional status, university education and Presbyterianism; and the lower part correlating more closely with non-manual status, secondary levels of education and Roman Catholicism, and reflecting the coloured middle class ... The low status subgroup is characterised by skilled or unskilled status, employment as domestics, the practice of common-law and visiting unions and achievement of low educational levels. It is also closely associated with the

FIGURE 3.19 GOODENOUGH'S LINKAGES BETWEEN CORRELATED CENSUS VARIABLES IN PORT OF SPAIN, TRINIDAD, 1960



Anglican Church and representative of the status of the majority of the Negro population". (188)

The major change that has occurred between 1930 and 1960 is clearly the upward social mobility of coloureds and minorities, which in spatial terms is exhibited in professionals from these groups relocating to areas adjacent to the old white professional suburbs. However the older creole professionals remain in their established locations, as do the generally low status blacks, though this sector of the population has been augmented on the city fringes, especially the east, by successive waves of rural migrants, as urbanisation proceeds apace.

It is very clear from the work of Clarke and Goodenough that education is a prime spatial as well as social variable, through which earlier, rurally-based associations between ethnic groups and Christian missions are translated to a changing urban complex, with education becoming more important in a society where one of the features of modernisation is credentialism. Dore, of course, neatly encapsulated this phenomenon in the famous alliteration "The Diploma Disease", (189) and Roberts has also illustrated the increasing use of credentials as identifiers and selectors as people move from smaller rural communities where their diffuse qualities are known at an individual level to large urban areas where they become more or less anonymous. (190)



Anonymity is not, however, a quality so readily enjoyed by ethnic minorities in Western cities, and it is to the subject of urban education that we now turn for the final part of this section of the thesis. It also takes us on to include the ultimate level of migration, intercontinental and long term, and its educational associations, and this aspect will be addressed with respect to 'Caribbean heritage people' (191), and to a lesser extent, communities of Asian origin in Britain.

#### 3.3.4 Some Spatial Aspects of Education and Social Geography in Suburban England

We must also return to some discussion of the emergent, essentially urban, national system of public education provision in England, which had been brought to the turn of the century at the end of Chapter two. This immediately presents us with a documentary problem in that both in history of education and in urban geography, the spatial context of schooling as the system expanded rarely receives detailed consideration. There is, of course, much discussion of the efforts of would be reformers of public education provision, such as Tawney, and the succession of reports during the 'long weekend', some aspects of which culminated in the 1944 Education Act, (192) not long after which the post-war waves of immigrant labour from the 'New Commonwealth' arrived in British cities. It would be interesting to speculate on reasons for the relative lack of spatial interest in the educational component of urban change, but as the writer has observed elsewhere

(193) the neglect of contextual discussion in respect of both educational and urban systems as encountered by first generation migrants to Britain in the immediate post-war period led to a flawed analysis of their experiences. So an attempt will be made here to provide a degree of contextual analysis for aspects of educational development in suburban England in the first two-thirds of the twentieth century.

Picking up from Chapter two at the time of the 1902 Education Act we can consider the changing relationship between geography and education over the next seven decades. In respect of geography first, it is necessary to identify significant aspects of both political and social geography, as we are dealing with new administrative parameters and new shifts of population which, as noted in respect of nineteenth century England, are rarely concordant. At the heart of both considerations is the essential significance of human migration and its relationships to education.

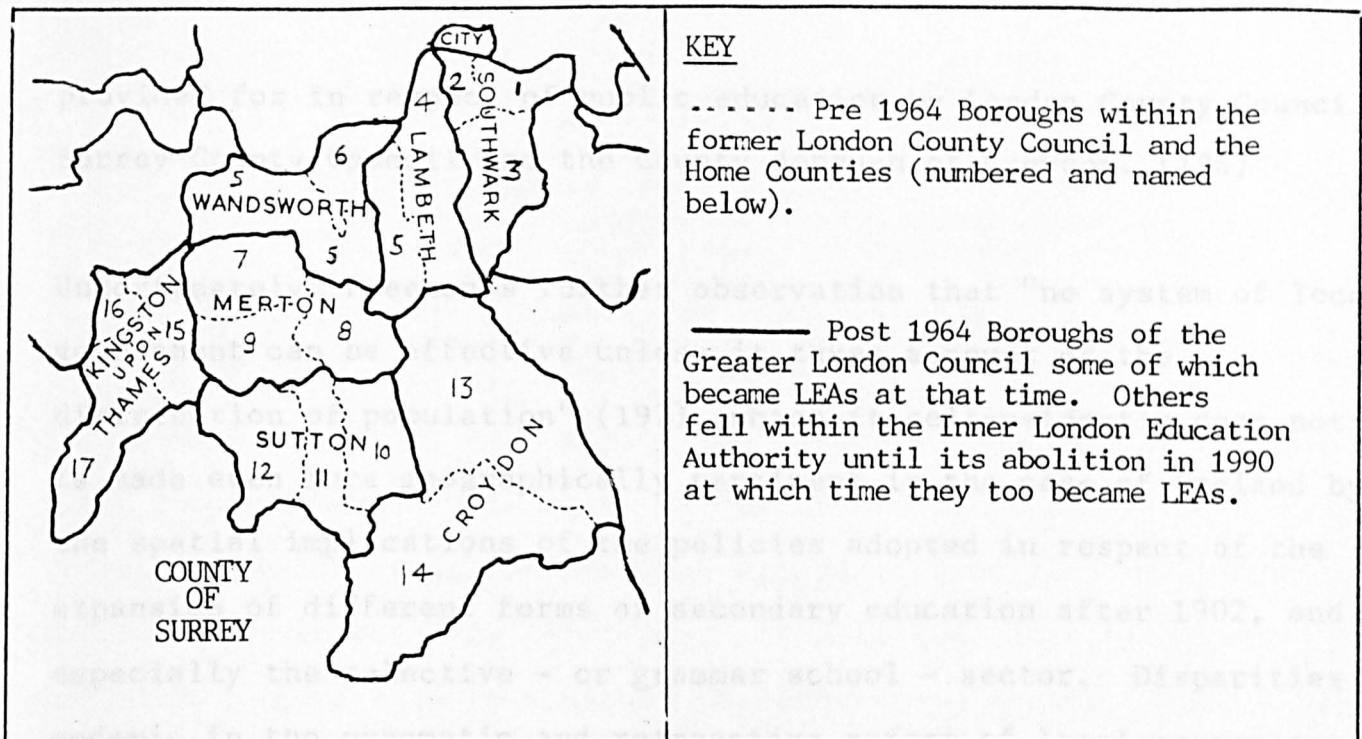
Freeman has remarked that: "by the end of the nineteenth century it was clear that town definition had reached absurd proportions." (194) In 1888, 61 County Boroughs had been created which, together with 23 more such units by 1922 and the ongoing but inevitably modified Shire Counties, constituted the new geopolitical parameters for the expansion of public primary and, especially, secondary education during the first half of the twentieth century. In 1927 Doncaster was elevated to CB status, the only further addition until the 1960s. As in the nineteenth century, so in the twentieth, administrative units

with responsibility for education were constantly embattled by significant shifts of population: for example 34 county boroughs lost population between 1931 and 1951, and 37 between 1951 and 1961. This was due largely to massive and voluntary migration from the inner to the outer suburban zones of towns and cities which took two forms: the first and second generation of owner occupiers, and the creation of large municipally owned housing estates. The first wave of such expansion, especially in the 1920s and 1930s occurred at a time of overall stagnation in respect of national population, which was even turned into a decline during the 1940s for obvious reasons. In fact this type of shift had begun in the late nineteenth century, but until the combination of enlivened social aspirations and greatly increased public transport by road and rail after 1920, had been more limited and disparate. But as Marion Yass indicates in her lively account of inter-war Britain, and in respect of the Hadow recommendation for a universal break between primary and secondary sectors at the age of 11:

"... reorganisation was helped by the ability of children to travel further afield to their new schools on the local buses. Just as the coming of the railways had enabled upper class parents in the nineteenth century to send their children away to public boarding schools, so now the motor bus encouraged the development of the secondary school. By 1939 two-thirds of the country's children left their elementary schools when they reached eleven and went to a grammar or a modern school." (195)

Figure 3.20 illustrates these demographic trends in respect of a segment of South London which, during the periods in question was

FIGURE 3.20 POPULATION CHANGE IN THE SOUTH WEST SECTOR OF GREATER LONDON 1911 - 1961



	1911	1911-21	21-31	31-51	51-61	1961
Bermondsey (1)	130760	+5.1	-6.6	-45.6	-14.6	51815
Southwark (2)	206180	-3.9	-6.9	-43.4	-11.4	86175
Camberwell (3)	259339	+2.2	-5.9	-28.5	-2.8	174769
Lambeth (4)	301895	+1.6	-2.2	-22.3	-3.1	223162
Wandsworth (5)	231922	+5.4	+7.5	-6.4	+5.1	347209
Battersea (6)	168907	-0.1	-4.9	-26.6	-9.7	105758
Wimbledon (7)	54966	+11.7	-3.1	-2.3	-2.0	56994
Mitcham (8)	29606	+18.6	+61.9	+18.5	-5.4	63653
Merton & Morden (9)	14140	+24.0	+135.1	+81.3	-9.0	67974
Beddington & Wallington (10)	14322	+13.9	+61.0	+24.4	-0.5	32588
Carshalton (11)	11654	+20.5	+105.1	+119.4	-8.4	57462
Sutton & Cheam (12)	27470	+5.2	+60.8	+66.8	-2.1	78964
Croydon (13)	170165	+12.5	+21.8	+7.2	+1.0	252387
Coulsdon & Purley (14)	18972	+13.9	+75.0	+60.3	+17.2	74738
Malden & Coombe (15)	12137	+19.4	+61.5	+95.1	+2.2	46587
Kingston-upon-Thames (16)	37975	+4.0	-1.1	+0.9	-9.3	36450
Surbiton (17)	17717	+10.3	+50.4	+101.7	+3.4	62940

Abstracted from: C. Brock, Settlement Studies in the South-East of England, with Special Reference to the Outer London Conurbations, Unpublished MA Thesis, University of Durham (1964).

provided for in respect of public education by London County Council, Surrey County Council and the County Borough of Croydon. (196)

Unfortunately, Freeman's further observation that "no system of local government can be effective unless it takes account of the distribution of population" (197), which it self-evidently does not, is made even more geographically pertinent in the case of England by the spatial implications of the policies adopted in respect of the expansion of different forms of secondary education after 1902, and especially the selective - or grammar school - sector. Disparities endemic in the pragmatic and retroactive reform of local government units and their discordant relationship to demographic realities were further aggravated by the instability of the macro political and economic climate obtaining during the main period of secondary expansion:

" ... during the first years of the century there was enough to be done in developing the system as defined by the 1902 Act. In 1914 the first world war broke out and, as a result, the political power situation was greatly changed. The egalitarian tendencies foreshadowed by the growth of the unions and left-wing groups in the late nineteenth century came to have much influence over the redefinitions of education suggested by the influential reports of the Consultative Committee made between the end of the first world war in 1918 and the start of the second in 1939.

Despite the new political situation and the continuing strains between the economy and the educational system these suggestions were abortive in that the additional resources that they demanded were not diverted into the educational system. The rate of expansion of the

educational system was slowed down in the inter war period because of extremely difficult economic conditions. However, these reports of the Consultative Committee were to form the basis for the next redefinition, that of 1944, which was triggered off by the idealistic desire to reconstruct a better Britain once the second world war was over". (198)

Given such a setting, and despite the undoubted dominance of the new style grammar school within the expansion of the secondary sector, it is not surprising that the peculiar and particular conjunction of social class structures, tax bases, and political will, (all unstable variables), gave rise to a highly differentiated sector, especially when viewed nationally. Grammar School development took up the running after 1902 with other possible extensions of post-elementary schooling being effectively blocked by Morant until his translation to another area of responsibility in 1910. This development took a variety of forms, in itself spatially significant, there being: new 'County Grammar Schools', many in smaller provincial towns and new suburbs of the larger conurbations; the elevation of the old 'Higher Elementary Schools' to Grammar School Status; the appropriation of many of the 'Endowed Grammar Schools' by forms of voluntary association to LEAs. As two of these three forms had pre-existing locations it is not difficult to see how the incidence and accessibility of grammar schools varied enormously as between different LEAs. These meant in turn that the chances of 'passing' the 11+ selection examination owed a great deal to historical and geographical accident as well as to gender and class. According to Davis, by 1908 there was already "a total of 663 grammar schools

controlled or assisted by the State", and by 1963 on the eve of the comprehensive reorganisation of secondary education in England, "there were 1295 grammar schools ... maintained by the State". (199) A marked decline in the rate of grammar school foundations is evident in these figures, and in fact as Lowndes indicates, even by the 1920s there was a situation of consolidation in this sector while the early 1930s saw:

"a readjustment of function as between the grammar and county secondary schools and other full time schools providing parallel education for the adolescent."  
(200)

In fact the aforementioned departure of Morant had led to enabling legislation for the establishment of Central Schools from 1911 and Junior Technical Schools in 1913. Like the grammar schools, the distribution of these new forms of secondary provision was extremely uneven. The former developed most strongly in the north of England and in London where massive urban growth had overtaken the capacity of the endowed secondary schools to meet demand. The latter were strictly vocational and even more disparate in geographical terms. The three forms provided the basis for the tripartite model of the Spens Report and the 1944 Education Act, but on the ground their distribution was so variable as to make the implementation of the ideal of secondary education for all even more inadequate than was inevitable from the naivety of the principle of parity of esteem.

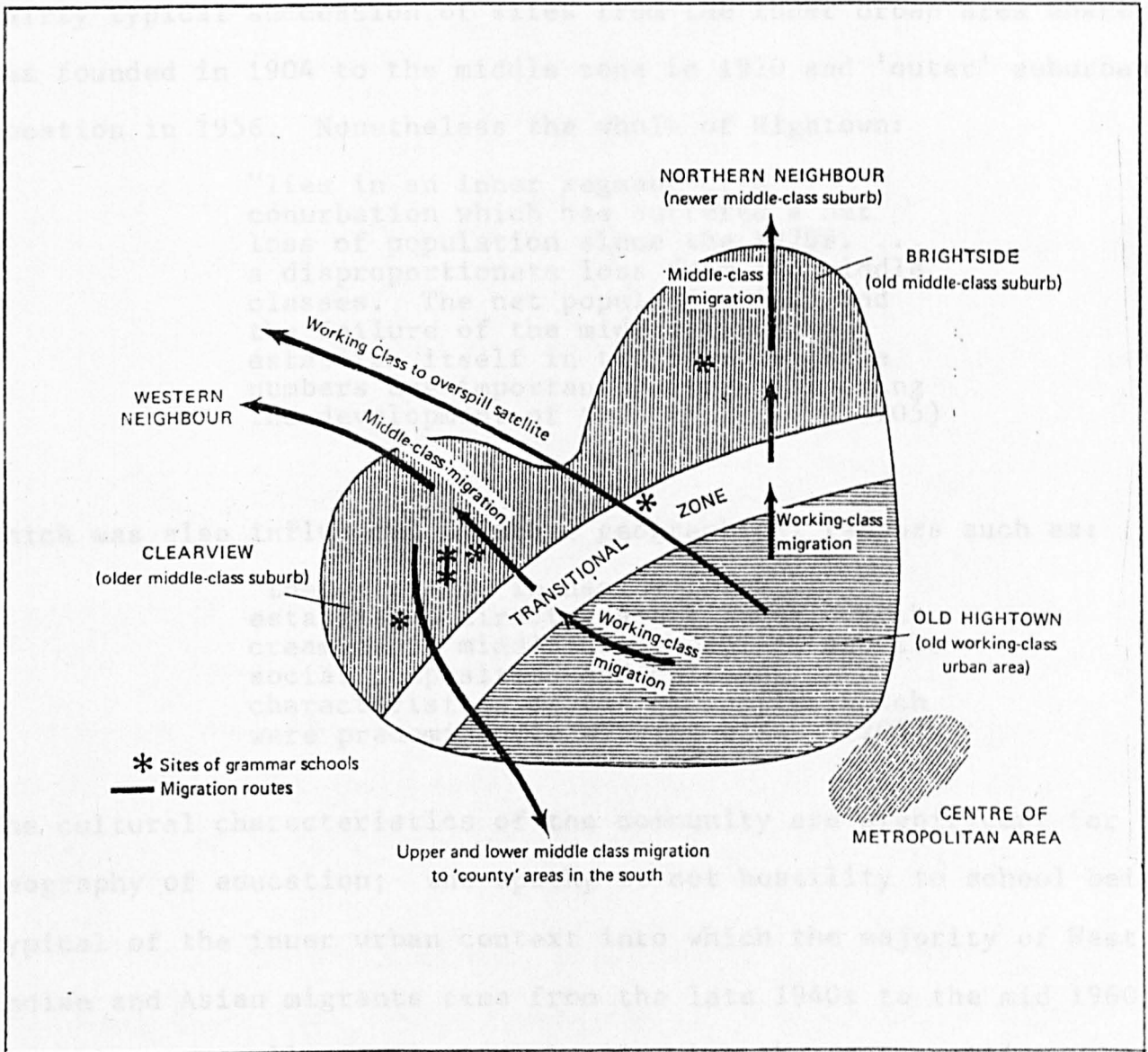
However, it may be because of the spatial inadequacies of the networks of other sectors of secondary education that the grammar schools were never quite so elitist in their catchment as has been popularly

supposed. On the one hand, Himmelweit demonstrated in respect of mid 1950s London that the lower working class pupils were under-represented, probably due to 'underachievement' and the general effects of adverse family environments. (201) But at about the same time Floud et al concluded that changes in the social class origins of grammar school pupils "reflected the changing occupational and residential character of the area"; in other words the economic and social geography. (202) They found that during the 1920s and 1930s the proportion of boys in grammar schools from the manual working class declined, but rose significantly during and especially after the Second World War due to better economic circumstances and the abolition of fees. This had less effect in northern cities and towns where already the working class representation was relatively high due to the occupational and social structure; but the ratio of places available to population in the given age range also varied according to both migration of population through urbanisation and redistribution, and the number and location of new grammar schools. The more middle class the area the less material prosperity seems to have been a factor whereas in industrial areas: "the successful children at each social level were distinguished by the relative prosperity of their homes". (203)

The 'catchment scale' significance of social and economic geography for a particular case is very well illustrated by Colin Lacey in his classic study 'Hightown Grammar', from which Figure 3.21 is taken. (204) This type of location, the inner and middle suburban zone of a large conurbation, is typical of the environment of a considerable



FIGURE 3.21 HIGHTOWN : THE MAIN ECOLOGICAL AREAS, THE MIGRATION ROUTES AND THE SITES OF GRAMMAR SCHOOLS



Source: C. Lacey, Hightown Grammar : the School as a Social System, Manchester University Press (1970), p. 3.

proportion of the population and exhibits a particularly complex human ecology within which educational selection plays a significant part. In addition to the area experiencing the same types of shifts of population indicated in Figure 3.20, the school itself followed a fairly typical succession of sites from the inner urban area where it was founded in 1904 to the middle zone in 1920 and 'outer' suburban location in 1956. Nonetheless the whole of Hightown:

"lies in an inner segment of a conurbation which has suffered a net loss of population since the 1920s. ... a disproportionate loss from the middle classes. The net population loss and the failure of the middle class to establish itself in the town in large numbers are important factors affecting the development of the school ..." (205)

which was also influenced by other geographical factors such as:

"the existence in nearby towns of established direct grant schools, which creamed off middle-class pupils, and the social composition and cultural characteristics of the community, which were predominantly working-class." (206)

The cultural characteristics of the community are significant for the geography of education; the apathy if not hostility to school being typical of the inner urban context into which the majority of West Indian and Asian migrants came from the late 1940s to the mid 1960s, and which generally contrasted sharply with the most positive attitudes to education in their places of origin. As we have seen with respect to the Caribbean Islands in particular, 'education for emigration' was a conscious policy.

In a parallel and near contemporary study to that of Lacey, but this time of a secondary modern school in the English Midlands, Partridge evokes a similar picture of the urban ecology:

"Even today (1966) many of the old Elementary board schools still ring with children's voices; these buildings are old, many bearing the dates of their inauguration, 1889, 1896, 1905 but the laughter and games of the young still persist. Although it is not widely known, there are some all-age-schools in use today in the industrial parts of many of our cities. These are schools which children attend from the age of five until they leave at fifteen; the eleven-plus examination is taken by most of the children and the brightest are transferred to a Grammar school, but the majority remain in the same old building throughout their school days. It is these survivals in the older working class areas of our great cities which present any local Education Committee with its most pressing problems. (207)

Not only does this indicate a decline for such inner city schools from Booth's aforementioned "church in God's acre", (208) but bringing the observation forward from the 1960s to the 1990s, would see little change except that these mostly 'neighbourhood' schools are now non-selective rather than secondary modern.

The fact that the works of both Lacey and Partridge are case studies in itself gives them a more ecological or geographical character than is enjoyed by much of the urban education literature in respect of Britain and the U.S.A. both of which tend to be sociologically based. (209) Such work is clearly sometimes verging on the geographical but generally only on a crude and broad scale of spatial differentiation,

often portrayed through the issue of social class and education. There is also a small but significant literature within geography in the area of urban social segregation (210) but this rarely addresses education in the way in which Clarke and Goodenough used thresholds of educational experience as interactive variables in their respective studies in Trinidad.

For example the outstanding contribution of Peach to the understanding of differential immigration, settlement and redistribution of Caribbean heritage people in Britain (211) illustrates most effectively the combination of spatially operative factors such as: arrival routes, location of employment, availability of accommodation and island cluster replication. He is able to demonstrate for example the distinctive distribution at the national level of 'West Indians' as compared to 'Indians' and 'Pakistanis', in the form of disproportionate concentrations in London and Birmingham and the tendency to remain in locations associated with the phase of first generation settlement. South Asians, together with East African Asians, while less concentrated in the areas of first generation settlement, have to some degree generated new clusters in smaller conurbations and also begun to move into owner occupier housing to a greater extent. So whereas South Asians have significant settlement development in 'new' urban locations which have experienced substantial growth: "The West Indian population has clearly concentrated in regions and conurbations which are losing white population". (212) While about 70 per cent of London's West Indians are in the Inner Boroughs, the proportion for South Asians is only 25

per cent. This reflects the more limited dispersal of first generation Caribbeans from the initial nuclei close to main line termini as compared with the less intensive, though still concentrated, distribution of South Asians within the 'West London Corridor' having mostly entered through Heathrow airport which in turn became a major source of employment. Furthermore the redistribution of West Indians of successive generations tended to confirm concentrations due to their relatively greater take up of municipal housing opportunities which: ... "did not redistribute them from inner to outer areas, but spread them from parts of the inner city where they were to parts where they had not been". (213) This is a direct function of political geography since the allocation of municipal housing by any Borough is obviously confined within its boundaries. Moving to an even smaller geographical scale, negative discrimination within these municipal housing areas has led to an over concentration of Afro-Caribbeans in the less favourable "inter war flatted estates". Finally:

Within the overall distribution of West Indians in London, for example, are clusters of people from the same island so that different island groups are often fairly segregated from each other. This is particularly noticeable with groups from small islands such as Montserrat ... (Finsbury Park). Other Windward and Leeward islanders are concentrated north of the river (Notting Hill) while the area south of the river (and also Haringey and Brent to the north) is dominated by Jamaicans to a greater extent than the statistically expected degree". (214)

Although there is also some replication of both macro and micro

homeland clusters on the part of South Asians, for the reasons mentioned above it is less intense than in respect of Caribbean heritage people. The significant Chinese minority is also spatially distinctive, though largely culturally homogeneous (Hong Kong/ Cantonese), in that apart from very few intensive inner city concentrations, notably London and Manchester, they are widely dispersed throughout the various suburban zones of conurbations, provincial towns and cities and even predominantly rurally oriented market towns and larger villages.(215)

Differential residential and domestic environments and degrees of social segregation and concentration have a direct relationship to education. Firstly, in general terms of socio-economic status, both poor inner city rented housing and municipal housing estates are not conducive to successful schooling, though they do not entirely prevent it. For primary schools in particular, the relatively small catchments necessary for the short journey to school may fall entirely or predominantly in the cultural ambiance of a particular group. This could have both benefits and disadvantages, but it will certainly have a distinctive effect on the learning process in such schools. For reasons mentioned above, of the major ethnic minorities in Britain, West Indians tend to be the most concentrated spatially, also Bangladeshis, Pakistanis slightly less so, Indians relatively more dispersed and Chinese almost ubiquitous. Consequently, even at primary level it is not uncommon for Chinese pupils to be ethnically alone in a class, while for West Indians and South Asians, to be in the majority is quite routine. If the concentration index is not

taken into account then otherwise unexceptionable research into, for example, differential achievement can be flawed. This was the case with the highly publicised study by Geoffrey Driver into differential performance of inner city pupils in comprehensive schools as between ethnic identity and also as between different conurbations. (216) The most celebrated finding, that girls of West Indian origin fared distinctly better than their white and Asian counterparts (male or female) in public examinations, failed to take into account one of the concomitants of degrees of dispersion, namely that in concentrated groups like the West Indians the professional middle classes will remain in the inner city. This fundamentally geographically contextual point is crucial to the analysis, but was overlooked.

However, while the educationists may be geographically illiterate, the geographers have tended to shun education as a social variable in spatial and locational analysis. So while the researches of Peach and other urban social geographers could infer significantly different educational environments between and within both minority and mainstream communities they rarely do so systematically. The aversion seems mutual but happily there are exceptions, mostly notably the sociological work of Williamson and Byrne, (217) and the geographical work of Robson. (218)

The writer is seeking, through this thesis, to establish the case for a geography of education, and in so doing one would not wish to claim that spatial disparity has been completely overlooked by the sociologists of education. The distinction lies in the subtlety

of the spatial analysis. There is no doubt that Williamson et al succeed in: "demonstrating a connection between such spatial inequalities ..... and different patterns of educational attainment"(219), but they fail to address the spatial dynamics of urban complexes and especially the input of educational factors into that dynamic. Take, for example the following accurate assessment:

"It was, and still is, undoubtedly the case that different groups of children, even when they are from similar socio-economic backgrounds, through living in different local authority areas or parts of towns, differ in their educational attainments measured either in terms of the length of time they stay at school or in terms of the educational qualifications they eventually acquire. Such a spatial structuring of educational inequalities, of which the phenomenon of inner-city deprivation is only the tip of the iceberg, is related to local-authority organization, resource levels, and politics, and is entrenched in the much larger system of local authority financing through the rate support grant which is controlled by central government." (220)

While this is true as far as it goes, it addresses neither the underlying cultural geography and its educational components, nor the now well demonstrated capacity of individual schools to effect markedly improved educational profiles in apparently adverse social settings. (221) This, no doubt, has something to do with the microculture of the school, as well as with more instrumental matters such as administrative and financial efficiency. Geography, with its interdisciplinary structure (see Figure 1.2) has the advantage of being able to call upon the sociological component as a contributor to the analysis of spatial and locational patterns, but is not limited to



it, and when addressing issues of education enjoys the mutually interactive capacity of a highly comparable structure (see Figure 1.1). It is therefore able to draw upon education as a proactive variable in a more flexible way, that is to say, education as a geographical factor in itself, and operate more or less simultaneously at a number of scales: the issue of scale being fundamental. This may be illustrated by Robson's classic study of Sunderland in which he pioneers the use of education as a prime geographical factor in the analysis of a North of England town, (222) which he describes as follows:

"What in essence is attempted here is a geographical method of analysing the social structure of a single town and the use of the results of this analysis in a spatial examination of one facet of the town's sociology, namely the development of attitudes to education amongst parents of boys who were about to sit the 11-plus examination".

In order to illustrate the distinctively geographical methodology employed by Robson it is necessary to provide an outline of it before discussing the results. In seeking to examine the dynamics of the urban complex, Robson turns initially to the ecological approach pioneered by Park and his Chicago colleagues in the 1910s and 1920s.(223) In this the city is viewed as a "kind of social organism" (224) to which the macro concepts of plant ecology are applied; that is to say of: competition, dominance and climax association. These have to do with competition for space, access to significant locations, colonisation and succession of types within areas and the application of the economic factor to functional and social

segregation. While the aerial dimension of this analysis is distinctively geographical, Robson is at pains to point out that:

"Geographers, no less than ecologists, are not interested in spatial patterns per se but rather in the dynamics and the factors which are responsible for the existence of spatial associations or spatial patterns". (225)

This leads on to the recognition of cultural and behavioural dimensions of spatial interaction and segregation, as illustrated in the work of Ackerman (226) and Firey (227) in the 1940s and 1950s in the USA, and the dual concept of 'milieu' as comprising the psycho milieu of the individual and the operational milieu of the group. It is in order to test and illustrate this idea that Robson seeks to accommodate the cultural dimension, and at the same time sharpen the analysis by selecting an attitudinal variable within the multivariate analysis of his case study city, namely Sunderland.

This requires an accommodation of the geographical question of scale, because of the highly localised incidence of intra-urban differentiation and even segregation. As we have seen above, the usefulness of large scale data for educational analysis is minimal and in the English case in particular the discordance between demographic change and administrative units renders any data raised on the geographical areas of the latter of limited worth. Robson turns, therefore, to the techniques of 'social area analysis' pioneered in the USA by Shevky in the 1940s and 1950s, (228) which seeks to enable the identification of small scale aerial differentiation by clustering a limited number of variables/indices of the human condition into two

constructs: social rank and urbanisation. Within the former, education is included and within the latter, age and sex specific concentrations. Within the data gathering system of England at the time, the smallest scale geographical base available to Robson was the enumeration district. (229)

Within this methodology, and at the small scale of the enumeration district, cluster analysis was used by Robson to reduce the 30 independent variables in his database to 4 composite variables. This in turn provided:

"... objective parameters within which sub-regions can be built up and which include the evidence of a larger number of variables in collapsed form." (230)

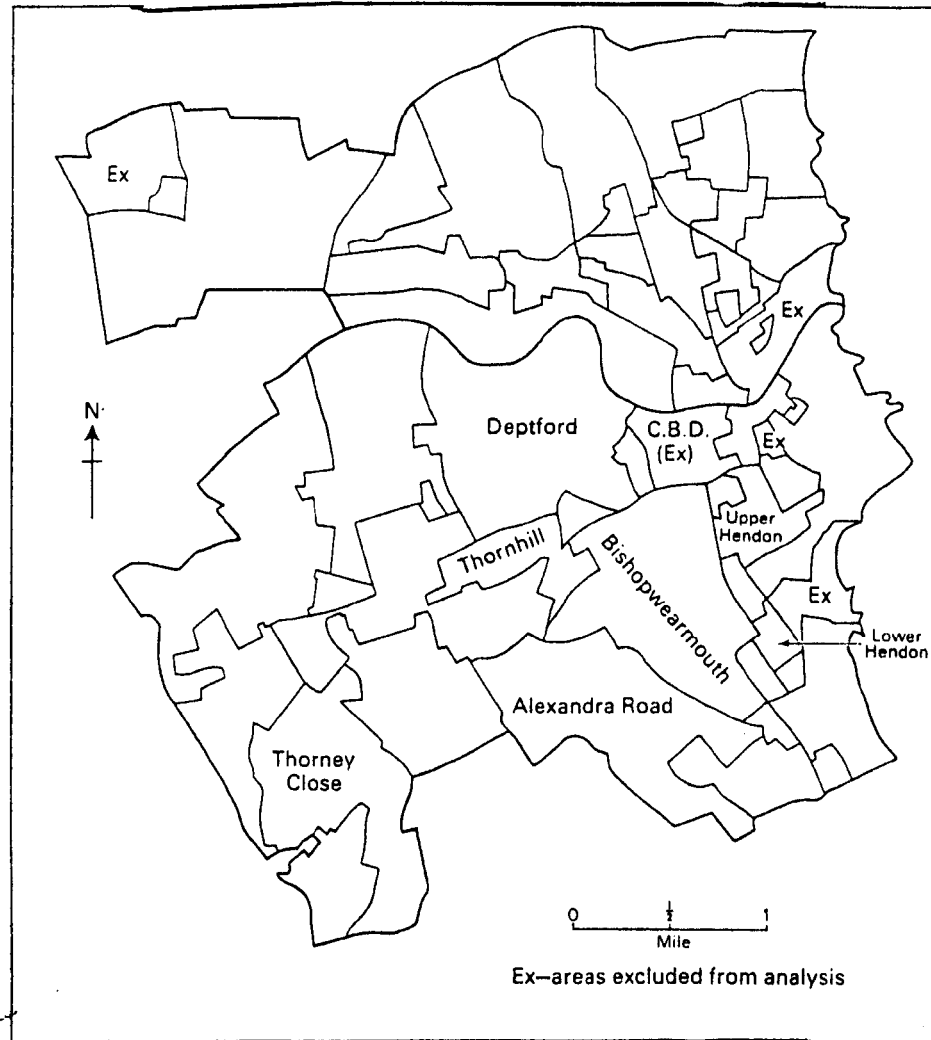
This enables an aerial sampling framework to be determined within which empirical data can be raised, which is spatially concordant with the documentary data of the enumeration district. It was on this basis that Robson delivered his questionnaire on parental attitudes to education.(231) The essential point behind the methodological procedure outlined above is that it comes out with something that has spatial credibility in terms of urban ecology.

Having conducted what he terms an examination of the simple ecological structure of Sunderland, that is to say a standard mapping of a succession of indices to provide broad contextual information, Robson then applies the multivariate analysis to identify the clustering of variables, on the basis of which he selects seven areas of the town for empirical investigation. In other words: "meaningful sub-

divisions of the town have been produced" within which it is possible: "to examine the effects of varying social and physical environments on the development of attitudes to education." (232)

The seven sub-areas are shown in Figure 3.22 and in aggregate represent the range of urban situations existing within Sunderland, and replace the theoretical construct of 'social class' with the reality of 'social world' or neighbourhood (as perceived by the individuals in it - not as a cartographical abstraction based merely on proximity). The difference between social class (theoretical), and social world (real) is illustrated in Figure 3.23 which shows either a positive or a negative anomaly for every one of the seven areas in respect of the attitudes to the education of their children of parents whose sons were about to take the 11 plus examination. (233) The variably anomalous situation is again merely a reflection of the problem of geographical scale in that even in these small areas there are social variations sufficiently large to make it difficult to determine the reality, and further illustrates the inadequacy of the purely sociological approach to the analysis of urban education. This was also illustrated by the general concordance between the distribution of IQ scores in Sunderland (Figure 3.24) and the other variables such as socio-economic level, type and nature of housing and levels of overcrowding: that is to say, the "size of the aerial units used in correlation affects the size of the correlations obtained." (234)

FIGURE 3.22 ROBSON'S SELECTED SUB-AREAS

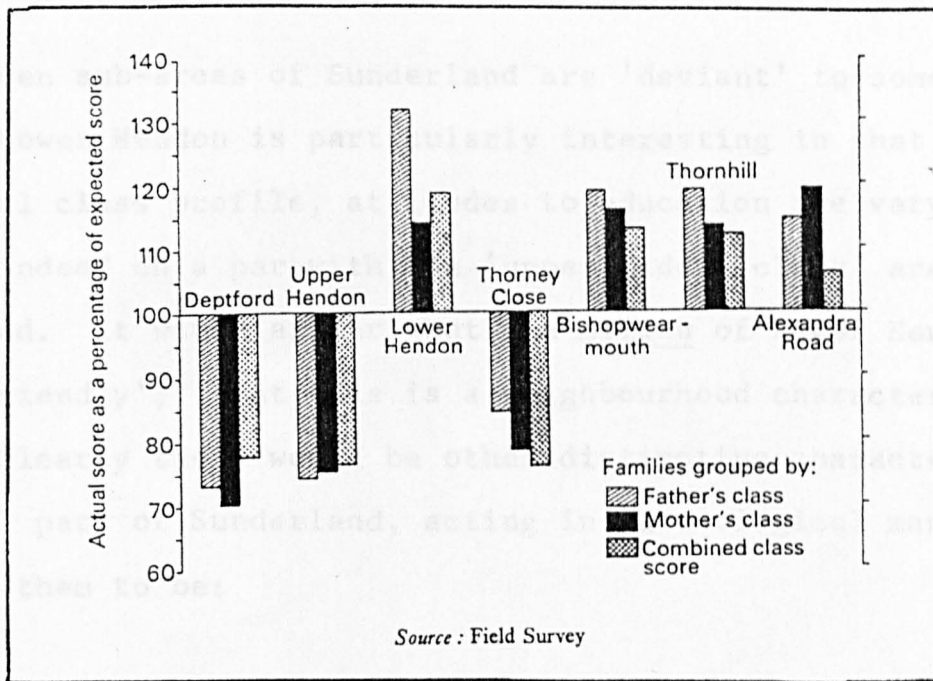


"Seven areas have been selected covering a variety of those types of urban areas which are suggested by the component analysis. For convenience the following names and approximate designations may be given to these areas:

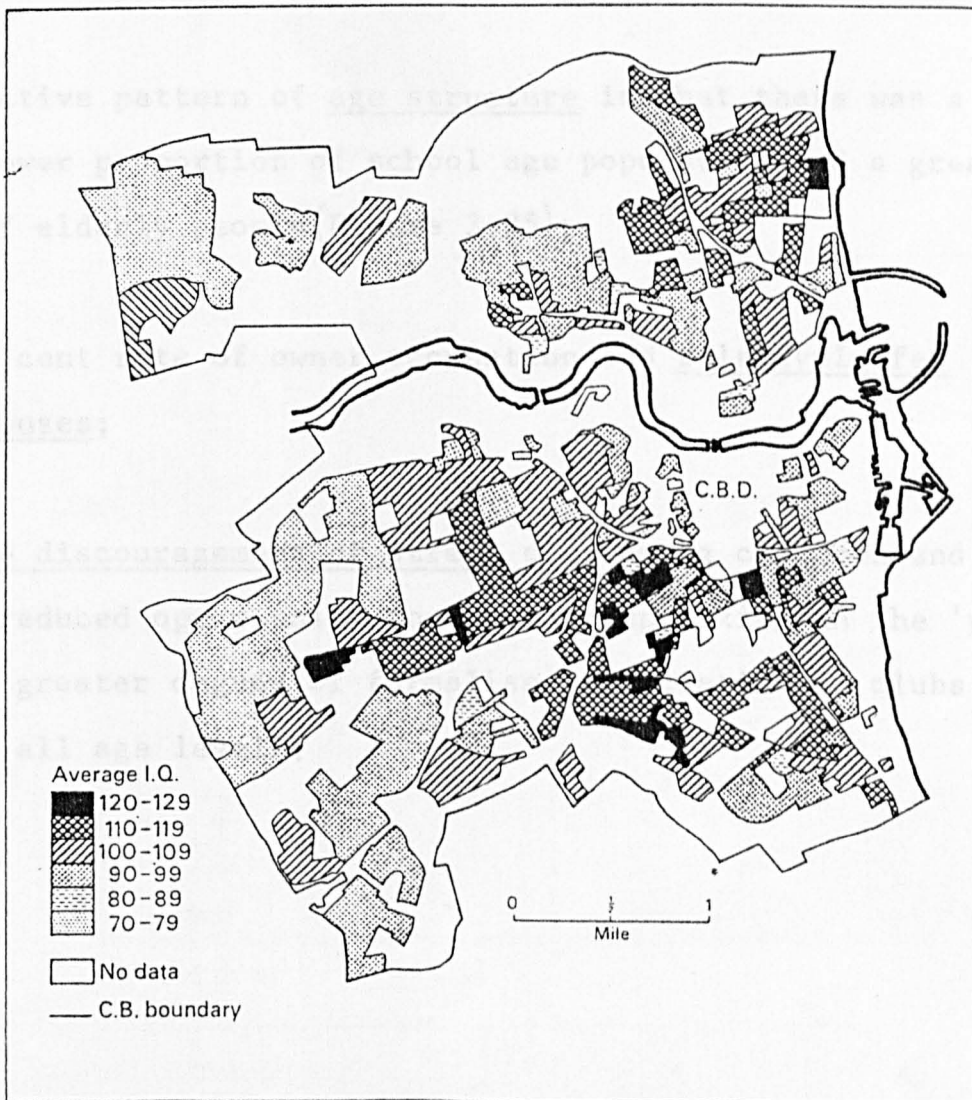
- a) Deptford: stable working-class area
- b) Upper Hendon: highly subdivided working-class area in the 'twilight' zone
- c) Lower Hendon: stable skilled working-class area
- d) Thorney Close: council-house area with predominantly older children
- e) Bishopwearmouth: rooming house area
- f) Thornhill: middle-class area
- g) Alexandra Road: upper-class area."

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Source: B.T. Robson, Urban Analysis : a Study of City Structure, Cambridge University Press (1969), pp. 188 - 9.

FIGURE 3.23 ACTUAL AND EXPECTED ATTITUDE SCORES

Source: Ibid., p. 212.

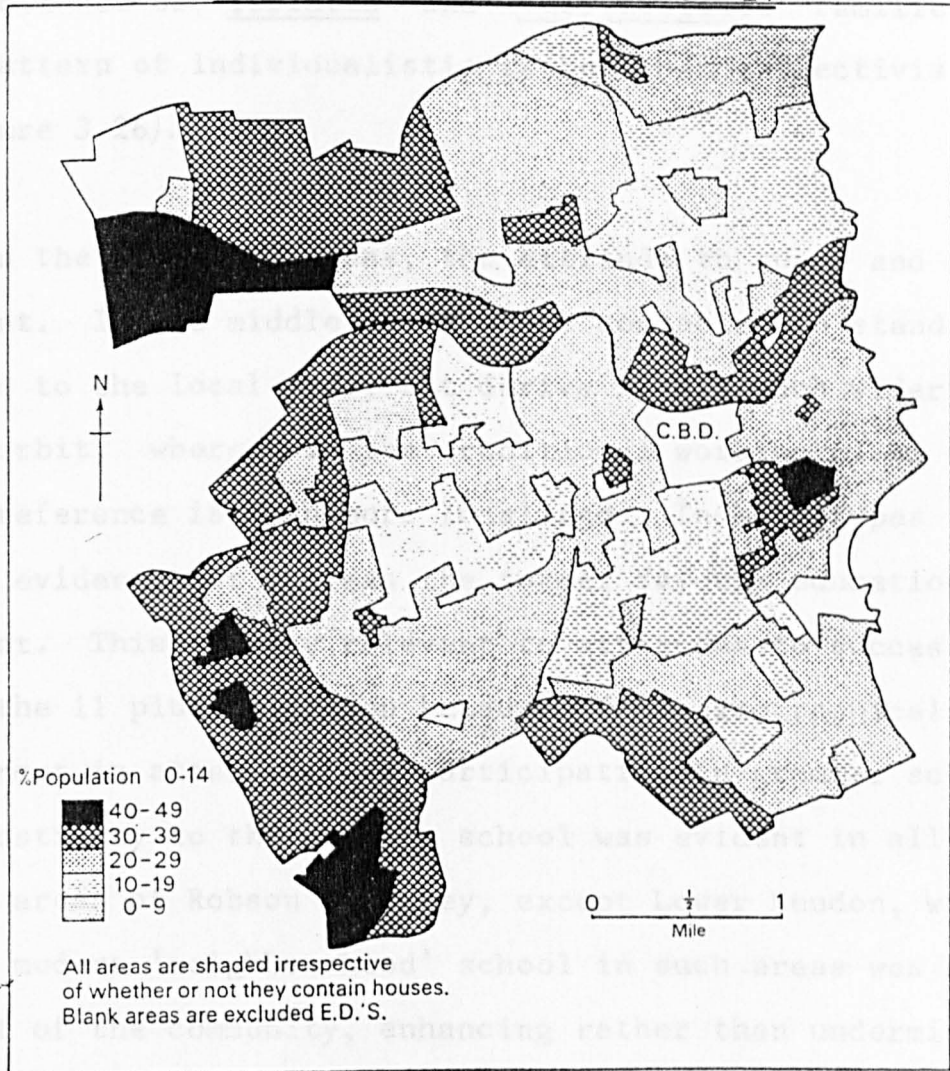
FIGURE 3.24 AVERAGE IQ FROM 11+ 1962 and 1963

Source: Ibid., p. 198.

While all seven sub-areas of Sunderland are 'deviant' to some degree, the case of Lower Hendon is particularly interesting in that despite its low social class profile, attitudes to education are very favourable: indeed on a par with the 'upper middle class' area, Alexandra Road. It would appear that the milieu of Lower Hendon is 'education friendly'; that this is a neighbourhood characteristic in this case. Clearly there would be other distinctive characteristics of this small part of Sunderland, acting in an ecological manner: Robson found them to be:

- a) a lower level of overcrowding than other sub-areas due to a degree of urban renewal and therefore significant movement both in and out of this sub-area;
- b) a distinctive pattern of age structure in that there was a relatively lower proportion of school age population and a greater proportion of elderly people (Figure 3.25);
- c) a 66 per cent rate of owner occupation and relatively few subdivided houses;
- d) an active discouragement of street play among children and therefore a reduced opportunity for peer group mixing in the 'primary' years, but a greater degree of formalised association in clubs and societies at all age levels;

FIGURE 3.25 DISTRIBUTION OF PERSONS AGED 0 - 14



Source: Ibid., p. 150.

FIGURE 3.26 DEGREE OF INTEGRATION WITHIN THE NEIGHBOURHOOD

Area	Number of families			Percentage of families		
	Well integrated	Moderately isolated	Very isolated	Well integrated	Moderately isolated	Very isolated
a Deptford	9	3	5	52.9	17.6	29.4
b Upper Hendon	20	5	9	58.8	14.7	26.5
c Lower Hendon	2	8	8	11.1	44.4	44.4
d Thorney Close	14	17	5	38.9	47.2	13.9
e Bishopwearmouth	3	7	4	21.4	50.0	28.6
f Thornhill	13	20	4	35.1	54.1	10.8
g Alexandra Road	21	4	7	65.6	12.5	21.9

SOURCE. Field Survey.

Source: Ibid., p. 231.



e) a high incidence of 'isolated' and 'very isolated' families; that is to say a pattern of individualistic rather than collectivistic behaviour (Figure 3.26).

In this, as in the other six areas, the attitude to space and distance was significant. In the middle class areas contacts and standards are not restricted to the local area, but derive from a much wider geographical orbit, whereas in the traditional working class areas the frame of reference is much more localised. In both types solidarity is evident, but whereas the former favours education, the latter does not. This is very relevant to attitudes to success or otherwise in the 11 plus selection because of the geographical mobility inherent in attending and participating in grammar school education. Hostility to the grammar school was evident in all the working class areas of Robson's survey, except Lower Hendon, whereas the secondary modern 'neighbourhood' school in such areas was accepted as a component of the community, enhancing rather than undermining its solidarity. Such an attitude survives the transplanting of so-called overspill populations from areas of inner urban degradation to peripheral or even distant housing estates. (235)

Many working class respondents to Robson's survey were adamant that their son should properly go to the 'Board' (now secondary modern) school that they had attended and their parents before them. In Upper Hendon, for example "any other pattern was unthinkable for the majority of parents". (236) It is a pity that Robson does not develop this point further, namely the location of the secondary school in

relation to the community, and especially in respect of the migrational patterns of the (urban) population and the coincidence of the foundation of schools within a variegated secondary section in the inter war period of suburban growth. He uses a nice geographical metaphor when referring to the: "swash and backwash of population movements between the inner and peripheral parts of towns" (237) but the fact that the majority of grammar school foundations and locations of the inter war period were associated with the growth of owner occupier (semi) lower middle class residential zones is not picked up. This may well be because his case study area, like that of Lacey's Hightown, (238) is exhibiting a working class predominance in its overall structure. Be that as it may, the locational trend of such schools, placed them outside the spatial parameter of the normal social networks of the cohesive working class inner urban areas; and even when outer suburban municipal estates were developed, their access to grammar schools through the 11 plus selection still meant an 'out of community' journey to a nearby owner occupier segment of that same outer suburban zone. Meantime the municipal estates acquired secondary modern or (later) comprehensive schools that inevitably absorbed the neighbourhood milieu.

.....

At this point we leave the early and valuable use of an aspect of education by a geographer - Robson - and look towards the way in which a stronger development of a nascent sub-discipline, the geography of education, could engage the potential of the spatial dimension to much

greater effect than hitherto as a contribution to the general analysis of educational provision, operation and outcome.

This will be attempted in Part C of the thesis, in which a selection of the existing, though as yet uncoordinated, literature comprising the potential sub-discipline will be located according to models of modern geographical study. Some of this literature will bring the basically chronological and developmental format of Part B on to the present day, the early 1990s; some will go back to previous periods and issues already touched upon in earlier chapters.

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230. B.T. Robson, op. cit., p. 72.
231. ibid., pp. 272 - 3 (the questionnaire is itself of course multivariate).
232. ibid., p. 184.
233. The fact that those with parents with daughters only involved in 11 plus selection were not included does not indicate bias because education is here being used as a geographical factor and not in itself.
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## PART C

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## CHAPTER FOUR

### THE GEOGRAPHY OF EDUCATION : MODELS FOR A SUB-DISCIPLINE

#### 4.1 MODERN GEOGRAPHY AND ITS INTERACTION WITH EDUCATION

##### 4.1.1 Introduction

In Chapter One the parallel development and comparable structure of both geography and education were outlined and discussed. It would appear that potential for interactive analysis is considerable, yet as was also mentioned, little has been attempted along those lines. In general, neither geographers nor educationists have seen each other's discipline in a complementary light, which is the main reason for the paucity of specialist literature that can be identified as the seed corn of a sub-discipline. However, within that modest collection there is a harvest to be garnered from the more robust shoots, and as we have seen from Chapters two and three the wider literature of both disciplines provides a rich soil within which to propagate the proposed hybrid so long as spatial perspectives are maintained. Whereas much educational literature is introspective in that, by default, it tends to focus on the greenhouse and the curator, traditional geographical literature was too deterministic to recognise a profoundly humanistic phenomenon for what it was, a dynamic formative component of the cultural landscape.

The contention here is that careful cross-fertilisation is capable of releasing the obvious potential that exists; also that a suitable starting point would be the wider recognition of the nature of modern geography by educationists. As is the wont of specialist academia,

geography is still practised somewhat in private by consenting colleagues, though its application to many other social and cultural fields, including 'welfare' is widespread and well established. (1) Indeed, by contrast with education's introspection, geography has perhaps become something of a frantic 'catch-all' creature as personified by W.S. Gilbert's 'Modern Major-General'. (2) Despite this gregarious interaction with other fields, geography has almost completely overlooked an aspect of human activity which is *inter alia* a very significant user of space. According to one of the few specialist geographers to have taken a professional interest in spatial patterns of educational provision:

"The main reason for the relative lack of interest in the past, and despite the important reassessments in the scope and methodology of geography in recent years, the present, is probably the assumption by geographers and others that educational opportunity and provision are evenly distributed throughout the population." (3)

That this degree of naivety concerning educational disparity is matched by the tendency of much of the literature of comparative education to assume that official policy and regulation at the national level results in uniform application and outcome on the ground at least provides for a common starting point on the intellectual lowlands as far as the basic reality of aerial disparity is concerned. As mentioned above, the issue of scale is fundamental to geographical analysis (for example Robson's concern with identifying the most appropriate and accessible spatial unit, (4) and Siddle's argument with Furet and Ozouf (5)), and has much to offer to

comparative education which has tended to become locked into a crude polarised argument as between the relative merits of case studies and generalised theory. (6) To be fair to education, geography has also been subject to this somewhat doctrinal problem as Figure 4.1 illustrates. (7) Both fields have since emerged from the methodological excesses of the social science boom and their resettlement into a more balanced perspective provides a good opportunity to effect a convergence.

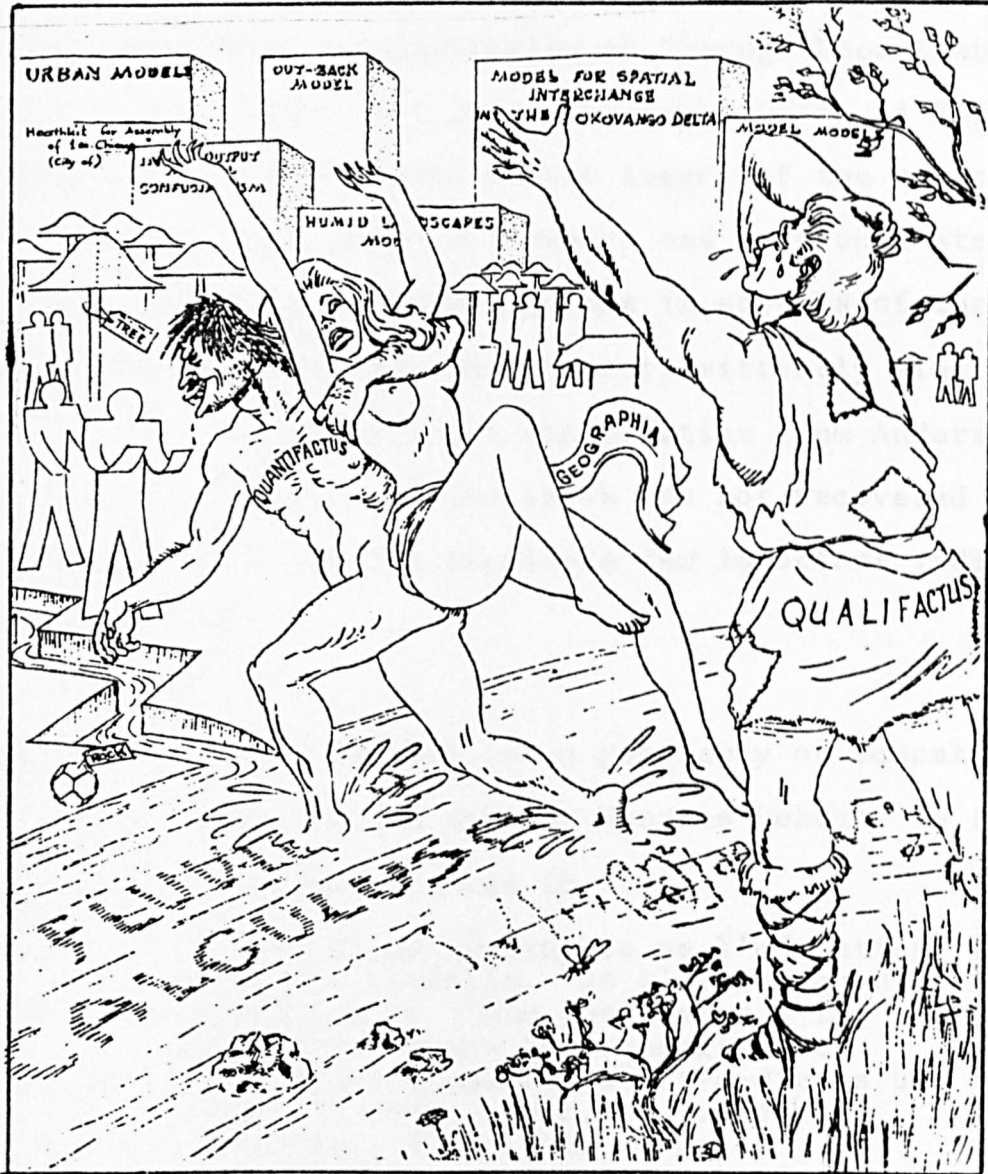
So in this chapter the models of modern geography put forward by Broek, (8) Haggett (9) and Walford (10) will be applied to educational themes, utilising a selection from the wider literatures of both disciplines as exemplified in Chapters two and three as well as the existing though previously uncoordinated literature of the geography of education in the medium of English. It is first necessary to consider briefly the identity and fortunes of this nascent field, to date.

#### 4.1.2 The 'Nearly' Sub-Discipline

There are two accounts of the origins and progress of a geography of education up to the time of their compilation, (11) and five calls promoting the further development of such a sub-discipline. (12)

The more substantial 'interim account' by Meusbürger suggests a number of formative studies in nineteenth and early to mid-twentieth century England, Germany and France. Some of these may well have had some

FIGURE 4.1 QUANTIFICATION : THE FORCED MIGRATION OF 'GEOGRAPHIA' FROM HER TRADITIONAL HABITAT



Haggett: 'Quantification'. A cartoon of the quantitative revolution tearing geography away from its conventional qualitative traditions. "Geographia" is somewhat older, and more able to take care of herself than the cartoonist suggests. (From L. Curry, *Canadian Geography* Vol. 11 (1976), p. 265, Fig. 1).

Source: Peter Haggett, '*Geography : a Modern Synthesis*', Harper Row, (1972), p. 461.

influence on the thinking of those who later contributed more specifically to the geography of education but in the opinion of the writer do not in themselves qualify as explicit examples. (13) The earliest 'genuine articles', also mentioned by Meusburger as well as by Ryba emanated from the University of Chicago Department of Geography in the 1940s, (14) under the inspiration of Edith Parker and Harlem Barrows and formed part of the legacy of the school of Urban Sociology in that same university which had developed strongly from the 1920s onwards. Although monographs in aspects of the geography of education have emanated from Chicago intermittently since the 1940s, (15) plus the significant contribution from Anderson in 1965, the intensity of interest of the 1940s was not recovered and did not develop elsewhere in the USA despite a few important individual contributions. (16)

The first coordinated argument for a geography of education seems to have been made by the French scholar Maurice Debesse in 1958, as he claims in a more explicit article in 1972:

"L'idée d'une géographie de l'éducation n'est pas nouvelle. Je l'avais formulée en 1958, lors d'une conférence à la Société Française de Pédagogie sur l'éducation comparée, c'est-à-dire à une époque où cette étude, en France, s'éveillait d'un long sommeil. Aujourd'hui, que peut-on entendre par une géographie de l'éducation? Quel intérêt offre-t-elle aux chercheurs? Quelle place pourrait être la sienne parmi les sciences pédagogiques? C'est ce qu'on voudrait examiner brièvement, en manière de conclusion à un ouvrage qui nous a apporté, dans un cadre géographique, les éléments d'un tableau des grands systèmes éducatifs." (17)

In between the two pronouncements of Debesse, Gautier had published what came to be recognised as a substantive contribution to the field (18), and there seems to have developed within the French literatures of both geography and education an accommodation of studies relating the two areas and pertaining to cases and issues in France, her former colonial territories and other third world areas. Examples of these constitute Appendix F , but despite the healthy flow of such publications, the call by Debesse for a geography of education does not appear to have been taken up by his French colleagues. However, the Francophone input has been significantly enhanced by the work of the Swiss scholar, Pierre Furter. (19)

Both Meusbürger and Ryba cite the important contribution of Geipel to the development of the geography of education in Germany, beginning with his call for its greater recognition in 1966. (20) Indeed it is only in Germany that the sub-discipline has taken root. In addition to Geipel's continued activity, Meusbürger has succeeded in establishing a strong team at the Geographisches Institut Universität Heidelberg, where he has held a Chair in Social and Economic Geography since 1983, and established a substantial database to support further researches. He has also been active in establishing a geography of education working group within the Association of German Geographers, which numbers about 25 participants. Since 1973 Meusbürger has published about 40 pieces of work in the geography of education, almost all in German, and therefore beyond the scope of this thesis. Appendix G carries the list in full for the benefit of readers who have German. At the time of writing, Peter Meusbürger is engaged on a

substantive volume on the Geography of Education due to be published (in German) later in 1992. (21)

The remaining focus of such activity as there has been is in the United Kingdom, and for obvious reasons this provides the bulk of the material to which the writer will refer in more detail below. Here the first call for a geography of education was made by Ryba in 1968, at which time he was able to say that:

"... the learned geographical journals do not appear to contain a single explicit contribution to educational geography; and even when the net is widened to include studies which might reasonably be assigned to the field despite not being explicitly intended for it, only one or two articles would seem to qualify." (22)

We have noted above the view of one professional geographer as to why his colleagues have shown little interest in the spatial patterns of educational activity, and as Ryba rightly acknowledges, the initiative has to come from the professional geographers, or those who like himself and the present writer have 'lapsed' into educational study.

Along with Hones and Rawstron, Ryba succeeded in persuading the 1972 Montreal Congress of the International Geographical Union to accept a workshop in the geography of education. All three presented papers, which were summarised in the Conference Report, (23) the setting up of an IGU Working Party, and a further paper calling for more interest in this potential sub-discipline (24) were promising outcomes of this

first really visible appearance of the proposal before a significant audience of professional geographers.

The fact that the joint-secretaries of the working group were both in England led perhaps to more interest being shown by British colleagues such as Brock, Gould and Marsden, all of whom contributed to the Bulletins produced by the group during its lifetime. (25) The working party became extinct in 1981 with the distribution of its fifth Bulletin. Among the contributions to the five editions were:

- a) a useful translation of the views of the German pioneer in this field, Robert Geipel in which he concludes that: "... geographers must concentrate on problems of a smaller scale;" (26)
- b) surveys of the work to date of Peter Meusburger, Bill Gould and Bill Marsden, all of whom have been mentioned above, and summaries of the contributions of Raymond Ryba and Colin Brock to Conferences in France and England in 1975; (27)
- c) evidence of further contributions of studies in this field to a number of conferences in 1976 and 1977, as well as of an expanding bibliography and network of contacts; (28)
- d) a valuable survey of work in, and associated with, the geography of education in Australia (29) and further evidence of an expanding bibliography.

It is, to say the least, unfortunate that this valuable service to the development of the sub-discipline terminated in 1981, especially as there had been further successful efforts to gain a platform at the



Annual Conference of the Geographical Association in London in 1979 and at the Conference of the Comparative Education Society in Europe in Geneva in 1981. Although neither was mentioned in Bulletin No.5 of the IGU working group, the former resulted in publication of the inputs by Marsden and Panton, (30) though not the aforementioned report on the 'Progress of the Geography of Education' by Ryba which might well have stimulated interest in the community of specialist geographers had it reached them; an interesting comment on differential circulation, in itself an aspect of the geography of education. The Geneva meeting of 1981, at which the writer was also present, again brought forth evidence of the growing interest in the field in the German medium community, and of significant efforts also in Switzerland and Italy. (31) In addition to his contribution to the general work of the working group, and its Bulletins, Bill Marsden also produced as a joint IGU/University of Liverpool Education Library project an annotated bibliography in respect of the historical geography of education. (32)

It is interesting, but perhaps not particularly profitable, to speculate on the reasons for the demise of the working group on the geography of education. Declining support from the IGU might have resulted from the fact that no workshop on this theme took place in any of its Congresses after the initial one in 1972, but most probably the pressures on the small group of activists from their various other interests and responsibilities in the respective institutions was more significant. After all 1981 was the year of massive cuts in the British university sector and the beginning of correspondingly heavier

work loads. The geography of education had not by then succeeded in gaining a place among the educational foundations courses of teachers colleges and university departments of education in Britain. Since then, of course, such components of initial and in-service education and training programmes have become increasingly out of favour in any case, which is yet another indication that any potential revival of interest and activity in this field will depend upon the geographers rather more than the educationists. Fortunately, as illustrated below there has been some new and sustained interest, with two university departments of geography in England maintaining some research effort. (33)

Despite the continuation, and perhaps even marginal increase in studies of 'educational geography' by the professional geographers, no further convergence is evident by the time of writing. This is most likely due to the lack of linkage between interested geographers and educationists at two levels:

- a) organisational - that is to say the need for a revival of some kind of working party comprising both educationists and geographers;
- b) intellectual - the need for a framework upon which to locate the various dimensions of both geography and education that can contribute to the discussion;
- c) visible - the need for more publications at different levels in this field.

Obviously a) and c) lie beyond the scope of this thesis, but b) is one of the prime aims of this thesis and to which we shall now turn.

## 4.2 MODELS TO SUPPORT A MODERN SUB-DISCIPLINE

### 4.2.1 Introduction

A model, or models, for the geography of education must of necessity be based on models of geography itself. A number of writers have attempted an holistic portrayal of modern geography, some of whom were mentioned in Part A above.

In Chapter one four distinctive characteristics of the more rigorous 'post-Madingley' modern disciplines of geography were highlighted. These have to do with methodology and may be illustrated with reference to spatial characteristics of educational phenomena, for example:

- a) quantified database: (school mapping);
- b) nomothetic models: (generalised educational surfaces);
- c) issue based approach: (spatial implications of educational policy changes such as expansion/contraction of provision, opting out and privatisation);
- d) behavioural dimensions: (mental maps).

But useful as these indicators are, they have to do with technical skills of spatial and locational analysis, rather than with the wider

intellectual appraisal of the discipline. These methods, inter alia, would operate within any of the three models selected here for application to the manifestations of educational geography.

#### 4.2.2 Broek's Model (34)

This was selected to illustrate modern geography in Chapter one, and portrayed in Figure 1.3 (p 36 above). It has to do with the 'essence' of the discipline (see also figure 1.4, p 40 above) and we may take each of its "essential components" and apply them to educational themes.

a) Cultural Appraisal. Broek contends that cultural regions provide a better framework than natural regions, which is to prefer possibilism to determinism. We have seen above how the domains of some of the major European cultural zones were extended by the process of urban colonisation, and the educational component associated with urbanism; likewise the role of education in European colonisation of other continental and island zones of the world in relation to resulting patterns of those two major cultural traits, religion and language.

b) Regional Concept. This can and does operate in respect of education, for example in the establishment and operation of regional universities such as the University of the West Indies, University of the South Pacific, the former University of Botswana, Lesotho and

Swaziland and Makerere in East Africa. The new University of Cyprus has been established partly in the hope of capturing the regional role of the American University of Beirut which has seen its spatial scope constrained over the past decade or more. Regional examinations boards have a similar ambiance, such as the West African Examinations Council and the Caribbean Examinations Council, the latter being almost the only dynamic regional operation in the Commonwealth Caribbean as the impact of UWI has been much more fragmented and partial. (35)

c) Aerial Coherence. This means a "spatial ensemble" acting with "internal consistency", such as was exhibited by the Lower Hendon district of Sunderland in Robson's study. (36) This attribute is rather more elegantly and succinctly expressed as the concept of 'milieu' in which educational processes, formal and/or informal, play a significant part.

d) Spatial Interaction implies a functional order rather than a situation of milieu and is not confined to coherent areas. Rather it deals with the organisation of space or "spatial hierarchies". With respect to education there is obvious application to the sectors of schooling in any place and the spatial interaction between them; for example the different spatial implications of catchment size and absence or presence of selection procedures in regulating the flow from primary to secondary, whether or not either sector be complete. (37)

e) Localization, or a tendency for specific or related features and activities to 'cluster', thus causing an "intensity of occurrence", lies at the heart of geographical interest which is the more activated the greater the disparity evident in the spatial pattern. This was commented on above in respect of the peripheral clustering of monastic educational activity in North-East England in the early Christian era (see Figure 2.2 above), but could also be well illustrated by the extraordinary concentration of higher education institutions in the 'gateway city' of Boston, Massachussets.

f) Significance of Scale. This is a crucial matter to all geographical study for as Broek puts it: "The scale of investigation makes ... a great difference to the generalizations that can be drawn from observations". This was illustrated above with reference to the work of Stephens (38) and of Siddle (39) in their respective concern with the development of literacy in England and France. The writer has observed elsewhere the significance of national scale for education, especially in respect of small states, (40) as well as in respect of comparative educational study, (41) of which more will be made below.

g) The Concept of Change. One of the most distinctive differences between the old geography and the new is the accommodation of the concept and the actualities of change in the dynamic methodologies of spatial and locational analysis now employed. Central to the essence of both geography and education are the almost synonymous issues of dissemination and diffusion (see Figure 1.4 above) which are prime

influences on rates of change as well as being profoundly spatial. But it is obvious that change involves the temporal dimension, as illustrated in Chapter two, or as Broek has it: "Events must be viewed in time scales appropriate to the nature of the process". It is for this reason that "Time Geography" has emerged within the constellation of sub-disciplines. (42)

h) Distributions. In a very crude form, the matter of distributions dominated the old geography: "capcs and bays"; "history is about chaps, geography about maps". Cartography is still of course an essential and distinctive characteristic of the geographical approach to the examination and illustration of the earth's surface phenomena, and has been so utilised in this thesis with respect to various aspects of education. But it must be remembered that "it is a means to an end, not the purpose of geography", and can be utilised at two different levels; that is to say, to establish a spatial database but also to perceive spatial relationships and interactions that would not become so clearly evident through other modes of observation and analysis. Even basic school mapping is still needed in many places. (43)

i) Abstract Theory Broek's comment to the effect that abstract theory, while sharpening the analysis can "remove place and time from geography" is of some significance for educational studies and especially for comparative education. He advises that distributions (eg of educational phenomena) chiefly result from "non-recurrent historical processes". However, when combined with empirical and

documentary data collection, as shown by Robson's substantive work on Sunderland, the contribution of theory can be instructive both in briefing and debriefing.

In summarising his perception of modern geography (see Figure 1.3 above), Broek emphasises that the core of the discipline is a concern with 'place', but that this could be viewed physically as a "piece of land" or "unique area", or culturally/behaviourally as a "human group" or as "mental concepts formulated to arrange an abstract order". All these have the potential for direct application to the study of education, for example, and respectively: a campus; a student body and its places of origin; the dispersion of the alumni, their image, status and networks.

#### 4.2.3 Haggett's Model (44)

In so far as this model appeared in a best selling student text, Haggett's view of modern geography has had the opportunity to be more influential than those of either Broek or Walford. It was used by the writer in his contribution on the geographical factor to the Festschrift for Vernon Mallinson. (45) Figure 4.2 illustrates his application of educational themes to Haggett's model of an integrated internal structure for modern geography. Appendix B comprises Haggett's own comparison of this integrated model with the traditional internal structure of the discipline. As with Broek's model a brief



FIGURE 4.2 THE APPLICATION OF EDUCATIONAL THEMES TO HAGGETT'S MODEL OF AN INTERNAL STRUCTURE FOR MODERN GEOGRAPHY

A. MODERN GEOGRAPHY		B. APPLICATION
(Comprises)		(Examples)
1. Spatial Analysis	Spatial interaction theory	Examination of patterns of location of educational provision and activities. The possible effect of policy decisions thereon; secondary reorganisation schemes, abolition of direct grant status. Diffusion of education items, development of education networks, projects and ideas.
	a.Theoretical Expansion	
	Diffusion theory	
	Others Relocation	
2. Ecological Analysis	Watershed development	Catchment analysis.  Models of educational activity in spatial terms in different urban structures. Educational zonation in cities. Flow of information, materials, students (ref. dual sites, feeder system). Education and town planning, activity grids (e.g. Milton Keynes).
	b.Applied Urban Problems	
	Others	
	Environmental Structures	
3. Regional Complex Analysis	a.Theoretical Ecosystems	Possible application to the location and work of agricultural colleges and other environmental institutions, e.g. field study centres, whose work may involve modifications to or conservation of the landscape; education/tourism overlap, e.g. National Park education schemes.
	Others	
	Natural resource geog.	
	b.Applied Hazard appraisal	
3. Regional Complex Analysis	Others	Educational institutions as economic growth points in a regional context. The multiplier effect and its geographic consequences. The implications of reorganisation of higher education in spatial terms: e.g. College of education rationalisation, development of polytechnics. Journeys to school in regional context, e.g. week boarding comprehensives. Long term effects of interaction between education and other systems, e.g. land use conflicts, priorities and co-operation. Educational zones.
	Regional growth theory	
	a.Theoretical Interregional flow theory	
	Others	
3. Regional Complex Analysis	Regional forecasting	After: Brock, C.: A Role for Geography in the Service of Comparative Education, <u>Compare</u> , Vol.5, No.3, 1976, p.36.
	b.Applied Regional planning	
	Others	
	Others	
Source: Haggett, P.: <u>Geography: A Modern Synthesis</u> , Harper and Row, 1972, p.583.		

Source: Colin Brock, 'Comparative Education and the Geographical Factor', in: Keith Watson and Raymond Wilson (Eds), Contemporary Issues in Comparative Education, Croom Helm, (1984), pp. 151-2.

discussion of the application follows, according to its main components.

a) Spatial Analysis

i) Theoretical: this may involve the creation and application of models of location and spatial interaction, as with the application of central place theory to educational structures and systems in the Bath area of England by Hones (46) and the use of various theoretical models of urban structure by Robson in his attempt to understand the 'culture' of Sunderland. (47) The potential influence of new policy decisions can be depicted, and in England and Wales since 1944 the actual effects compared. (48) Diffusion plans for the dissemination of curricular innovation can be worked out, as can the actual diffusion of educational changes in the past. (49)

ii) Applied: catchments can be examined using modern techniques, leading to important policy decisions. This was most skilfully carried out by Elizabeth Thomas-Hope in respect of the primary sector in the Jamaican parish of Saint Ann (50) and the number and approximate locations of schools in different sectors predicted, as undertaken on behalf of the government of the Caribbean island of Saint Lucia by the writer. (51) An excellent example of the application of network theory for schools in relation to town planning was the decision to base the entire planning grid for the new city of Milton Keynes on the scale of the optimum legal walking journey to and from school for young primary children.

### b) Ecological Analysis

As indicated in Figure 4.2 this may be interpreted in the more natural ecological sense of man's role in affecting physical landscape change and the effect of educational activity as a contributor to, for example, both degradation and conservation. Popular field study centres, such as at Malham Tarn in Yorkshire and Slapton Ley in Devon can have effects in both directions, as can National Parks i) by attracting too many people, but ii) succeeding in educating some of them towards environmental care. The most exciting and extensive example of making the natural environment the locus for education is the 'Rainforest University' set up in the Batu Apoi jungle in Brunei in 1991.(52)

The application by the writer fails, however, to address the ecological dimensions of the built environment and the actual and potential role of education in situations ranging from rural through suburban to urban man-made landscapes and townscapes. The ecology of the school, (53) and of education at a larger scale (54) is one of the most significant and 'open' areas of potential research in the geography of education.

### c) Regional Complex Analysis

The majority of the populations of the developed world are concentrated in major urban areas. Primate cities and other major conurbations are becoming increasingly dominant, not only in 'the

North', but also in the developing countries of 'the South'.

As illustrated above in the cases of Freetown and Ibadan, major urban centres are characterised by high educational profiles and prestigious institutions. At the peak of the range of such massive agglomerations of humanity are the metropolitan areas, seen by Eckstein and Noah as essentially cultural manifestations. The metropolis they say is " ... at once the progenitor, importer and exporter of culture, a powerful agency of education in its national and international contexts". (55)

The case of London from the educational viewpoint has been a contentious one in terms of the reform of its internal political geography: the creation of the Greater London Council in 1964, and its educational subdivision into the Inner London Education Authority (ILEA) and a number of new outer London Boroughs (56), the abolition of ILEA in 1990 and its replacement by the creation of new education authorities for each of the Inner London Boroughs. - Yet beneath this radically different political geography there operates a massive and complex set of interlocking educational networks many of which transgress the political boundaries and relate more to the economic and demographic dynamics of a major metropolis. Nonetheless from both the political and the socio-economic geography standpoints comprehensive works on London (57) fail to recognise the educational component of its being. Because of the scale and complexity of diurnal migrations relating to education in such conurbations as well as the numerous non-educational dimensions of schools and colleges in densely populated areas, such as their relationship to land values and residential desirability, it is important for the realities of the

geography of education to be researched. The computer hardware and software now exists to enable the formerly unmanageable multivariate spatial analysis to be conducted and multidimensional mapping to be possible.

However, despite the value of Haggett's model, it does not carry in itself the dynamic character of geography. For this the writer will turn to Walford.

#### 4.2.4. Walford's Model (58)

Walford's model of dynamic themes in geography comprises Figure 4.3a and the writer's application of educational phenomena to it forms Figure 4.3b.

In order to portray the dynamic realities of geography, Walford refer always to 'activities', examples of which he provides in general geographical terms. Three interlocking spatial dimensions of activity are employed:

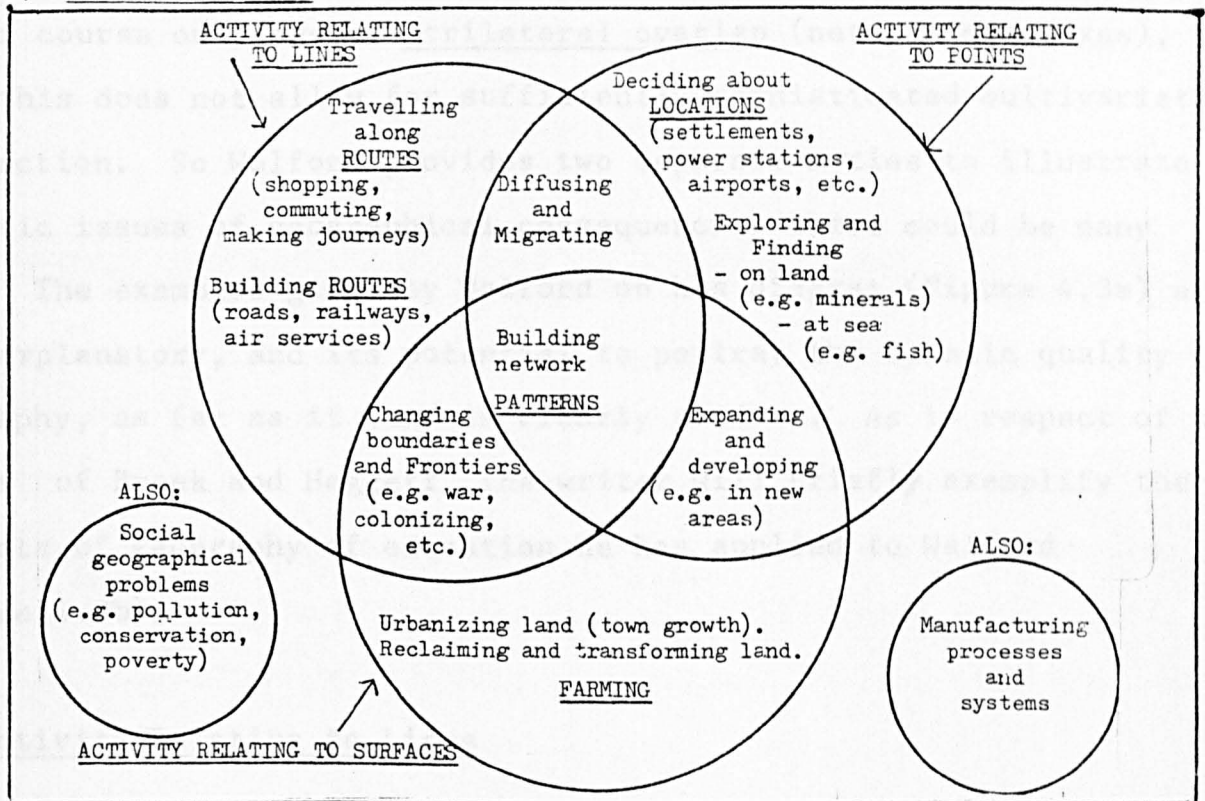
- a) Lineal (activities relating to lines);
- b) Locational (activities relating to 'points');
- c) Aerial (activities relating to 'surfaces').

The Venn diagram allows for three areas (and therefore examples) of bilateral overlap:

- a) lines/points (nodes on networks);
- b) surfaces/points (diffusion through networks);
- c) surfaces/lines (network parameters),

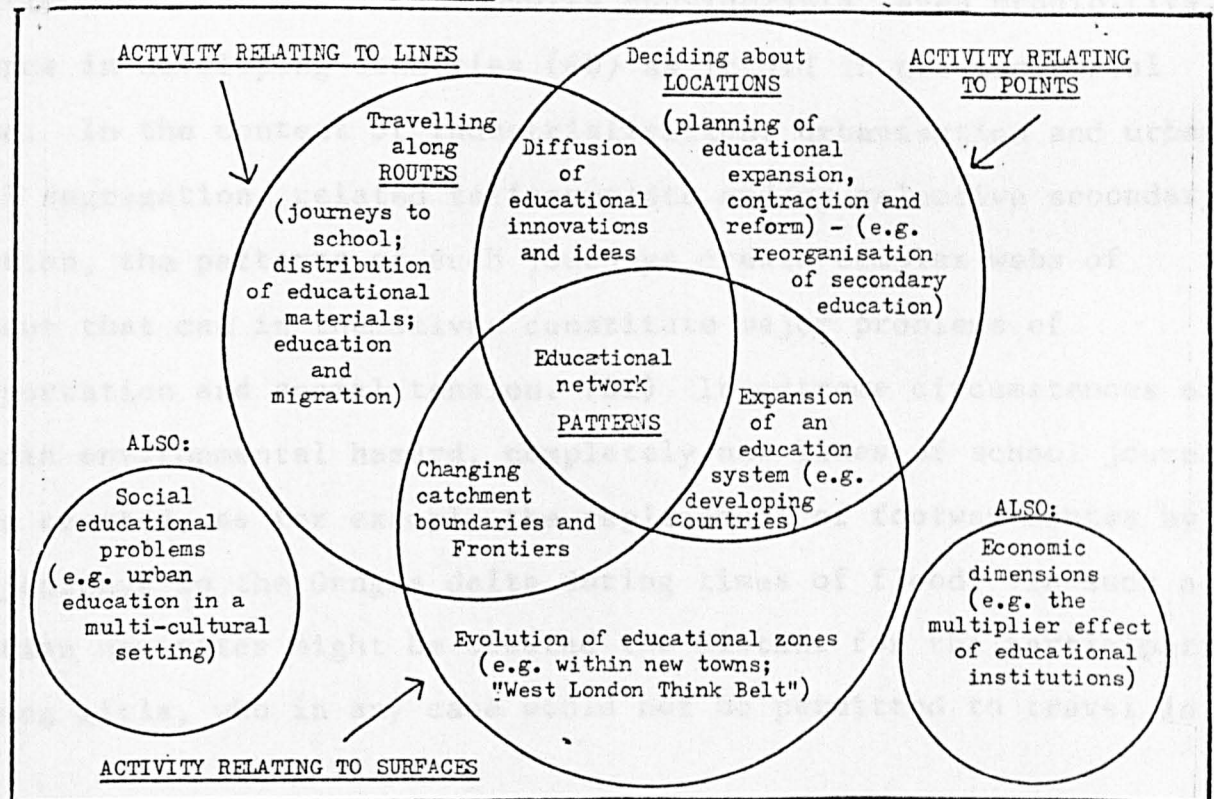
FIGURE 4.3 THE APPLICATION OF EDUCATION TO WALFORD'S MODEL OF THEMES IN GEOGRAPHY

a) WALFORD'S MODEL



Source: Walford R. (Ed). New Directions in Geography Teaching, Longman, 1973, p. 105.

b) APPLICATION BY COLIN BROCK



Source: Colin Brock 'Comparative Education and the Geographical Factor' in: Keith Watson and Raymond Wilson (Eds), Contemporary Issues in Comparative Education, Croom Helm, 1984, p. 154.

and of course only one of trilateral overlap (network complexes), but even this does not allow for sufficiently sophisticated multivariate interaction. So Walford provides two separate circles to illustrate thematic issues of geographical consequence - there could be many more. The examples given by Walford on his diagram (Figure 4.3a) are self-explanatory, and its potential to portray the dynamic quality of geography, as far as it can, is clearly evident. As in respect of the models of Broek and Haggett, the writer will briefly exemplify the elements of geography of education he has applied to Walford (Figure 4.3b).

a) Activity Relating to Lines

Beginning with the smallest scale, the diurnal journey to and from primary school (59) is a good example of a lineal activity relating to education, and one which can involve considerable, even prohibitive, distance in developing countries (60) as it did in pre-industrial Europe. In the context of industrialisation, urbanisation and urban social segregation, related to incomplete and/or selective secondary education, the patterns of such journeys create complex webs of movement that can in themselves constitute major problems of transportation and social tension. (61) In extreme circumstances of periodic environmental hazard, completely new lines of school journey may be created, as for example the replacement of footway routes by boat journeys in the Ganges delta during times of flood. In such a situation new sites might be created too distant for the participation of young girls, who in any case would not be permitted to travel in

boats with males, and would therefore suffer an interruption in their schooling. (62)

When successive waves of reorganisation of post-primary education occur, as has been the case in England since 1902, and especially since 1944, the resulting implications for differential accessibility contribute significantly to the changing social and economic geography of different locations, neighbourhoods and zones. (63) Mention has been made above of the demographic shifts in suburban London (see Figure 3.20) which were made possible by the development of public transportation lines in the form of buses and trains (over and underground). These lines also became factors in determining the accessibility of prospective secondary, especially grammar, schools and may well regain that kind of significance as parental choice becomes more effective under the market system of the 1988 Education Reform Act. So such 'activity along lines' can operate with educational factors effecting a migrational pull, or it can be the reverse where the migration is not in itself educationally motivated but may significantly affect the educational context. For example, the aforementioned transportational determinant of initial West Indian and South Asian settlement in London was extended by the movement of subsequent generations outwards within the same sectors. As such movements occurred, so the socio-cultural constitution of individual school catchments changed, including differential attitudinal and achievement profiles.



With respect to developing countries we have seen above how successive lines of transportational development affected the formative period of western schooling in Sierra Leone (see Figure 3.14) and, as in other such countries, helped to establish a pattern of marked disparity of provision in relation to population distribution and tended to pull selected young people from the rural areas. Johnson's study of the location of Christian Missions in Africa also illustrated the significance of routes, including pre-European caravan routes. Of course it is not only the clustering of educational activity according to linear movement that is significant, but the negative effect for populations in the interstices of patterns of lines. This may severely disrupt the flow of educational materials or the frequency of advisory and administrative support. Such problems of accessibility may be increased by the incidence of extremes of physical geography as in, for example: the Niger Delta, (64) the mountainous interior of Papua New Guinea, (65) remote archipelago states of the South Pacific. (66) But they may also be a direct result of the general divergence of lines of communication between cores and peripheries. (67) The interstices do not have to be remote in absolute terms to miss out on development, including education as the aforementioned example of mid-nineteenth century 'rural industrial slumberlands' illustrated (see Figure 3.3).

Finally, being 'at the end of the line' can be advantageous or otherwise in educational terms, according to the circumstances, which, as geography is always in a dynamic state, can change. We may compare for example the relative remoteness (in terms of cultural and

political geography as well as lines of communication) of the Mamfe district of Cameroon, as between the core of that country and adjacent lines and nodes of Nigerian networks of opportunity, including education. Much depends on the scale of the context within which activity along lines is viewed. Hull might be seen as peripheral in terms of the national rail network, but viewed on a N.W. European scale and in respect of other lines of movement it gains in stature and this is reflected in the educational activities and strengths of its university and polytechnic. (67) Furthermore, its prosperity as a provincial centre and that of its 'city region' may well increase with the full operation of a Single European Market from 1 January 1993, and this in turn would have significance for the level of resource on which educational investment by both LEA as well as local companies and individuals depends (see Figure 4.4).

b) Activity Relating to Points

As Figure 4.3 indicates, this is concerned not only with location per se but also decisions about locating and therefore the factors informing such decisions. The central and most obvious example of this in educational terms is the precise location of educational institutions, their degree of clustering and resulting patterns of distribution. Observations were made in Part B as to the distribution of schooling in pre-industrial England and then on into the phases of industrialisation and urbanisation. Before 1870 everything depended on the decisions of 'non-governmental' providers such as churches, religious societies, the nature and status of the rural gentry and the

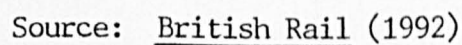
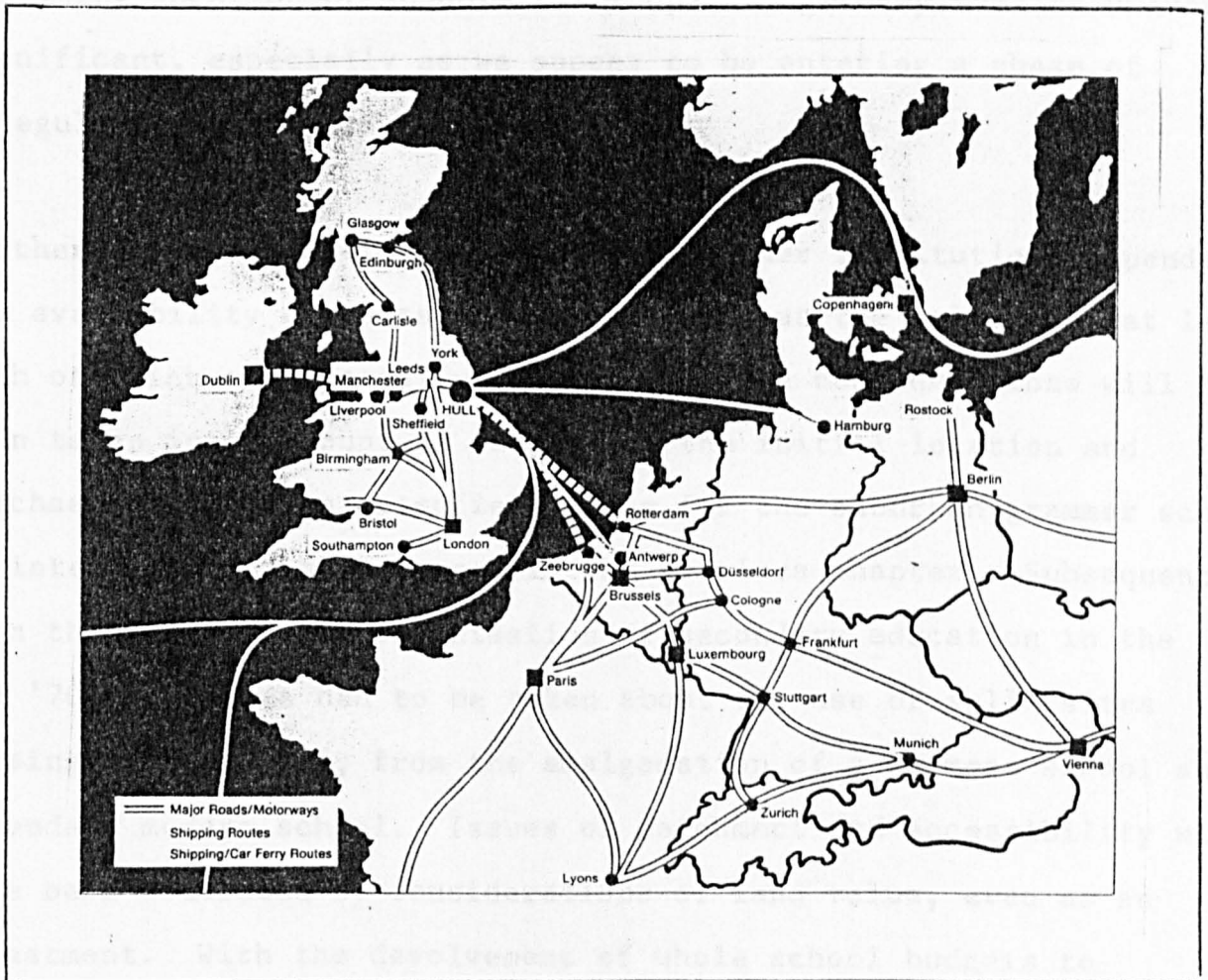


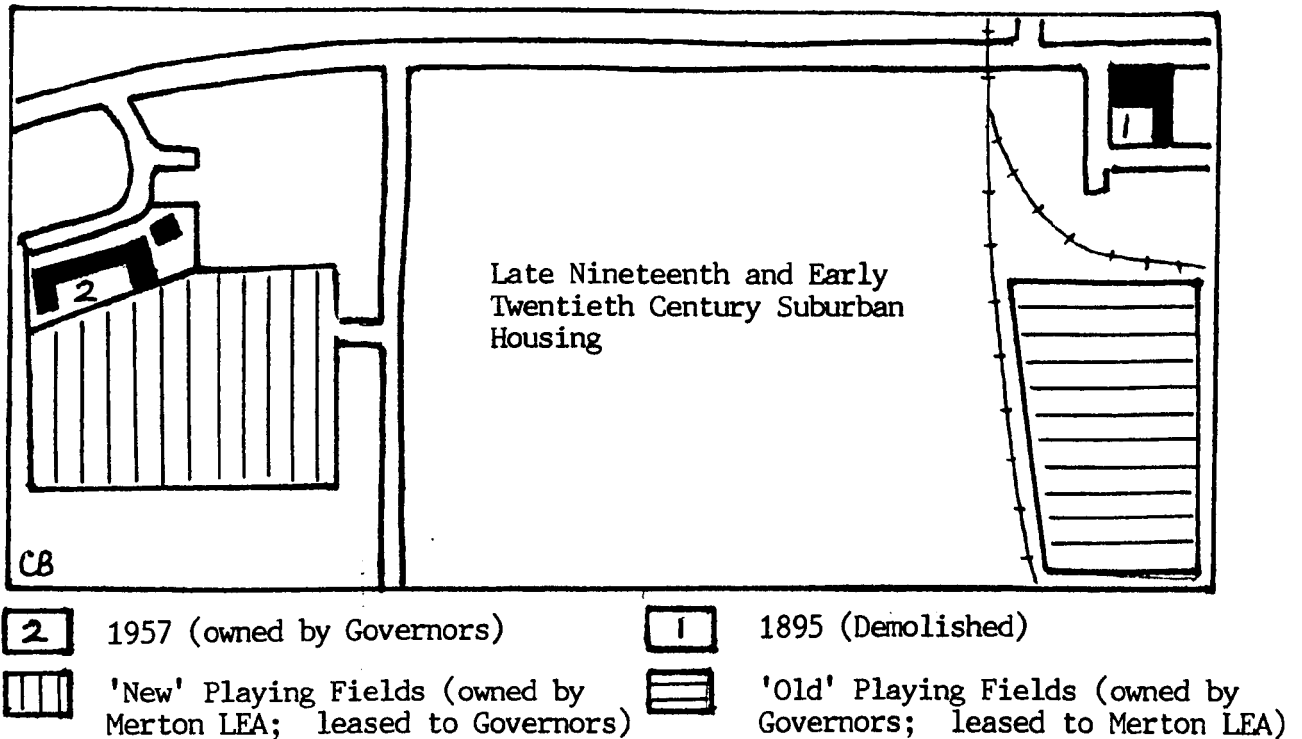
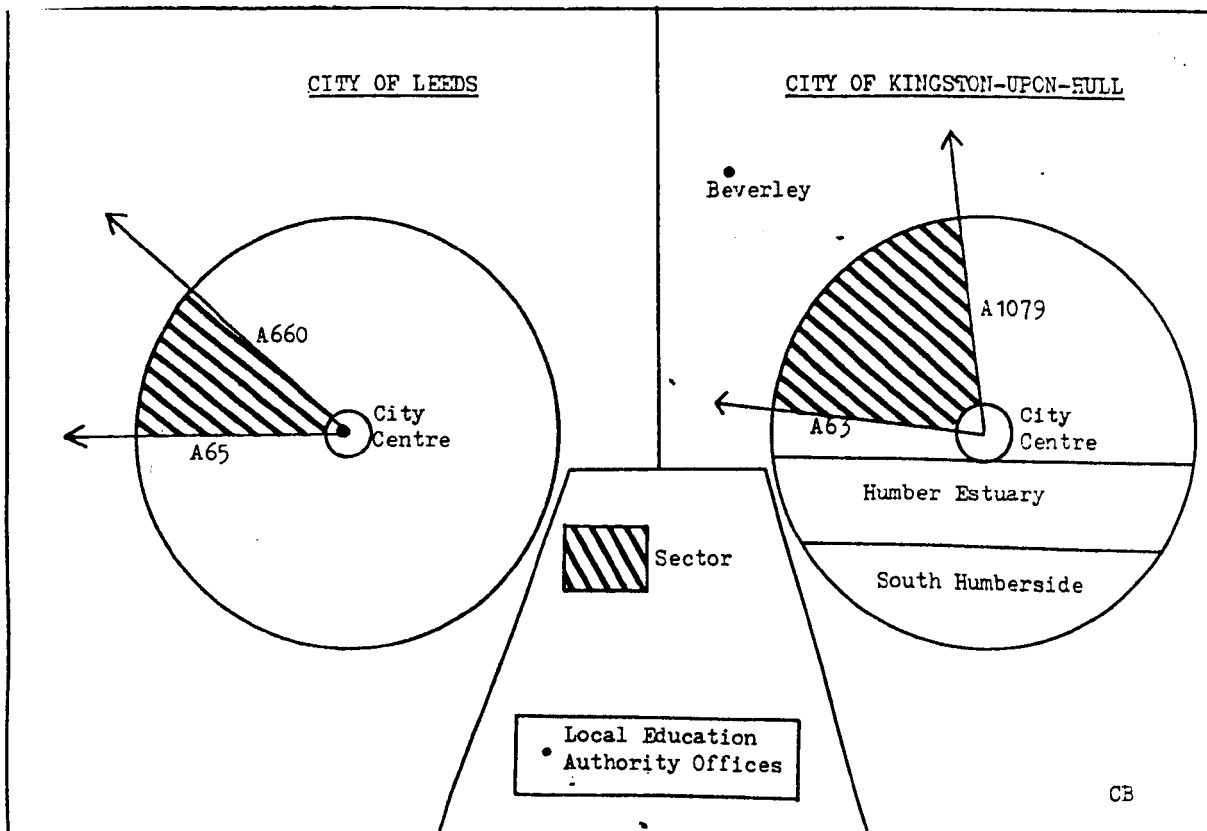
FIGURE 4.4b) HULL AS A NODE ON THE EUROPEAN NETWORK



Source: Hull University Prospectus (1992)

level of wealth in the market towns. Distribution did not accord with an overall spatial plan relating to demographic demand and associated geopolitical reform as was discussed above in respect of early nineteenth century Prussia and France. Just as with the Christian missions in Belize (69) and in Africa (70), so the denominations in British towns and cities competed for primary clientele and the resulting location of schools still operating today remains uneven and significant, especially as we appear to be entering a phase of deregulated catchments.

Furthermore the location of schools and other institutions depends on the availability of suitable land, as well as the value of that land, both of which are spatially variable. These considerations will have been taken into account in respect of the initial location and purchase of the then greenfield sites for the suburban grammar schools of interwar Britain discussed in the previous chapter. Subsequently, with the widespread reorganisation of secondary education in the 1960s and '70s decisions had to be taken about the use of split sites arising, for example, from the amalgamation of a grammar school and a secondary modern school. Issues of catchment and accessibility will have been moderated by considerations of land value, even as an investment. With the devolvment of whole school budgets to Headteachers and Governing Bodies by the 1988 Education Act under the 'Local Management of Schools', it is possible for this resource to be realised in order to meet other costs, although this may involve the LEA, and then the political factor. With voluntary aided schools this can become additionally complicated (see Figure 4.5).

FIGURE 4.5 RUTLISH SCHOOL, LAND TENURE AND RELOCATIONFIGURE 4.6 EDUCATIONAL SURFACES IN LEEDS AND HULL

Source: Colin Brock, 'Comparative Education and the Geographical Factor', in: Keith Watson and Raymond Wilson (EDs), Contemporary Issues in Comparative Education, Croom Helm (1984), p. 156.

It will be evident that what is meant by a 'point' in respect of education, when applied to Walford's model, is an institution, which could be large in area, e.g. a university campus. We are talking here about 'educational space' both inside and outside the buildings, and this can form a microcosm of the geography of education in itself.

(71) In some cases, especially 'university towns', whole settlements may be dominated by educational activity, including numerous 'multiplier functions' tapping the market created by the presence of such an institution. Some of these functions are, to a greater or lesser degree 'educational' (eg publishers and museums), others more crudely parasitic.

English Public Schools, especially when located in relatively small settlements like Oundle, Sherbourne and Barnard Castle can be major employers and dominant cultural features, and to a lesser degree this is true of maintained secondary schools in sparsely populated areas such as rural Northumberland.

### c) Activity Relating to Surfaces

An educational surface is an area within which educational land use and activity tends to be concentrated in comparison with other uses. It is a relative concept, and does not mean that an entire zone has to be exclusively for such a purpose. The writer has illustrated this elsewhere with reference to typical urban structures of English cities whereby 'prestigious' educational institutions tend to be found in territorial association within an identifiable sector (see

Figure 4.6). In both Hull and Leeds this sector is also associated with the residential zone of the higher socio-economic groups and this has to do with the outward extension of the association between prestigious educational land use and 'higher order' social groups along a line or series of divergent lines from the core of the settlement.

In the case of Leeds, the zone includes: the university and polytechnic, both with massive campuses and student residential areas; the LEA offices and teachers' centre; Leeds Grammar School (boys) and Leeds High School (girls), the most prestigious day independent schools; the two main Catholic secondary schools; the two major further education colleges and what used to be the two most prestigious selective state grammar schools before reorganisation. The polytechnic was formed from the aggregation of several previously independent but geographically associated colleges of technology; art and teacher training. This is a particularly good example of Broek's notion of 'intensity of occurrence'. Hull's educational surface, as the map shows, is slightly less concentrated, but nonetheless clear and again includes: the university and polytechnic with their student residential areas; Hymers College and Hull High School for Girls, the established prestigious day independent schools to which has been added the new independent Grammar School; the mixed Catholic secondary school (both parts having already been located in this zone); a further education college and, beyond the City but on the same linear extension, the LEA offices in Beverley.



Figure 4.3b in relation to the evolution of educational zones gives two types of example: the planned educational sector of a new town; and "The West London Think Belt", a concept coined by Peter Hall, and also used by Cedric Lewis. This refers to the intensity of occurrence of high level educational and research institutions to the west of London originating it is supposed from the strong historical link between Eton College, the University of Oxford and the political elite, at least from the mid seventeenth century. Long standing research centres such as the National Physical Laboratory (Teddington); Atomic Research Centres (Harwell and Aldermaston); Tropical Products (Abingdon); Hydrological Research (Wallingford); Grassland Research (Hurley - near Henley-on-Thames) (72) have been joined by an extension of the zone in the form of the location of all the Research Council Offices in Swindon. The M4 motorway now provides a spine routeway, from which modest diversions will reach all the above centres, extending the tendency further west to Bristol. According to Mohan: "... the success of the Thames Valley, hailed as a paradigm for Britain's industrial future, owes much to the success of high technology industry there - supported to a large degree by Ministry of Defence contracts -". (73) This 'M4 Corridor' at least in respect of its educational concentrations, extending as it does the parameters of the older "think belt" could be used to illustrate the bilateral overlap of surfaces and lines pushing west the frontier of the zone of official research!

d) Bilateral Overlap : Surfaces and Lines

As the "think belt" example illustrates, an educational zone or surface may be extended by linear communications development, but surfaces and lines may also come together in delimiting the area over which an educational activity may operate. With respect to the routine provision of formal education, such lines would therefore terminate at the border of a nation or province according to whether the system is centralised or decentralised. In practice, due mainly to the distribution of population, there may be a transgression of the boundary for routine provision of schooling, where the location of the student's home is much nearer an educational unit in a neighbouring system than in the one of domicile. This is a matter of official agreement, for example as between LEAs in England, but it also happens unofficially by family decision, and in respect of higher status boundaries. For example there has long been educational overlap at secondary and tertiary levels across the national boundaries of Germany, Netherlands and Belgium in South Limburg. (74) The raising of restrictions on movement and settlement through the abolition of 'internal frontiers' within the European Community area will legitimise a great deal of such cross border enrolments, but it will also extend the horizons of perspective and enable new lines and surfaces to develop. To encourage movement within the EC region while at the same time restricting the educational surfaces within old national borders will eventually bring about a situation of conflict in the short term, but this is often a concomitant of geographical change.

e) Bilateral Overlap : Surfaces and Points

An example of the kind of tension and conflict alluded to above is found within the process of diffusion through networks, or as Figure 4.3b has it: "expansion of an education system (e.g. developing countries)". This may occur in at least two ways: the physical expansion of the system in the form of additional institutions in new locations; and then the expansion or diffusion of an educational innovation through existing locations, involving structural upgrading.

The first type of expansion has been discussed above in terms of: the cultural colonisation of eastern Europe through the process of gateway and satellite urban development (see Figure 2.5); the filling in of gaps in primary sector provision within the newly founded School Board districts of late nineteenth century England; the expansion of mission school networks with the aid of successive transport and communications development in Sierra Leone (see Figure 3.12).

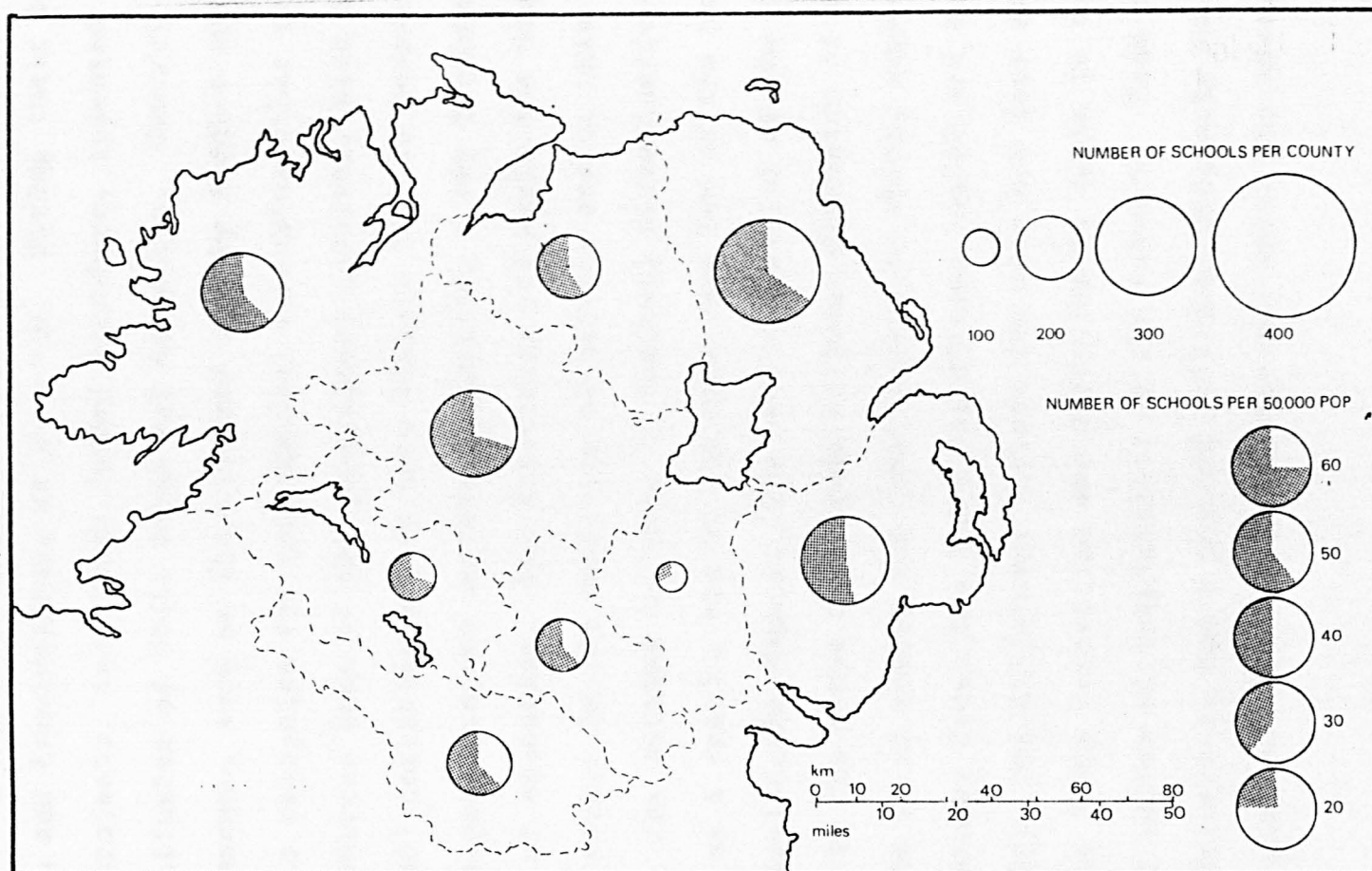
The second type, concerned with the upgrading of an existing network and thereby also the quality of educational surface, can be seen in the efforts of the European Community to promote the development of human resources in Objective I regions; that is to say, the so-called "lagging regions" of the EC. (75) This means strengthening the education and training systems of these regions so as to make up the leeway between them and the most highly developed regions. This may well be a massively overoptimistic assessment of the capacity of the educational component to engender economic development, but it is

nonetheless the case that one third of the resources available to these regions under EC structural funding during the period 1989-93 is being devoted to this end. (76) The kind of tensions involved in this exercise have been well illustrated by Wright (77) in his concern that economic and environmental issues are being separated and thereby placed in conflict. In educational terms this means that the structural and curricular developments involved are not part of an 'organic' ecological approach, but rather a political one. As was observed above, there tends to be a discordance between the parameters and surfaces of political geography, within which educational provision is operated, and those of social and cultural geography.

f) Bilateral Overlap : Lines and Points

This is closely related to the processes discussed in the previous section, but is more concerned with the diffusion of educational innovations and ideas through networks. Linking directly with the bilateral overlap between surfaces and points, that is to say the extension of an educational surface by 'physical and structural colonisation', this may be exemplified by the extension of access to information through the expansion of schooling. A good illustration would be that of Adams in his analysis of the mass distribution of geographical literature in association with the development of the National School network in Ulster from 1831, (78) which even by 1851 had provided for the majority of the clientele in all but one of the counties of the Province. (Figure 4.7)

FIGURE 4.7 DISTRIBUTIONS OF NATIONAL SCHOOLS IN ULSTER : 1851



Source: J.R.R. Adams, 'The Mass Distribution of Geographical Literature in Ulster, 1750 - 1850', The Geographical Journal, 153 : 3, (1987), p. 386.

During the expansionist and innovative period of education in England and Wales in the 1960s and 1970s two major examples of diffusion occurred, one of which has lasted and extended further while the other has not. The latter is the rise and fall of about 200 curriculum development projects under the auspices of the Schools Council for Curriculum and Examinations, as then was. During their lifetimes each of these projects, and others funded elsewhere, operated mini-networks for the diffusion of their ideas and materials. General discussion of this phenomenon, such as the standard work by Rudduck and Kelly (79), tend not to recognise the geographical dimension other than as 'given', whereas some of the geographers involved, such as Elliott (80) certainly do, as does Adegoke (81) in respect of Nigeria. While such projects are certainly operating a key feature of the geography of education, they illustrate yet again the dominance of the political factor in the selection of schools and/or LEAs to be involved. The outcome in terms of national dissemination was very disparate as a result, but in any case very few of the projects have had any significant impact. The more successful of the innovations of the 1960s in the sense of a truly national diffusion of ideas and information is of course the Open University which, especially in the more peripheral areas has had a significant social and cultural effect. (82) The difference between the more and less successful examples of 1960s innovation and diffusion is again in the political status and degree of completeness of the network. From the outset, the Open University had a planned political geography backed by central Government authority, whereas not until the advent of the

National Curriculum (5-16) in 1988 did the same apply to the diffusion of curricular change at the compulsory level of provision.

g) Educational Network Patterns

At the centre of Walford's model lies the concept of the network, its development and operation. This is virtually synonymous with the essence of both education and geography as illustrated in Figure 1.4 above, but as the geographical section of that figure suggests, networks can operate at different geographical scales and over various periods of time. Educational networks, like others, may be incomplete and temporary, and often are. Just as the provision of a network of railways per se provides no information as to the intensity, regularity or quality of operations along it, the same applies to education. Furthermore, there are many types of educational network. Most educationists tend to concentrate overmuch on the formal official networks operating within national or provincial political units. In historical terms, and even in the more developed nations, not only were these networks incomplete and/or changing within, but they were also modified, sometimes dramatically by abrupt reordering of the political geography. The case of Germany in its various forms over the past 100 years would make for a very instructive spatial analysis of educational networks, and what travelled along their many 'lines'.

But there are many other educational networks outside of those carrying formal national systems. In England a good example of a massive and rapidly developed national network of this kind would be

that of the Training and Enterprise Councils (TECs), (83) which are not under the control of the Department of Education and Science and therefore not spatially or otherwise formally linked with technical and vocational education within the compulsory sector and its network of schools. Just as in the formal sector there has, as mentioned, always been a tension between the political geography of educational administration and the social geography of educational needs and demands, so with the TECs there is a tension between their networks and those of other parties to the totality of training provision:

"Local communities will be anxious to build links between business and education. TECs will certainly want to be part of these links. But there is a feeling that central government structures may frustrate these desirable aims. Training Agency programmes are to be run by TECs and the Department of Trade and Industry appears to be closely associated. The Technical and Vocational Education Initiative, non-advanced further education and Compacts are not to be the responsibility of TECs, or at least their administrative future is uncertain. The Department of Education and Science appears to see school-business links as its preserve.

There are other problems. The Confederation of British Industry and Business in the Community, are developing the Business/Education Partnership programme ..... However, while local communities will overcome the bureaucratic barriers in practice, the lack of an effective channel for DES funding and initiatives to TECs will be a limitation." (84)

The TECs network is particularly interesting as: "no geographical boundaries are prescribed for TECs ... they will respond to bids from local business-led groups based loosely on labour market areas". So



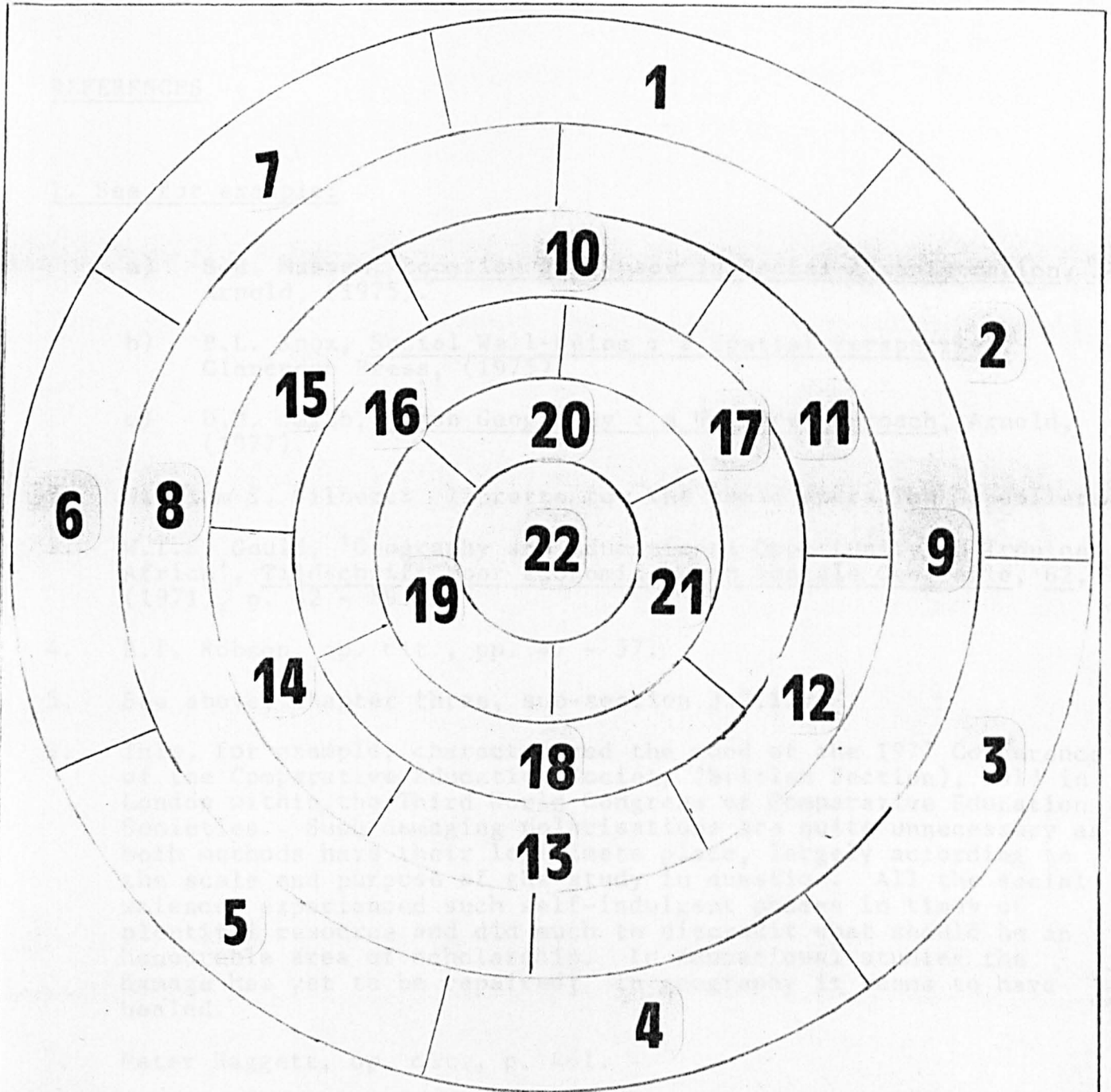
the potential for a dynamix complex is possible in each locality as the institutions of the formal sector are set to lose their catchment constraints.

#### 4.3 SUMMARY

The three models of Broek, Haggett and Walford are not mutually exclusive; there is significant overlap but the nature and purpose of each is different: Broek is concerned with the identity and intellectual distinction of the discipline; Haggett with its internal structure; Walford with its dynamism. Furthermore, while we have been able to exemplify each of the components of the models in respect of an educational activity, in practice most educational geography phenomena would themselves be susceptible of multivariate analysis in terms of the components of either or all of the models.

Figure 4.8 is intended to illustrate this interconnecting character and may be likened to the dials of a concentric locking device each sector of which may be revolved until a particular combination of attributes applies. The numbers relate to the sectors, sub fields or integrated areas within which the emergent literature of the geography of education resides, some of which has already been referred to above, the remainder comprise the new elements of the following chapters.

FIGURE 4.8 LOCATING THE LITERATURE OF THE GEOGRAPHY OF EDUCATION



**GEOGRAPHICAL DIMENSIONS  
APPARENT IN THE LITERATURE**

14. NF and Media

15. Adult

1. Political

8. Urban

16. Along Lines

2. Applied

9. Rural

17. At Points

3. Demographic

10. Primary

18. Within Areas

4. Economic

11. Secondary

19. Changing Boundaries

5. Socio-Cultural

12. Private

20. Expanding System

6. Behavioural

13. Vocational/Tech.

21. Diffusion/Flow

7. Regional Issues

14. Tertiary

22. Essential Complex

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  4. B.T. Robson, op. cit., pp. 47 - 57.
  5. See above, Chapter three, sub-section 3.2.1.
  6. This, for example, characterised the mood of the 1977 Conference of the Comparative Education Society (British Section), held in London within the Third World Congress of Comparative Education Societies. Such damaging polarisations are quite unnecessary as both methods have their legitimate place, largely according to the scale and purpose of the study in question. All the social sciences experienced such self-indulgent phases in times of plentiful resource and did much to discredit what should be an honourable area of scholarship. In educational studies the damage has yet to be repaired; in geography it seems to have healed.
  7. Peter Haggett, op. cit., p. 461.
  8. J.M. Broek, op. cit.,
  9. Peter Haggett. op. cit.,
  10. Rex Walford, op. cit.,
  11. a) Peter Meusburger, The Geography of Education : an Account of its Development, Position within Geography, and Future Tasks mimeo (undated but mid 1970s), pp. 50, (translated by N.K.Beattie).

- b) Raymond Ryba, On Progress in the Geography of Education: Paper Presented to the Annual Conference of the Geographical Association (1979), mimeo, pp. 15.

12. See:

- a) Raymond Ryba, 'The Geography of Education : a Neglected Field?' Gazette (University of Manchester School of Education), 12, (1968), pp. 21 - 23.
- b) Gerald H. Hones and Raymond H. Ryba, 'Why Not a Geography of Education?', Journal of Geography, LXXI : 3, (1972), pp. 135 - 139.
- c) Maurice Debesse, 'Pour une Geographie de l'Education', in: M. Debesse and G. Mialaret (Eds), Traite de Sciences Pedagogiques, Vol. 3, P.U.F. (1972), pp. 401 - 409.
- d) Colin Brock, The Geography of Education : Aspects of the Emergence of a Sub-Discipline and its Application to Studies of Educational Phenomena in the Third World, (Paper presented to the Conference of the Comparative Education Society in Europe, Sevres, June 1975, mimeo, pp. 14. (subsequently published in abbreviated form in : Education Comparee).
- e) \_\_\_\_\_, 'A Role for Geography in the Service of Comparative Education', Compare, 5 (1976), pp. 35 - 36.

13. They included for example the 'county' reports of Michael Sadler, and the urban surveys of Charles Booth.

14. See for example:

- a) Edna E. Eisen, Educational Land Use in Lake County Ohio, University of Chicago Department of Geography Research Paper No. 2, (1948).
- b) Allan K. Phillbrick, The Geography of Education in the Winnetka and Bridgeport Communities of Metropolitan Chicago, University of Chicago Department of Geography Research Paper No. 8, (1949).

15. See for example:

- a) E.W. Gilbert, op. cit.,
- b) Fred L. Hall, Location Criteria for High Schools: Student Transportation and Racial Interpretation, University of Chicago Department of Geography Research Paper No. 150 (1973)
- c) J.W. Meyer, Diffusion of an American Montessori Education, University of Chicago Department of Geography Research Paper No. 160, (1975).

16. See for example:

- a) D. Maxfield, 'Spatial Patterns of School Distribution', Annals of the Association of American Geographers, 62, (1972), pp. 585 - 90.
- b) M. Lowry, 'Schools in Transition', Annals of the Association of American Geographers, 63, (1973), pp. 167 - 180.
- c) A.L. Backler, 'A Geography of Education in the United States', in R.N. Taaffe and J. Odland, (Eds), Geographic Horizons, (1977), pp 156 - 173.

17. Maurice Debesse, op. cit., pp. 401 - 2.

18. Marcel Gautier, 'La Repartition des Effectifs Scolaires en France', Annales de Geographie, LXXIII, (1964), pp. 46 - 62.

19. Pierre Furter, Les Espaces de la Formation, Presses Polytechniques Romandes (1983).

20. Robert Geipel 'Angewandte Geographie Auf dem Feld des Bildungswissens', Verhandl des Deutschen Geographentages, 39, (1966), pp. 448 - 457.

21. Peter Meusburger to Colin Brock, 28 August, 1991.

22. Raymond Ryba, op. cit., (1968), p. 21.

23. W.P. Adams and F.M. Helleiner (Eds), International Geography 1972, Proceedings of the 22nd International Geographical Congress: Vol. 2, Toronto University Press, (1972):

- a) G. Hones, 'Some Problems in the Application of Central Place Theory to Educational Planning, with Special Reference to the Bath Area of the UK', ibid, pp. 1053 - 4.
- b) E. Rawstron, 'Location as a Factor in Educational Opportunity: Some Examples from England and Wales', ibid, pp. 1058 - 60.
- c) R. Ryba, 'The Geography of Education and Educational Planning', ibid, pp. 1060 - 62.

24. Gerald H. Hones and Raymond H. Ryba, op. cit.

25. International Geographical Union Commission on Geography/Education: Group B Working Party - The Geography of Education, Bulletins: 1 (1972); 2 (1973); 3 (1976); 4 (1978); 5 (1981).

26. I.G.U. Working Party; Bulletin No. 2, (1973), pp. 4 - 5.

27. \_\_\_\_\_, Bulletin No. 3, (1976)

28. \_\_\_\_\_, Bulletin No. 4, (1978)
29. \_\_\_\_\_, Bulletin No. 5, (1981), pp. 8 - 14.
30. a) W.E. Marsden, op. cit., (1980).  
b) K.J. Panton, 'Literacy in London', Geography, 65:1 (1980), pp. 27 - 34.
31. See for example:  
a) Swiss Project on Regional Disparities in Education (especially Primary and Pre-School) - Pierre Furter.  
b) Italian Project on the Involvement of the Local Community in Education - Paulo Orifice.
32. W.E. Marsden, The Geographical Component in Educational History: An Annotated Bibliography, IGU Working Party/University of Liverpool School of Education, (1978), mimeo, pp. 25.
33. Namely the Department of Geography, University of Manchester; and the Department of Geography, Queen Mary and Westfield College, London.
34. J.M. Broek, op. cit.,
35. Colin Brock, 'Contemporary Issues in Caribbean Education', in: Paul Sutton (Ed), Dual Legacies in the Caribbean, Frank Cass (1986). pp. 240 - 257.
36. B.T. Robson, op. cit.,
37. See for example:  
a) Adrian Winter, Education and Community: some Spatial Aspects, Unpublished MA Long Essay, University of Hull (1979).  
b) Terence Esmor Hewitt, Geographical Factors in the Development of State Secondary Education in two Contrasting Areas : Montgomeryshire and Woking, Unpublished MEd Thesis, University of Hull (1976).
38. W.B. Stephens, op. cit., (1977).
39. D.J. Siddle, op. cit.
40. See for example:  
a) Colin Brock, Scale, Isolation and Dependence: Aspects of Education in the Island Developing and other Specially Disadvantaged States of the Commonwealth, Commonwealth Secretariat (1984)

- b) Kazim Bacchus and Colin Brock (Eds), The Challenge of Scale: Educational Development for the Small States of the Commonwealth, Commonwealth Secretariat (1987).
  - c) Colin Brock, 'Education and National Scale : the World of the Small States', Prospects, XVIII : 3 (1988), pp. 313 - 324.
41. Colin Brock, The Question of Scale in Comparative Education (Paper presented to the Annual Conference of the Comparative and International Education Society, Washington DC, (1987), mimeo, pp. 17.
  42. Nigel Thrift, An Introduction to Time Geography, CATMOG, 13, (1977).
  43. Jacques Hallek, op. cit.,
  44. Peter Haggett, op. cit., p. 453 (see also Appendix B).
  45. Colin Brock, 'Comparative Education and the Geographical Factor'. in : Keith Watson and Raymond Wilson (Eds), Contemporary Issues in Comparative Education, Croom Helm, (1984), pp. 148 - 173.
  46. G. Hones, Spatial Models in the Geography of Education, Unpublished PhD Thesis, University of Bath, (1973).
  47. A.T. Robson, op. cit.,
  48. Terence Esmor Hewitt, op. cit.,
  49. G. Arnold Anderson, op. cit., (1966).
  50. Elizabeth Thomas-Hope, 'An Approach to the Delimitation of School Districts: the Example of Primary Schools in the Parish of St Ann, Jamaica', Social and Economic Studies, 24 : 3, (1975), pp. 320 - 339.
  51. Colin Brock, 'Problems of Education and Ecology in Small Tropical Island Nations', in: Colin Brock and Raymond Ryba (Eds); A Volume of Essays for Elizabeth Halsall : Aspects of Education No. 22, University of Hull Institute of Education, (1980), pp. 71 - 83.
  52. The Earl of Cranbrook, 'Rainforest University', Geographical LXIV: 5, (1992), pp. 26 - 30.
  53. John Eggleston, The Ecology of the School, Methuen (1977).
  54. George Taylor and N. Ayres, op. cit.,

55. Max A. Eckstein and Harold J. Noah, 'Metropolitanism and Education : a Comparative Study of Teachers and School Success in Amsterdam, London, Paris and New York, Comparative Education Review, 18 : 3, (1974), pp. 359 - 373.
56. Some of which are shown on Figure 3.20 above.
57. See for example:
  - a) R. Clayton (Ed), The Geography of Greater London, George Philip and Son, (1964).
  - b) Peter Hall, London 2000, Faber and Faber (1971).
58. Rex Walford, op. cit., p. 105.
59. W. Houghton-Evans and R.M. Catenby, op. cit.
60. W.T.S Gould, op. cit., (1971), p. 88.
61. Richard Hoggart, The Uses of Literacy, Penguin, (1957).  
(in which he describes the problem of the journey to school for a grammar school boy).
62. Colin Brock and Nadine K. Cammish, op. cit., (1991), who, in their field research also found problems of discrimination for adolescent girls travelling to school by bus in Kingston, Jamaica.
63. Adrian Winter, op. cit.,
64. Antony G. Moon, The Expansion of Secondary Education in Nigeria, 1970 - 1978, with Special Reference to the Cross Rivers State, Unpublished MA Long Essay, University of Hull, (1980).
65. Colin Swatridge, Delivering the Goods: Education as Cargo in Papua New Guinea, Manchester University Press, (1985).
66. Commonwealth Secretariat, The Supply, Training and Professional Support of Educational Personnel in Multi-Island Situations, (1987).
67. Colin Brock, 'Beyond the Fringe? Small States and the Provision of Education', Comparative Education, 24 : 2 (1988), pp. 167 - 179.
68. For example: The University of Hull has nationally renowned expertise in minority European languages, including the Scandinavian languages and Dutch and is a national documentation centre for EC publications and records; Humberside Polytechnic has what is generally regarded at the time of writing as one of the most advanced European Business Schools within UK Higher Education.



69. C.J.M.R. Gullick and J. Crane, op. cit.
70. Hildegard Binder Johnston, op. cit.
71. Clearly many of the dimensions of the geography of education could apply at the institutional level. Every school, for example has its particular political geography, social geography, economic geography etc. This is also a purely spatial element, as illustrated by, for example:
  - a) I. Cooper, 'The Maintenance of Order and the Use of Space in Primary School Buildings', British Journal of the Sociology of Education, 3, 3, (1982), pp. 267 - 80.
  - b) Gwen M. Wallace, 'Architectural Constraints on Educational Aims and Organisations, with Particular Reference to Middle Schools; Journal of Education Administration and History, XII : 2, (1980), pp. 47 - 57.
72. Henley-on-Thames is also the location of the 'Management Centre' for the training of industrial, commercial and public service managers. It has the equivalence of university status and has professorial appointments. Henley also has the headquarters of the Confederation of British Industry (Southern Region).
73. John Mohan, 'Britain's Gulf War', The Times Higher Educational Supplement, 19 June, 1987, p. 11.
74. Sylvia van der Bunt Kokhuis, 'The Netherlands', in: Colin Brock and Witold Tulasiewicz (Eds), Education in a Single Europe, Routledge (1992) - forthcoming.
75. These are officially listed as: France d'Outre Mer and Corsica; the Italian Mezzogiorno; the UK province of Northern Ireland; the entire countries of Greece, Ireland, Portugal and Spain.
76. Annex I to Invitation to Tender No. V/91/009 in Respect of the Evaluation of Structural Funds in Favour of Human Resources in the Least Developed Regions of the Community (1991), p. 5.
77. Martin Wright, 'Funds in Fragile Places', Geographical, LXIV : 1, (1992), pp. 34 - 38.
78. J.R.R. Adams, 'The Mass Distribution of Geographical Literature in Ulster, 1750 - 1850', The Geographical Journal, 153 : 3, (1987), pp. 383 - 387.
79. J. Rudduck and P. Kelly, The Dissemination of Curricular Development, NFER (1976).
80. G.G. Elliott, Nodes and Networks in the Dissemination of a Schools Council Project - History, Geography, Social Science 8 - 13, The Schools Council (1978).

81. K.A. Adegoke, 'Nodes and Networks in the Dissemination of New Trends in the Study and Teaching of Geography in the Nigerian High School Geography Curriculum', Geographical Education, 4 : 3, (1983), pp. 124 - 130.
82. R. Woolfe, 'The Impact of the Open University in Wales 1971 - 74, with Reference to the Social, Economic and Cultural Structure of Wales', Education for Development, 3 : 2, (1974), pp. 35 - 53.
83. Robert Bennett, TECs and Vocational Education and Training : the Practical Requirement, Research Paper, London School of Economics, (1989).
84. \_\_\_\_\_, 'Business Bid for a Role in the Philadelphia Story', The Times Educational Supplement, 2 June, (1989), p. A13.

## CHAPTER FIVE

### ALLOCATING THE LITERATURE BY BRANCHES OF GEOGRAPHY

#### 5.1 INTRODUCTION

The order in which the sub-sections below are treated is not intentionally significant, except that by commencing with aspects of the political geography of education, one is recognising the greater weight of the political factor and the perspicacity of Bereday in selecting political geography as one of the prime candidates for the role of foster parent to comparative education.

However, even with the political dimension there is overlap with others and this applies almost across the board. In any case Figure 4.8 is a composite of geography and education, so that within the sub-sections identified in educational terms particular combinations of geographical attributes may apply as between the sources located for discussion.

It will have been noted that there is no sub-section for either physical or historical geography. This is because the former has no counterpart literature in respect of the geography of education, except in the outmoded terms already mentioned and even then very briefly, and in any case only becomes significant in the form of the human response to the physical factor. It will therefore appear en passant within other items. The latter, historical geography, has

been exemplified already, in Part B, in respect of both the implicit and explicit literature of the geography of education. Furthermore it is, by definition, likely to subsume any or all of the other subdivisions and factors according to the nature of each case or theme examined. Therefore some examples from the historical geography may be referred to within the sub-sections that follow.

## 5.2 IN RESPECT OF FIELDS OF GEOGRAPHY

### 5.2.1 Political Geography of Education

This has to do with spatial aspects of power, control, decision-making and administration in respect of education. As with all aspects of geography, scale is of the essence and will be the basis of the sequence of discussion.

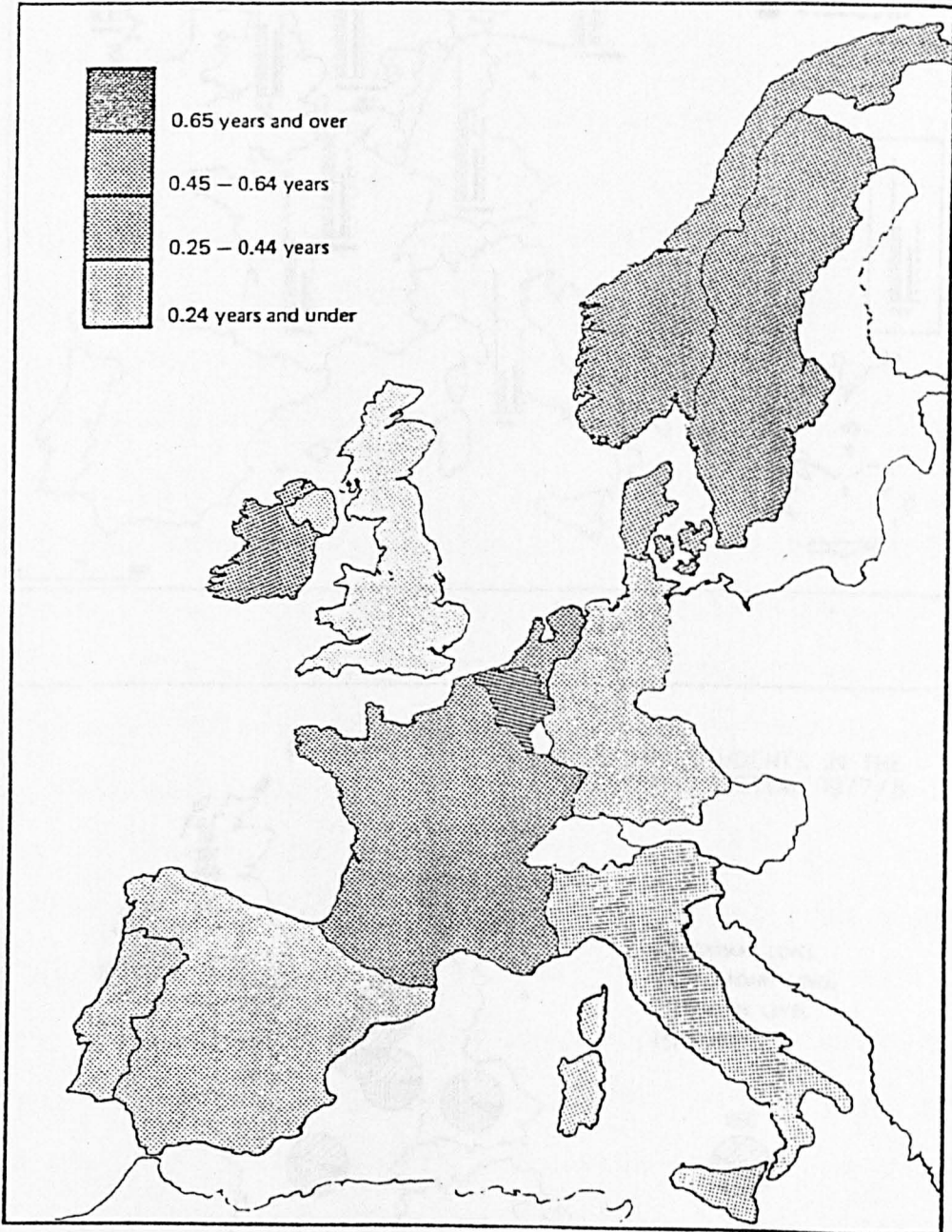
The standard unit of political geography, fossilised in the average atlas, is the nation-state. So it is with education, at least in respect of formal public provision, that the national scale or frame of reference is the parameter for the presentation of information and the discussion of issues. The bulk of the literature of comparative and international education operates at this level, and it would be inappropriate to attempt to reference it here; to provide a selection would be invidious. The point has been made already that even in the smallest of nations there is significant geographical disparity in educational terms and that one of the major motivations behind the attempt to develop a geography of education is to break through to the

reality within. However, it must be granted that in many countries educational policy is formulated and presented at national level and that one of the main purposes of providing public education systems is to effect a degree of social and political control, or at least, influence. Nonetheless such attempts still result in considerable disparity that calls for a geography of education, even in the most centralised regimes. In any case there are many sources and examples of bias with regimes and administrations of very different political colour. (1)

It is quite possible that one of the reasons for the virtual absence of this sub-discipline is the difficulty of raising official funding and gaining access to official information that would immediately illustrate the disparities. Even when educational information is geographically presented at this scale it adds little to merely tabulating it, though graphics always extend the perception of patterns of distribution, however elementary (see Figure 5.1), or cartographically clever (Figure 5.2).

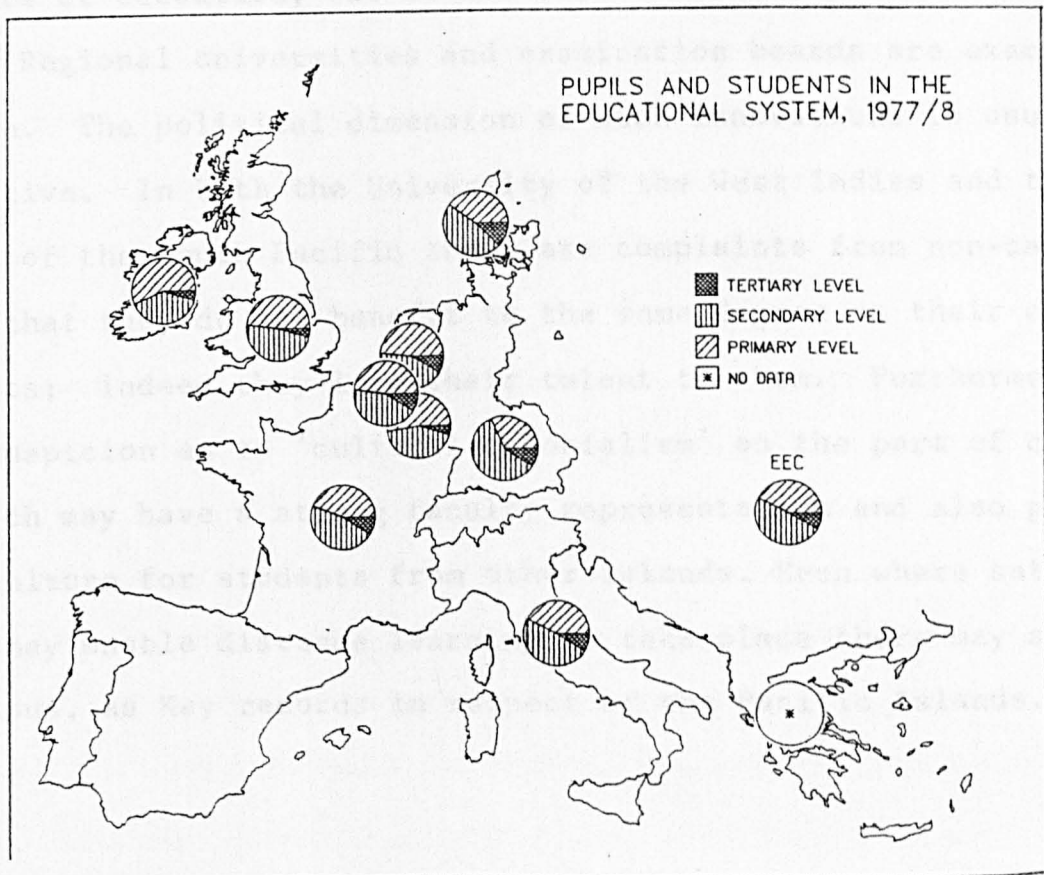
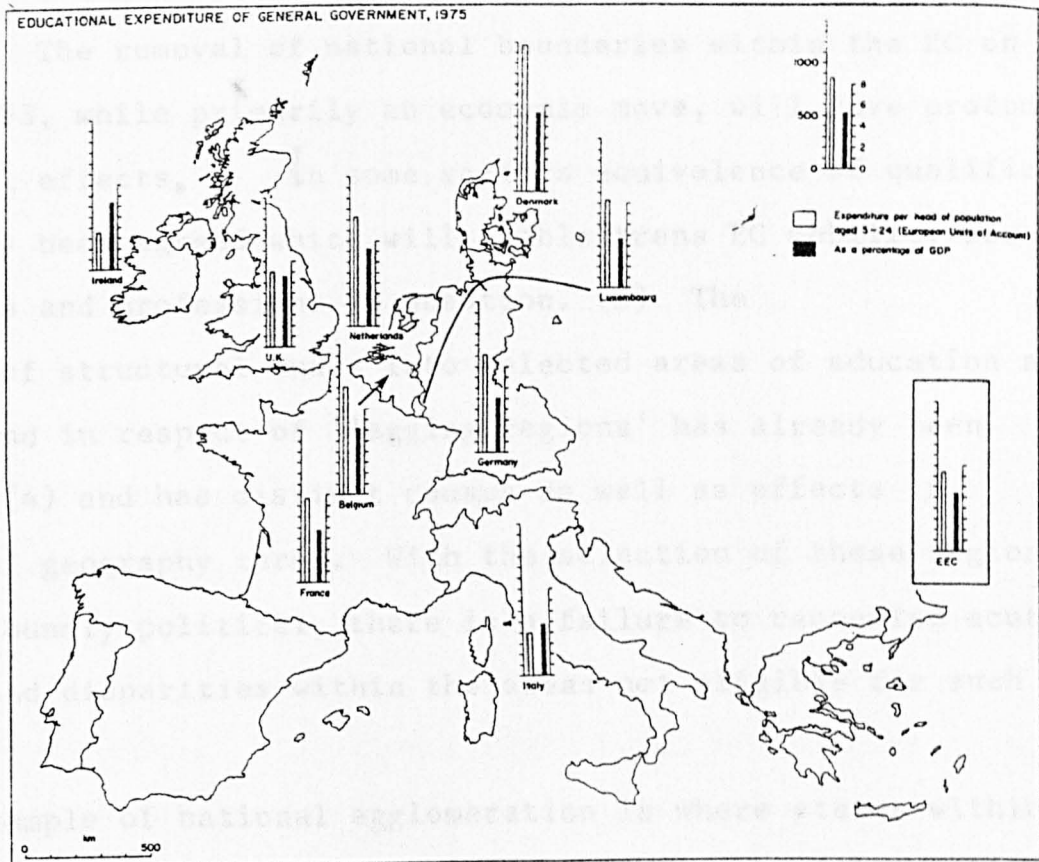
For more significant interest we have to look above and below the national scale. Above it we find both aerial and linear patterns, as well as a combination of the two. The aerial form is the agglomeration of nation-states to form a larger entity with some significance for education. The European Community is one such example where, despite the absence of an educational dimension in the treaties establishing the group, from the early 1970s onwards policy guidelines from the Commission have begun to effect degrees of convergence in different

FIGURE 5.1 W. EUROPE : AVERAGE YEARS OF HIGHER EDUCATION  
EXPERIENCE OF THE TOTAL POPULATION AGED 25 - 64 AROUND 1970



Source: Raymond Ryba, 'Aspects of Territorial Inequality in Education', Comparative Education, 12 : 3, (1976), p. 191.

FIGURE 5.2 THE ONLY EDUCATION PAGE IN AN ATLAS OF EEC AFFAIRS



Source: Ray Hudson, David Rhind and Helen Mounsey, *An Atlas of EEC Affairs*, Methuen (1984), p. 134.

areas. (2) The removal of national boundaries within the EC on 1 January 1993, while primarily an economic move, will have profound educational effects. In some sectors equivalence of qualifications has already been agreed which will enable trans EC mobility for the occupations and professions in question. (3) The injection of structural funds into selected areas of education and training and in respect of 'lagging regions' has already been mentioned (4) and has distinct causes as well as effects in educational geography terms. With the selection of these regions being profoundly political, there is a failure to recognise acute problems and disparities within the areas not eligible for such funds.

Another example of national agglomeration is where states within a region cooperate in certain fields to operate regionally, including some aspects of education, but do not form a community in other respects. Regional universities and examination boards are examples given above. The political dimension of such innovations is usually very sensitive. In both the University of the West Indies and the University of the South Pacific there are complaints from non-campus countries that they do not benefit to the same degree as their campus counterparts; indeed they lose their talent to them. Furthermore there is suspicion as to 'cultural colonialism' on the part of campus states which may have a strong faculty representation and also provide the host culture for students from other islands. Even where satellite links (5) may enable distance learning to take place there may still be objections, as Kay records in respect of the Pacific Islands. (6)



Linear patterns of educational activity at supra-national level operate under many different auspices and at various scales. There are numerous nation to nation bilateral educational development programmes, which by their nature have a planned obsolescence and are therefore not picked up as the crucial components of developing country systems which they often are. There are also the private flows of students from one country to a nearest neighbour, especially in the case of very small countries proximately located to larger ones with whom they have a positive relationship, such as between Luxembourg and her neighbours and between The Bahamas and the USA, especially Florida. Nearest neighbour situations may of course be negative in respect of educational interchange and support so that networks of activity in this field may be directed elsewhere. The case of Gibraltar is the clearest of these, with its system virtually plugged into the UK and almost totally disconnected with Spain. The educational relationship between Brunei and Malaysia again reflects the broader political tensions and results in continued connections with UK and significant links with Indonesia and the Phillipines in connection with the establishment and staffing of its new university.

In addition to bilateral development networks there are the international networks of the United Nations Agencies, especially UNESCO, UNDP and UNU, (7) schemes such as VSO and Peace Corps, the major Christian denominations, charities, and other trusts (8) which together contribute massively to educational provision. Each has its particular, though changing geographical network and they interconnect with each other as well as with the formal systems of governments.

They are virtually ignored in the analysis of educational activity at national level and to date absent from the literature of the geography of education. They are mentioned at this point because they operate in the field only as a result of the agreement of host country governments, and must therefore inter alia be a component of the political geography of education.

Finally, at the extra-national level, and again a potentially fruitful area for the development of the literature is the education of refugees, clearly an aspect of the political geography of education. This may take many spatial forms. One such form is the operation of a system by an outside agency for refugees displaced but still more or less in the locale of the homeland. The primary and secondary systems operated by UNRWA (9) in Gaza, Lebanon, Syria and especially the 'West Bank' for Palestinians is probably the best example. With the majority of the refugees being in the 'West Bank' area, and UNRWA operating from Amman the system is inevitably tied into that of Jordan in respect of qualifications, and access to the tertiary sector. The geography of refugee communities is itself extremely varied, ranging from exposed encampments to necessarily hidden diasporas, with related educational networks, experiences and conditions being equally diverse. There is a considerable literature on refugees from the political, sociological and economic fields but very little in respect of education, (10) and nothing on their geography of education.

Turning to the sub-national level of political geography there is some development of note in respect of educational literature. The most

obvious starting point is the political sub division of a country which may be of different status as between different examples.

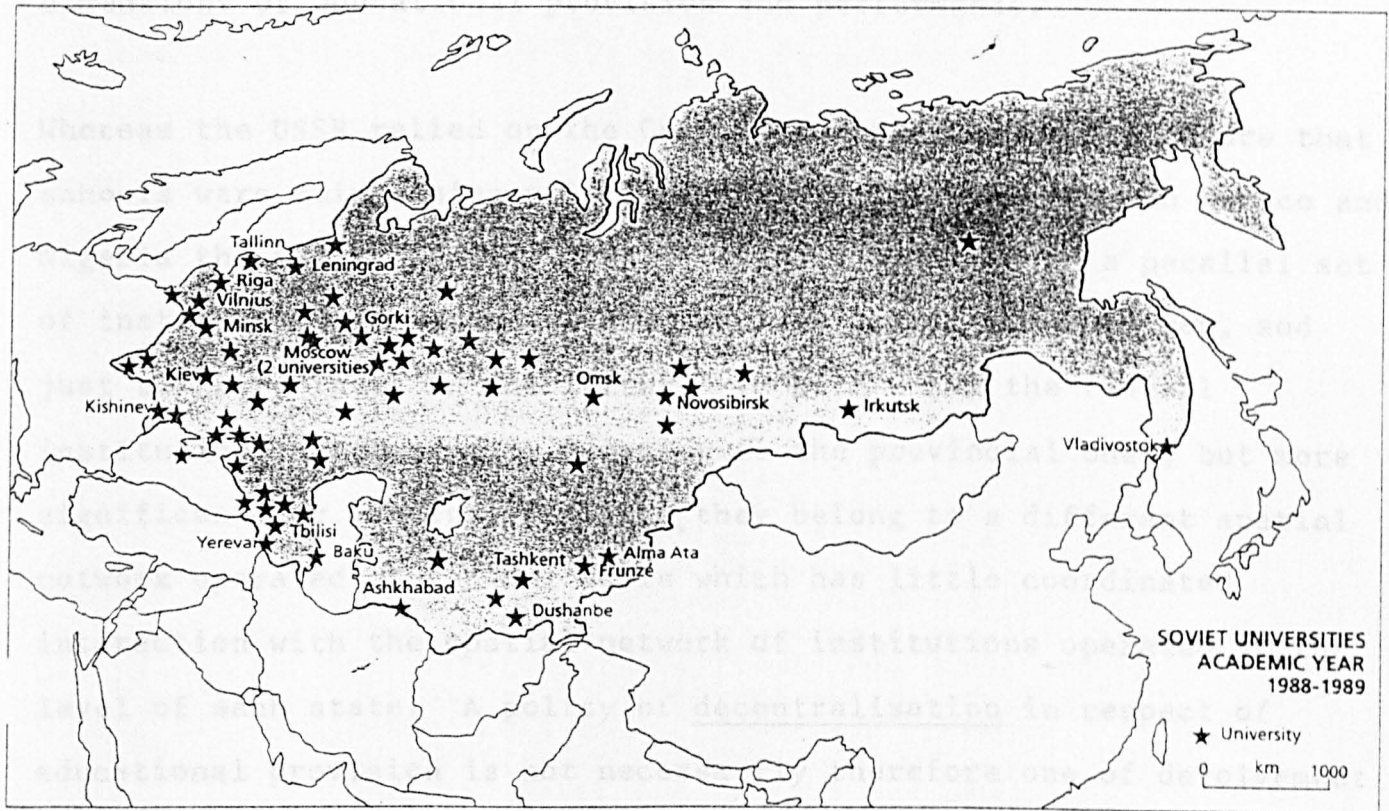
In the case of federal states there may or may not be a devolution of educational responsibilities to the component units, and even if there is, the federal authorities normally operate some kind of mechanism, ranging from strong central oversight as in the case of the former USSR, to peripheral though increasing intervention in the case of the USA and Germany. De facto, however, the individual states and lander operate as national systems in these two cases. The significance of the federal educational dimension to the USSR as was, is discussed in a rare though fairly recent element of the geographical literature.

(11) This was, of course, written just before the demise of the Federation and the consequent emergence of the smaller CIS.

Unfortunately, the author, a geographer, treats the federal education system as homogeneous though he does offer an understanding of the real relationship between educational and economic development, namely that the latter determines the former rather than the reverse.

Unfortunately, the crudity of the geographical analysis can be seen from Figure 5.3 and arises from an assumption that the stated aims are carried through in practice and regulations observed. The problem again is scale. The author fails to recognise that the full curriculum cannot be provided in sparsely populated rural areas or that social class variations within the major cities, especially Moscow, make for a spatially disparate educational pattern as complicated as that in comparable settlements in the 'West'. Sallnow comments on the role of western expertise in assisting the

FIGURE 5.3 EXAMPLES OF NAIVE GEOGRAPHY OF EDUCATION

a) Soviet University Locations, 1988/89b) School Pupils in Enrolment in Union Republic Capitals

Source: John Sallnow, 'Sowing the Seeds of Superpower', *Geographical*, LXII : 8, (1990), pp. 46 - 48.

redevelopment of the then USSR. It is to be regretted that this does not include sufficient interest or expertise in analysing the spatial dimensions of educational provision and performance.

Whereas the USSR relied on the Communist Party network to ensure that schools were maintaining politically correct programmes, in Mexico and Nigeria the federal power in this field is operated by a parallel set of institutions at secondary and tertiary level in the former, and just tertiary level in the latter. In both cases the federal institutions are generally superior to the provincial ones, but more significant for our interest here, they belong to a different spatial network operated at federal scale which has little coordinated interaction with the spatial network of institutions operated at the level of each state. A policy of decentralisation in respect of educational provision is not necessarily therefore one of devolvment of political power, as the case of Chile post - 1973 illustrates. (12)

The question of centralisation and decentralisation is one aspect of the political geography of education that has enjoyed some significant discussion, though again not with much regard to spatial implications as such. (13) Distinctions are not always made between the decentralisation or otherwise of different facets of the same system. Is it political, financial or curricular devolvment of responsibility, or combinations of these in any given case? In most parts of the USA, administrative and financial decentralisation are more marked than in respect of curriculum, assessment and accreditation which tend to operate on a larger scale of political

geography. The pros and cons of decentralisation in respect of education are most concisely presented in a recent Commonwealth Secretariat paper by Bloomer, (14) in which the author recognises that it can operate differentially at scales ranging from central governmental to institutional, but beyond this observation the geographical implications for education are not considered. Lauglo's more searching analysis, (15) while not being essentially geographical is more sensitive to this dimension:

"... in a system of geographically dispersed institutions, the chain of authority will have an associated spatial dimension. This spatial aspect of decentralisation can politically become quite important when levels of authority coincide with independently constituted governments which are not simply agents of the nation state but have their own legitimacy and power base (eg states in a federal system, regional assemblies, local councils). Further, the problem of communication with a 'centre' which can go with geographical remoteness, is an argument for institutional autonomy. In fact isolation breeds autonomy perforce whether intended or not. Thus 'space' and geographical dispersion can be conditions which influence the distribution of authority." (16)

Innovation is often associated with 'the periphery', (17) and in political terms may be reinforced by the policy in some regimes of posting dissident educationists to the nether regions of the given system!

Lauglo goes on to describe the populist base of Norwegian educational provision, where "the units of locally elected government must be so

small as to coincide with a local 'community'". This corresponds well with the township scale school districts of New England, (18) though both there and in Norway resistance has had to be given at times of attempted agglomeration in the interests of the power at the centre of the system. School districts in the USA are one of the main examples given of the category of 'Local Legally Bound Spaces' offered by Coates et al in their examination of legally bound spaces and inequalities. (19) They describe the fact that between 1942 and 1972 the number of such legally bound spaces in the USA was halved, and that this was entirely due to the disappearance of 90,000 school districts, which were aggregated into larger units. In areas of urbanisation such agglomeration has more logic in terms of human ecology and the administration of Haggett's urban complexes. Massam's typology for the evolution of service districts (20) illustrates this, and comprises Figure 5.4. But the spatial logic of such a sequence may be turned on its head by political dictat from a strong centralist government. For example, the Conservative administration in Britain under Mrs Thatcher chose to disaggregate the educational space of the Inner London Education Authority and create smaller spatial units, one for each of the Inner London Boroughs. This decision was based on political geography not educational geography, but the former determines the latter. Massam's model derives from the American experience of strong local democracy in the formative period which survives the expansion of population and communications. We have already seen from Freeman's work on the evolution of the internal political geography of England that such formative conditions did not apply here. (21)

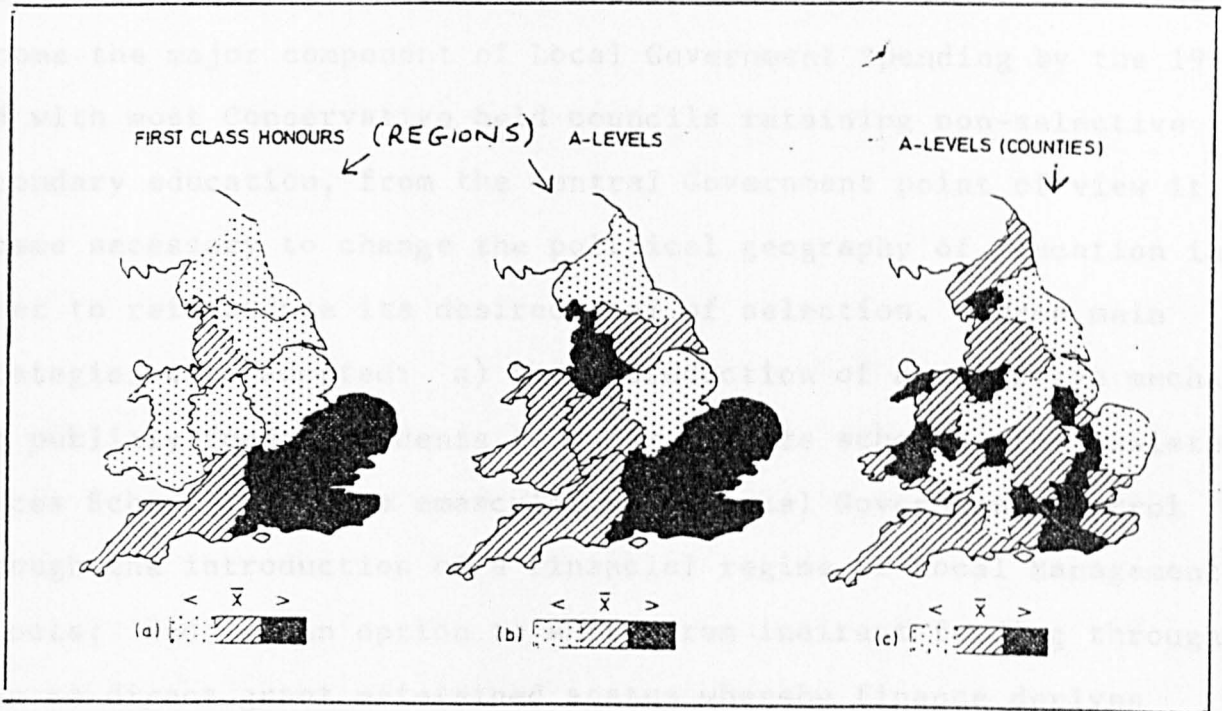




Before moving to some consideration of the possible spatial effects of other reforms of education in 1980s Britain, we should pause to look at disparities as between local authorities as far as some aspects of education are concerned, these having been the prime units of local legally regulated spaces in England since 1902. The combination of the facts that these units are at once those of public educational provision and a reduction in the scale of observation below those of national and regional level is significant as Figure 5.5) shows. (22) The situation of Wales is of particular interest, especially when taken together with the typology of local education authorities compiled by Byrne et al (23), presented as Figure 5.6). This would seem to suggest that there is a connection between a policy of investment in schooling and the achievement of educational attainment in terms of formal qualifications, in which as already discussed above (24), the level of central government support for individual authorities is crucial. It is this level of significance of political geography that explains the necessity for the Conservative governments since 1979 to create a new form of spatial patterns of educational control through networks that transcend the parameters of the local spaces of the authorities.

This brings us to a consideration of a selection of the emergent literature concerning the micro-political geography of education in England. Mention was made in Chapter two of the discordance between the emergence of a) patterns of urbanisation and industrialisation; b) developments of educational networks by a variety of providers; and c) successive reforms of local political geography, especially

FIGURE 5.5 VARIATIONS IN EDUCATIONAL ATTAINMENT AT DIFFERENT SPATIAL SCALES: (a) (b) REGIONS (c) COUNTIES.



Source: Andrew Kirby, The Politics of Location : an Introduction, Methuen, (1982), p. 51.

FIGURE 5.6 LOCAL EDUCATION AUTHORITY CLUSTERS, 1970

Variables	Cluster profiles					
	1	2	3	4	5	6
Expenditure	Average	High	Average	Very high	Average	Very high
Attainment	Low	High	Average	High	Average	Very high
Politics	Labour <sup>a</sup>	Conservative	Labour	Labour	Conservative	Labour
System	Selective	Selective	Comprehensive	Comprehensive	Selective	Mixed
Examples	Barnsley South Shields Wigan	Berkshire Solihull Cheshire	Gateshead Cardiff Doncaster	Bristol and Southampton (only) London boroughs	Blackpool Leeds Most English county boroughs	Welsh counties

Source: D. Byrne et al, The Poverty of Education, Robertson (1975).

the creation of county borough and the emergence of school boards and counties as units, and therefore spatial parameters, of networks of educational provision. (25) With this particular function having become the major component of Local Government Spending by the 1980s, and with most Conservative held councils retaining non-selective secondary education, from the central Government point of view it became necessary to change the political geography of education in order to reintroduce its desired goal of selection. Three main strategies were adopted: a) the introduction of a selective mechanism for publicly funded students to enter private schools (the Assisted Places Scheme); b) the emasculation of Local Government control through the introduction of a financial regime of Local Management of Schools; and c) an option to shift from indirect funding through LEAs to direct grant maintained status whereby finance derives directly from the central government to the individual school. The private sector is of course part of the political geography of education in most countries, (26) but clearly the appropriation of the state sector by a combination of centralisation and privatisation has already been effected to some considerable degree. There will be significant spatial variations.

The geographical implications of the structural reforms of the 1988 Education Act have been well considered by Burdett, whose abstract is worth quoting in full:

"The geography of education after the 1989 Education Act is likely to consist of four tiers, divided by their degree of private funding, with variation both

within and between these tiers. There will be a geography of the type of schools, their levels of funding, the nature of access, the curriculum offered and the outcomes achieved. The degree of choice in education, the principal aim of the legislation, will superficially increase in the short term, but in the longer term 'market forces' will reduce choice through school closures." (27)

Burdett chooses, as did the writer in respect of nineteenth century comparison between Prussia, France and England in Chapter two, to include the private schools as a fundamental component of the English system. The increase in the day private sector arising from the abolition of the direct grant by the Labour Government of the late 1970s, added to the already unbalanced distribution of private secondary schools which "is heavily biased towards the South East and ..... has changed little since the 1960s". (28) These schools form the 'top tier' of Burdett's hierarchy, and access to them via the aforementioned Assisted Places Scheme will vary according to where people live since "the APS is a prisoner of the past geography of private schools".(29)

Burdett's second tier is comprised of the City Technology Colleges, which, since the author wrote on this matter have had less success in gaining business sponsorship than the government had hoped. However, it is interesting to note that the first CTC was established in Solihull, a Conservative local authority which chose to retain non-selective secondary education. This privileged location, together with the more recent announcement of a publicly funded preparatory school

and three elite primary feeder schools for the CTCs in gentrified Wandsworth (30) tends to indicate a difficulty of access for the mass of the population. The beneficiaries, as with the APS will most likely be those of: "submerged middle class backgrounds already well endowed with cultural capital." (31) But even for them, the top two tiers will remain geographically inaccessible in most parts of the country. Any additional institutions will depend on local political and business initiative.

The third and fourth tiers of the hierarchy comprise the state sector upon which the majority of parents depend: the third being those schools which choose to opt out of local authority connections altogether (becoming grant maintained schools) as the fourth being the rump of remaining local authority schools which have failed to attract clients and are therefore in a downward spiral of parental estimation. With political and financial responsibility devolved to governing bodies, the differential expertise of such groups will almost certainly lead to greater disparity within the secondary sector, including new spatial patterns of demand, journey to school and surviving locations.

The 1988 Education Act is based on applying the principal of market forces to school provision and therefore the crucial notion of parental choice. Both Walford (32) and Bondi (33) have addressed this issue and would tend to agree with Burdett as to the restrictions on real choice that will apply, in no small part due to the geography of secondary schooling as it is, and as it is likely to develop under a

political climate of unrestricted choice as the ideal. As Bondi points out there is a fundamental difference in relation to community as between the USA and UK whereby: " ..... the traditional resonance of 'community' has flourished in the USA in part because of the separation between workplace and 'community' politics". (34) This is a fundamentally geographical issue, there being a greater commitment to 'place' in the USA, and the relationship of the school to the local community; a matter of cultural as well as of political geography. It is also a matter of land values and the extent to which a site may be of potential value to a board of governors in England as: "The Education Reform Act gives the governing body of a grant maintained school possession of the land assets and no compensation is payable to the council." (35)

Bondi is also co-editor of the only book published in the UK, which is known by the writer to figure the geography of education within its title, (36) or at least its sub-title. Published just before the 1988 Education Reform Act, and anticipating some of its geographical implications, the book includes four contributions on parental involvement, in theory an increasingly important component of the micro political geography of education. (37)

The first of the four chapters concerned with consultation is particularly interesting, being in essence a study of the role of Portsmouth parents in relation to, and in league with, a variety of forces supposedly informing a rational decision on the part of the education authority as to the selection of the most suitable site for

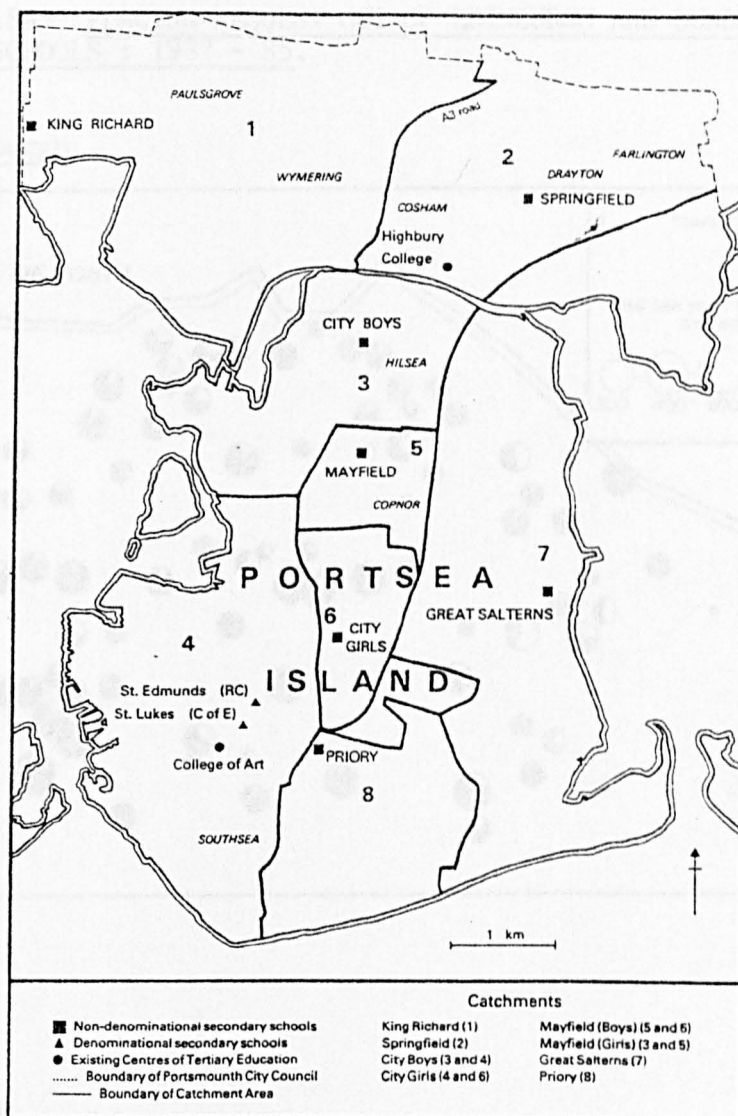
a sixth form college (see Figure 5.7). This policy arises out of a twin need to reduce 11 - 16 capacity and at the same time create a more viable 16+ sector, which involved the closing of one of the existing secondary schools. Perceived attributes of the three most favoured sites are also given on Figure 5.7. In fact the majority of parents overall, and of pupils in all schools other than Mayfield, opted for Mayfield, located in a middle class area. The local authority selected Great Salterns which obviously had different geographical implications. Why was this? Burnett suggests that it was because: "The majority of parents behaved naively, officials manipulated public opinion and some councillors treated it cynically."

(38) All this took place in the early 1980s, since when the 16+ sector of schools is likely to be taken out of local authority remit and the compulsory sector will in all probability opt for (direct) grant maintained status. This does not of course mean that the 'hard' politics of the Portsmouth case will disappear; rather it will be channelled into fierce competition between schools for future clients.

Each of the other three chapters cited (see ref 37) involved parental consultation, but only in the case of admissions to primary schools in Edinburgh and Dundee (39) was the outcome accommodated, and probably only because in Scotland the regulations require it. As shown by Figure 5.8a) a considerable number of parents opted for a change, but mostly (85%) to an adjacent school, for obvious geographical reasons (see Figure 5.8b). Despite the fact that the majority of placements took place within socially homogeneous areas, and were apparently based on objective issues such as the quality of the fabric and the amount

**FIGURE 5.7 PORTSMOUTH : SECONDARY SCHOOL LOCATIONS AND CATCHMENT PRIOR TO THE REFORM, AND COMMUNITY PREFERENCES FOR SIXTH FORM COLLEGE LOCATION**

**a) Map of Former Catchments**



**b) Family Preferences for Sixth-Form College Location**

**For Mayfield:** 32% commented. Of these 66% cited centrality, 39% cited accessibility, 14% cited building/facilities and 3% cited educational record.

**For Great Salterns:** 33% commented. Of these 24% cited safety/accessibility for older children, 20% cited facilities, building, parking, 18% cited centrality, 5% cited scope for future expansion and 8% cited less deleterious effect on neighbourhood (than Mayfield).

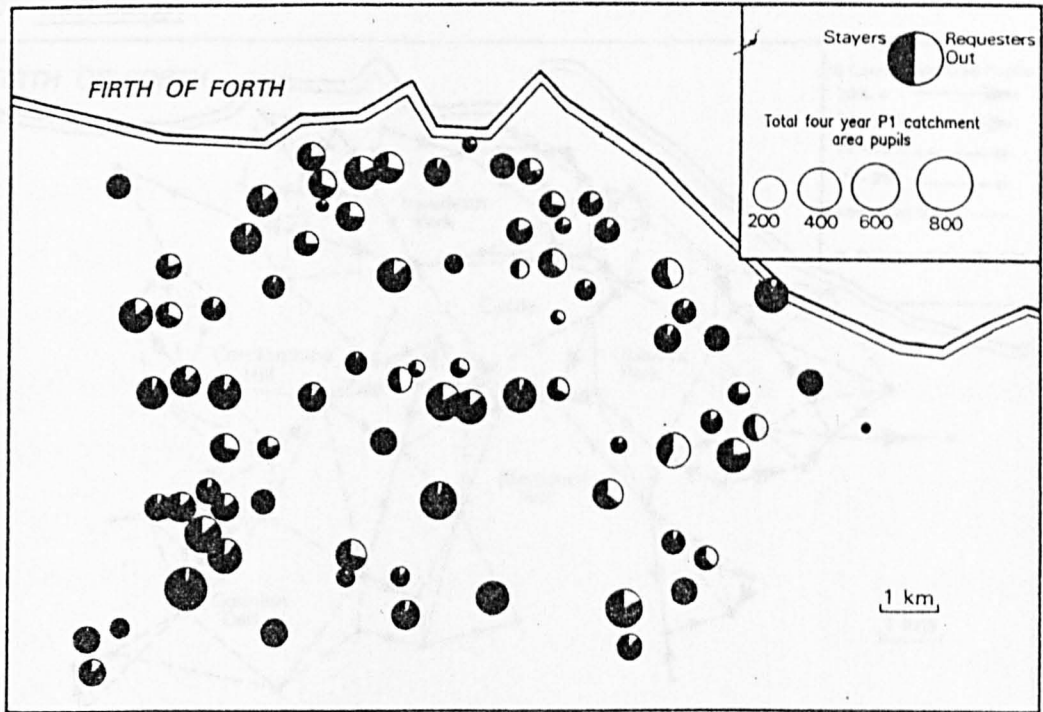
**For King Richard:** 24% commented. Points raised included buildings/facilities, schools vulnerable to closure, it was wanted by the estate (boost to area and should encourage school leavers to continue into a sixth form), King Richard pupils would be 'spread out' and this would improve their chances.

Source: Alan Burnett, 'Consulting for Change: the Political Geography of School Reorganisation in Portsmouth', in: Liz Bondi and M.H. Matthews (Eds) *Education and Society*, Routledge, (1988), pp. 19 - 51.

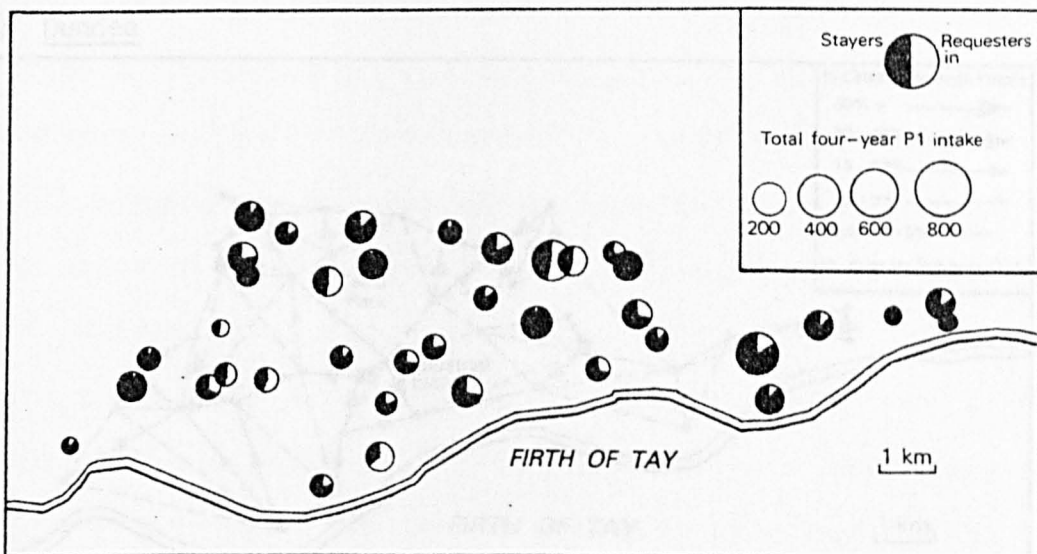


FIGURE 5.8a) PLACING REQUEST OUT OF EDINBURGH AND DUNDEE  
PRIMARY SCHOOLS : 1982 - 85.

i) Edinburgh



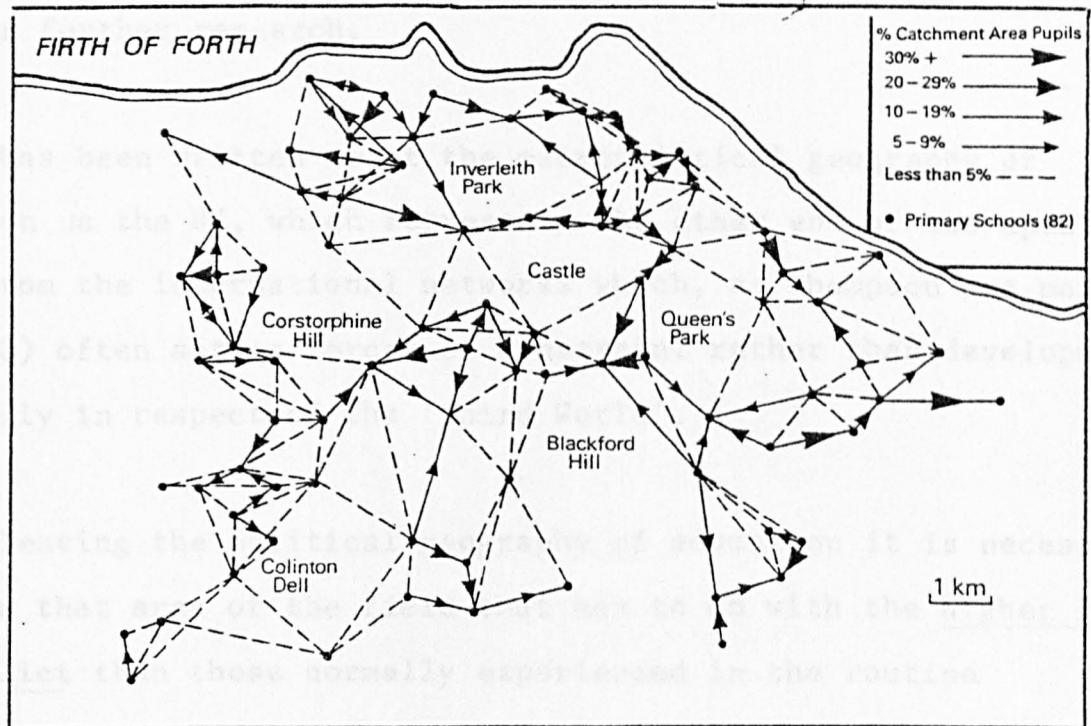
ii) Dundee



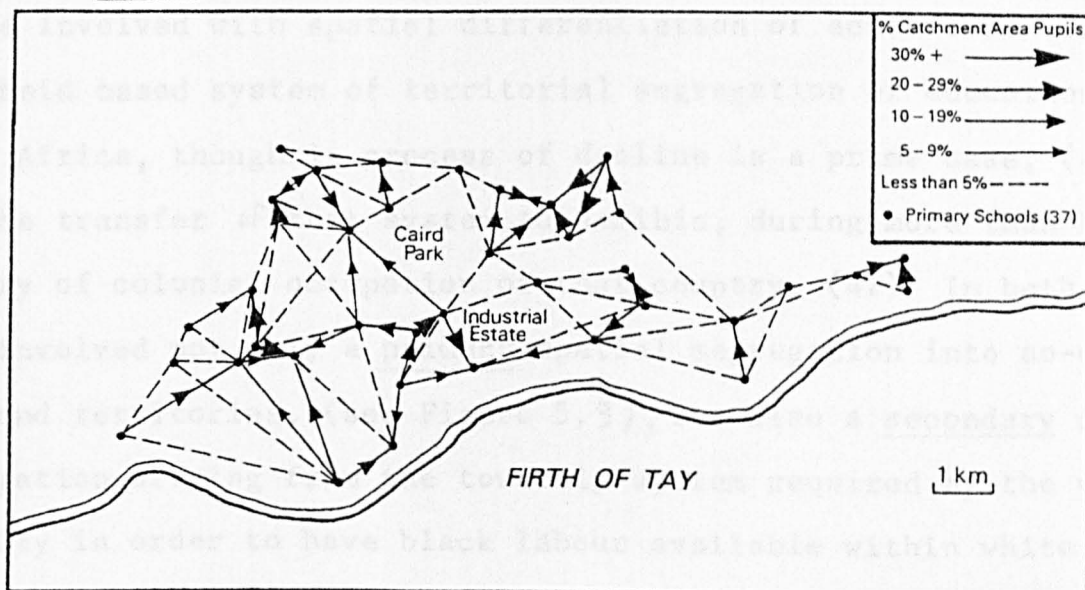
Source : Gillian Raab and Michael Adler, 'A Tale of Two Cities : the Impact of Parental Choice on Admissions to Primary Schools in Edinburgh and Dundee, in : Liz Bondi et al, Education and Society. Routledge, 1988, pp. 113 - 147.

FIGURE 5.8b PLACING REQUESTS ACROSS ADJACENT BOUNDARIES BETWEEN PRIMARY SCHOOLS IN EDINBURGH AND DUNDEE IN 1984

i) Edinburgh



ii) Dundee



Source : Ibid.

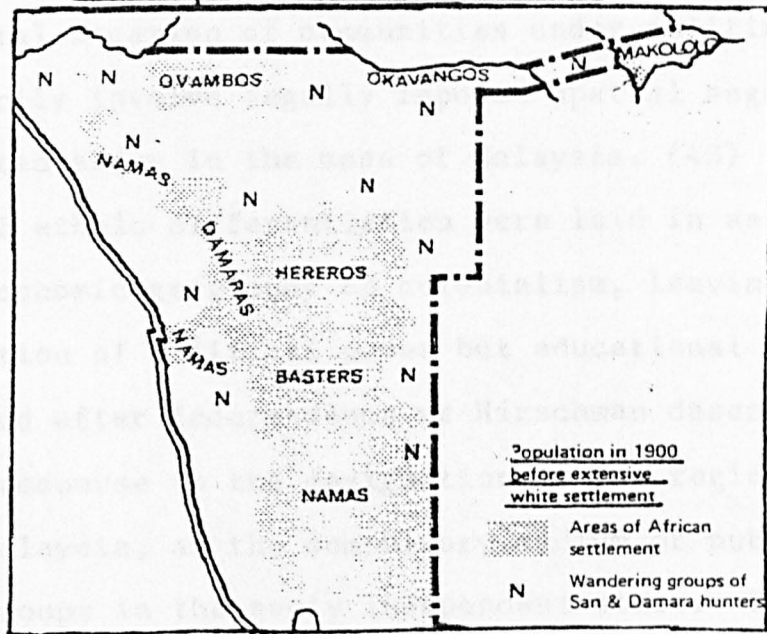
of space, the outcome nonetheless is a cumulative increase year by year in the disparity between primary schools by all the criteria employed by parents, thus increasing the geographical interest and the need for further research.

Enough has been written about the micropolitical geography of education in the UK, which represents the other end of the spectrum of scale from the international networks which, as Thompson has pointed out, (40) often act as forces of constraint rather than development, especially in respect of the 'Third World'.

Before leaving the political geography of education it is necessary to touch on that area of the field that has to do with the higher levels of conflict than those normally experienced in the routine manipulation of a system for political purposes. Mention has already been made of the education of refugees who are one of the consequences of higher level conflicts. Another example would be the tensions arising from ethnic and/or religious pluralism when these aspects become involved with spatial differentiation of education. The apartheid based system of territorial segregation of education in South Africa, though in process of decline is a prime case, (41) as was the transfer of that system to Namibia, during more than half a century of colonial occupation of that country. (42) In both cases this involved not only a primary spatial segregation into so-called homeland territories, (see Figure 5.9), but also a secondary spatial segregation arising from the township system required by the white minority in order to have black labour available within white areas.

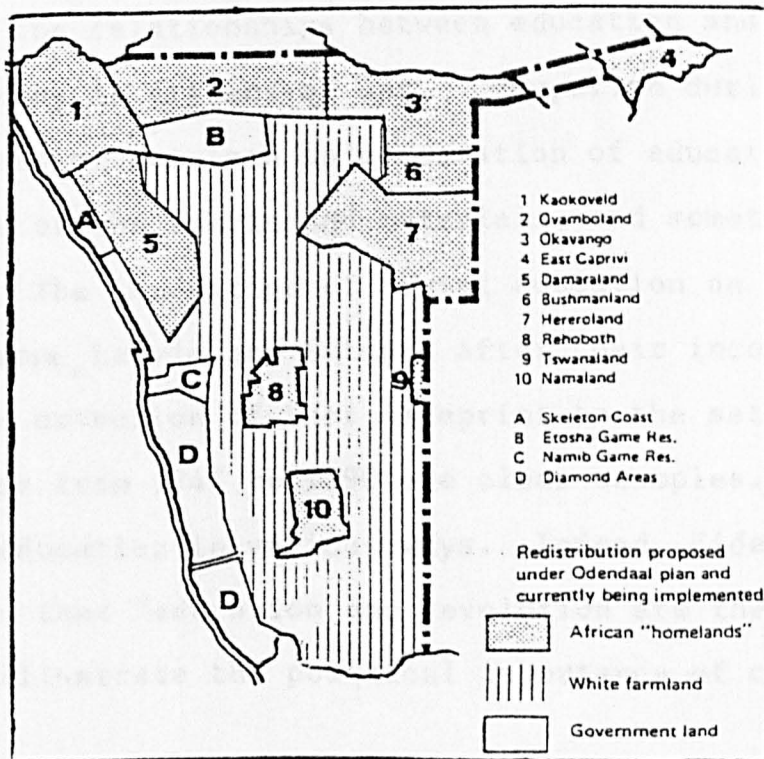
FIGURE 5.9 PRE-INDEPENDENCE NAMIBIA : FROM  
TRADITIONAL EDUCATIONAL TERRITORY TO UNITS  
OF FORCED MIGRATION

a) The Geography of Tribal Territory



Source: P. Fraenkel, The Namibians of S.W. Africa,  
Minority Rights Group, (1978).

b) The Geography of Apartheid



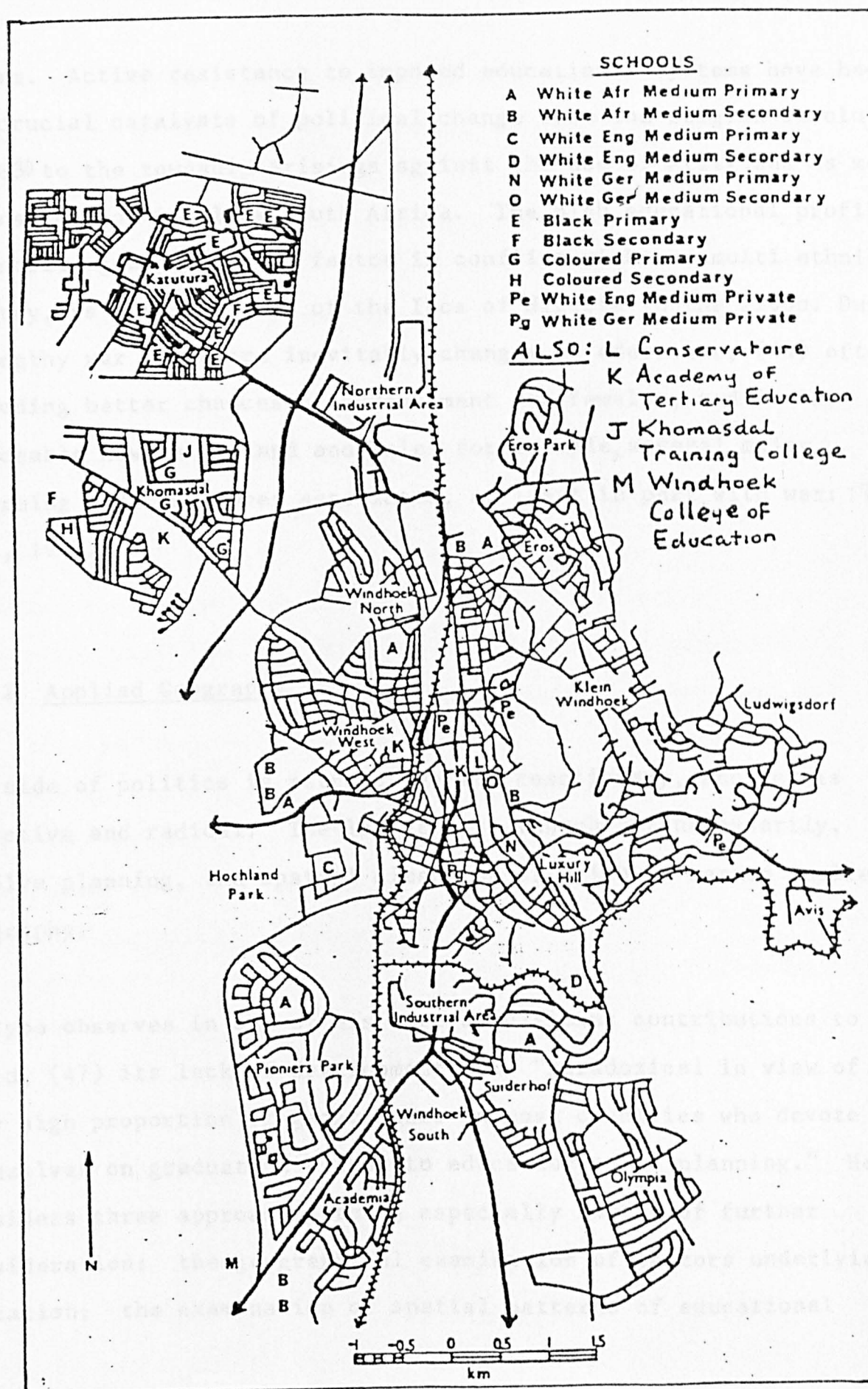
Source: WUS Briefing : Namibia and Refugees,  
World University Service (1984).

The resulting microcosm of multiple systems in spatial terms can be seen in the location of educational institutions in Windhoek (Figure 5.10). Differential location of communities under political pressure does not necessarily involve legally imposed spatial segregation, as already illustrated above in the case of Malaysia. (43) Although the basic patterns of ethnic differentiation were laid in association with aspects of the economic geography of colonialism, leaving the Islamic Malays in a position of political power but educational weakness, this had to be resolved after Independence as Hirschman describes. (44) It was achieved by recourse to the designation of the regional lingua franca, Bahasa Malaysia, as the compulsory medium of public education for all ethnic groups in the newly independent state. This at once arrested the educational advance enjoyed by the Indian, and especially Chinese, Malaysians and was a major factor in the cession of Singapore from the new State.

The ultimate in the relationships between education and conflictual political geography is in times of war. Occupation during aggressive territorial extension can lead to a cessation of educational activity, even devastation of the fabric and materials, and sometimes a new imposed system. The imposition of Soviet education on the Baltic states of Lithuania, Latvia and Estonia after their incorporation into the USSR and the extension of that blueprint to the satellite states of Eastern Europe from 1945 to 1990 are clear examples. Civil war can also relate to education in various ways. Indeed, Fidel Castro's famous assertion that "education and revolution are the same thing" (45) serves to illustrate the political importance of controlling the



FIGURE 5.10 EDUCATIONAL APARTHEID IN WINDHOEK



Source: D. Simon, Aspects of Urban Change in Windhoek, Namibia during the Transition to Independence, Unpublished D. Phil. Thesis, University of Oxford, (1983).

system. Active resistance to imposed educational systems have been the crucial catalysts of political change from the Belgian revolution of 1830 to the township arisings against the use of Afrikaans as medium of instruction in Black South Africa. The high educational profile of a minority group can be a factor in conflict within a multi ethnic country, as with the case of the Ibos of Nigeria in the 1960s. During a lengthy war there are inevitably changes in education, (46) often including better chances of advancement for females, and it is noticeable how in England and Wales for example, several major reforming Acts have been associated, at least in part, with war: 1902, 1918, 1944.

#### 5.2.2 Applied Geography

One side of politics is retroactive and reactionary, another is proactive and radical. The latter may, though not necessarily, involve planning, the spatial dimension of which is termed applied geography.

As Ryba observes in one of his more significant contributions to the field, (47) its lack of development is: "paradoxical in view of the very high proportion of geographers in most countries who devote themselves on graduation either to education or to planning." He considers three approaches to be especially worthy of further consideration: the geographical examination of factors underlying education; the examination of spatial patterns of educational

phenomena; the role of education as a factor influencing the geographical patterns of other social and cultural phenomena. He goes further than does Gould in relating spatial aspects of education to other space users, and in predicting in a similar way to Price (48) that educational activity has a profound and probably increasing influence on patterns of settlement and networks of activity.

Like political geography, applied geography operates at all levels of spatial scale from global to local as well as in temporal terms. (49) Some analysts are willing to operate at continental level in respect of the role and effect of educational systems, as for example, Pearson (50) and the European Commission. (51) The former, like much of standard educational planning is not particularly geographical, more systemic, but the latter subsumes interesting tensions between political and economic geography. It is concerned with closing the gap between the so called Objective I regions and the most highly developed regions of the EC in respect of educational level and involvement in education and training. The gap is wide as the following quotations illustrate:

"... the educational level of the working population in these regions as compared with the most highly developed in the Community (eg 87% of the population of working age in Portugal as compared with 19% in the Federal Republic of Germany has a level of education below the upper secondary stage; ..."

"... the percentage of young persons in the 15 - 19 age group who are undergoing education/training (eg 40% in Portugal, Greece and Spain as compared with 85% in the Federal Republic of Germany)." (52)



but the idea that the making up of this leeway will effect a corresponding upturn in the economic fortunes of the so-called 'lagging regions' is naive. The mere fact that in the case of those countries whose entire territory is covered by Objective I are unlikely to concentrate the funds on their most underdeveloped parts illustrates this. Nonetheless politics will be satisfied and it is in that realm that education and educational planning, including the spatial dimension, reside.

However, this is perhaps only another way of illustrating the well-known situation that although much of the work of planners is overridden by political decision this does not negate the professional quality of, and academic interest in, the exercise. Much of the work of strategic planning operates at the regional/provincial level of countries and, especially if carried out by international agencies, includes the objective of reducing regional imbalance which has come about through the operation of the geographical dynamic over time. Some such planning is more concerned with the adjustment of internal political boundaries in an attempt to catch up with ongoing developments in human geography, especially the distribution of population and the location of economic activity. An example with direct implications for the delivery of educational services in England was the Royal Commission on Local Government in England 1966 - 69. This produced a majority report and a minority report, the latter by Mr Senior. As can be seen in the regional extract, (*Cambridge/*

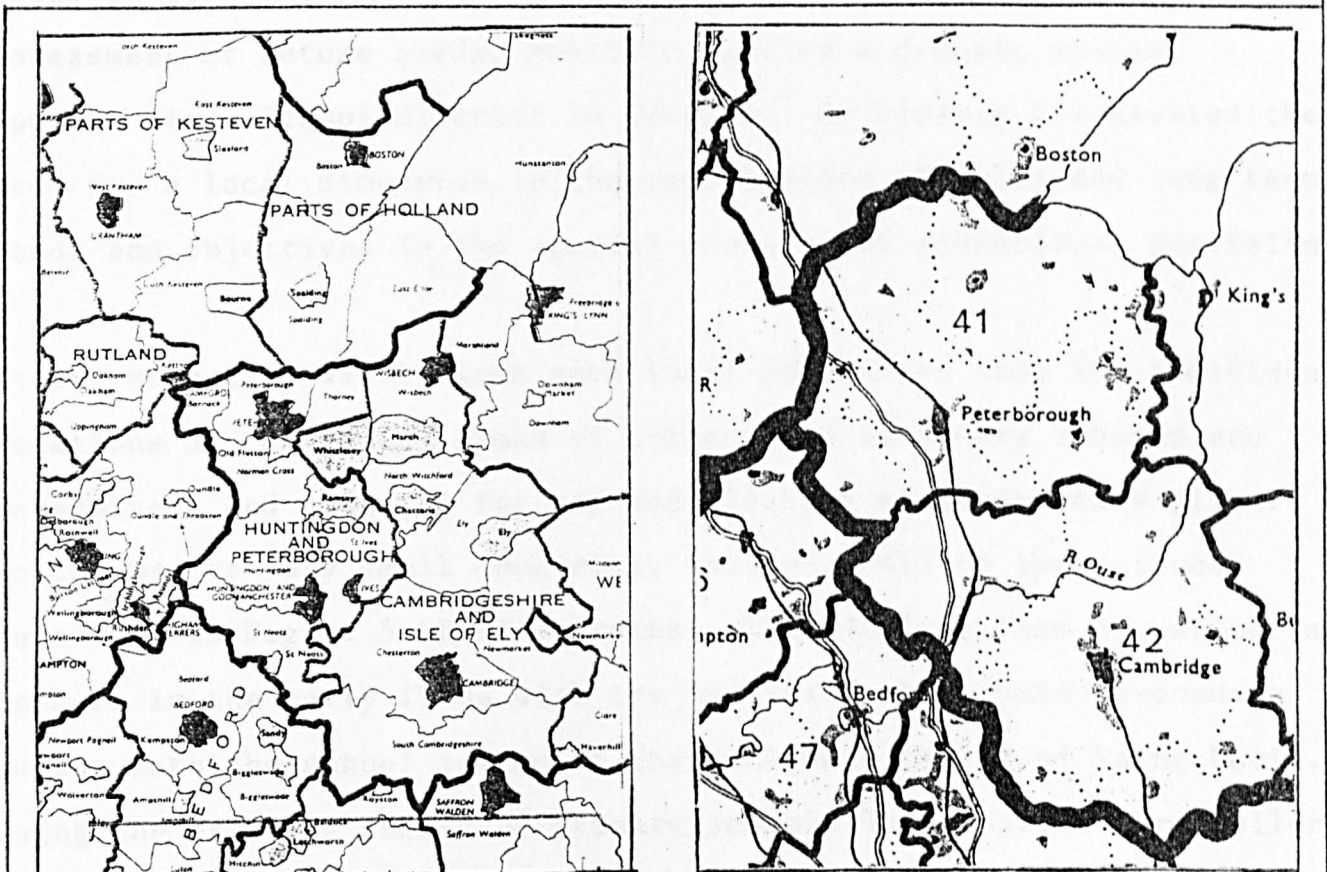
Huntingdon ), comprising Figure 5.11 both reports proposed radical changes with Senior's being the more realistically based on the geographical dynamics of city regions. In the event, the general election of 1970 resulted in a moderation of the majority report to a more conservative position, though the geographically appropriate new estuarine counties such as Cleveland and Humberside survived and became political realities in 1974. However, within a few years of the time of writing (1992), there will be a further reorganisation of local government apparently lacking the spatial awareness of the 1969 reports and even their 1974 manifestations, based rather on a revival of the political factor over the geographical. Whether this will in itself have as much significance for educational provision as have past boundary changes will depend upon how many schools, if any, remain under local government auspices, as the majority may by then have opted for (direct) grant maintained status and a national parameter of political geography rather than a local one. Within such an ambiance the pure geographical operation of models concerned with the spatial allocation of educational resources (53) becomes profoundly problematical due to the shift of political assumptions and policy implementation.

Be this as it may, in most countries of the world the idea of planning the location and catchment of schools so as to approximate as closely as possible to a situation of optimum accessibility is still the norm of political behaviour and we may shift our focus to a more local scale. Within this scale we find a small cluster of elements of the literature of the (applied) geography of education. In many parts of

FIGURE 5.11 THE TERRITORIAL GROWTH OF CAMBRIDGESHIRE AS A RESULT OF THE ROYAL COMMISSION ON LOCAL GOVERNMENT (1966 - 69)

a) Old Units and Boundaries

b) New Units and Boundaries



Source of Maps: Royal Commission Report.

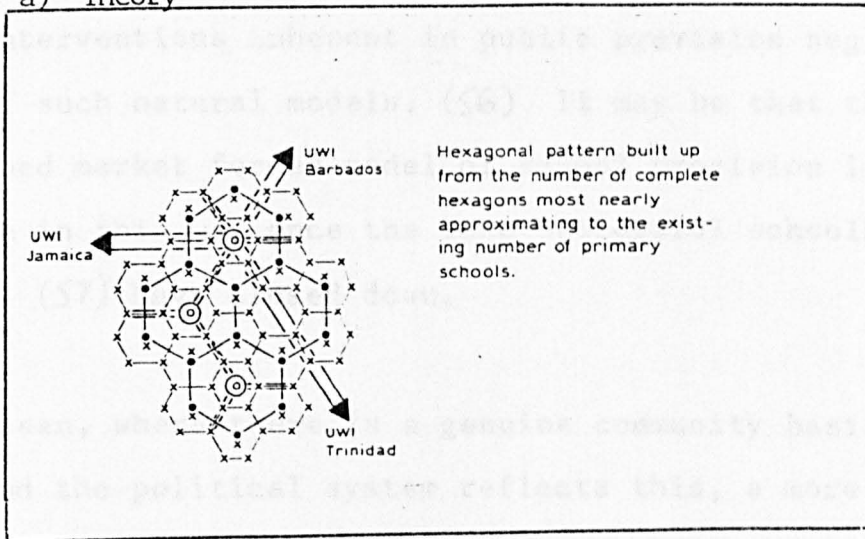
The old Cambridgeshire, famous in the history of educational administration for the innovations of Henry Morris, focussed on the historic University city and a segment of the fenland. The new Cambridgeshire reflects the significance of the Cambridge-Peterborough axis and includes substantial additions to the old counties of Cambridge and Huntingdon to both north and south. These reflect the dynamic pull of the two major urban centres and therefore attempt a convergence between the political and human geography. The new Cambridgeshire Education Authority was formed from residual areas of at least five former educational territories.

the USA, the School District is a highly localised affair and Maxfield (54) has made a significant contribution to the discussion. He illustrates the capacity of techniques of spatial study and linear programming to enable administrations to reach better decisions concerning the micro and macro planning of School Districts. With a focus on such specific problems as overcrowding, desegregation and the assessment of future needs, Maxfield applies a dynamic spatial approach to a School District in Georgia. He clearly illustrates the need for a local dimension in the coordination of short and long term needs and objectives in the spatial planning of educational provision.

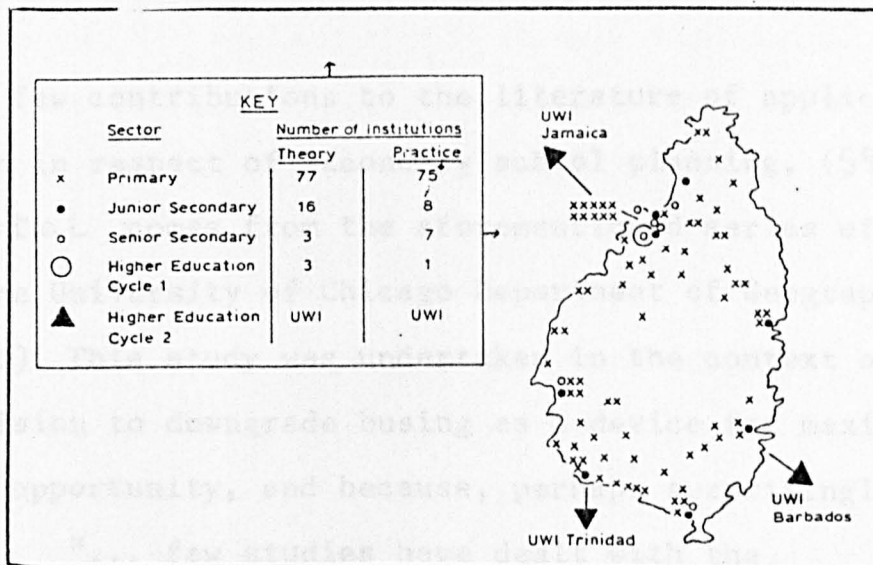
It is, normally, within some such local parameters that the individual locations and catchment areas of primary and secondary schools are determined, and planning for any modification of these takes place. In the case of very small countries, this may well be the national parameter as Figure 5.12 illustrates. This derives from the writer's concern in the early 1970s with the insertion of a junior secondary sector into the school system of the Caribbean island of Saint Lucia. Using the existing number of primary schools as a base, a Christaller K3 locational model was employed to determine the number of junior and senior secondary schools that ideally would derive from this. As can be seen, the actual number of junior secondaries was only half of the optimum, this being due to a combination of: lack of political will to create a universal junior secondary sector at that time; the strength of existing secondary schools in retaining their 11+ intakes; the rejection of the claims of some settlements on political grounds. By contrast the number of senior secondaries was twice the optimum due

FIGURE 5.12 A CENTRAL PLACE MODEL AND STRUCTURAL FORM OF EDUCATION IN A SMALL ISLAND NATION : SAINT LUCIA

a) Theory



b) Practice



Source: Colin Brock, 'Problems of Education and Human Ecology in Small Tropical Island Nations', in: Colin Brock and Raymond Ryba (Eds), A Volume of Essays for Elizabeth Halsall: Aspects of Education No. 22, University of Hull (1980), pp 71-83.

mainly to well established denominational foundations. (55) Hones found similar problems in applying central place theory to the location and catchments of schools in the Bath area of the then Somerset system, and came to the conclusion that the historical and political interventions inherent in public provision negated the operation of such natural models. (56) It may be that the aforementioned market forces model of school provision in England will operate more in this way once the less successful schools of Burdett's lowest tier, (57) have closed down.

As we have seen, where there is a genuine community basis for public education and the political system reflects this, a more place-bound operation will be found. While this is common in the USA, it is rare in England, but the initiative of Henry Morris in developing the village colleges of Cambridgeshire was a notable exception. (58)

There are a few contributions to the literature of applied geography of education in respect of secondary school planning, (59) but the most substantial comes from the aforementioned series of Research Papers of the University of Chicago Department of Geography: by Fred L. Hall. (60) This study was undertaken in the context of a 1972 Federal decision to downgrade busing as a device for maximising equal educational opportunity, and because, perhaps surprisingly:

"... few studies have dealt with the criteria to be used for judging the locations of schools, or of any facility providing public services." (61)

In view of this, Hall engages in a useful discussion of aspects of

location theory as between public and private sector contexts. The latter is the context within which conventional location theory has been developed, which explains the difficulties faced by Brock and Hones referred to above. Whereas in the private sector bad location decisions may lead to closure on grounds of cost, in the public sector they may merely lead to an indefinitely continued waste of resources. Normally public education units in the Chicago system comprise 'Definite Service Regions'; that is to say: where all persons in the region needing the given service use one particular facility, a good example being a neighbourhood catchment high school. By contrast, an 'Indefinite Service Region' is one where persons may make use of any facility within the system. This will be the position operating in respect of secondary schools in the fully developed post 1988 Education Act situation in England. Strict catchments are clearly Definite Service Regions, and this was the context under which Hall's alternative's for Chicago's District 18 were formulated. Fig. 5.13 a)+b) illustrate the high school age population of that district and the location of both public and parochial high schools within and near it respectively.

Bearing in mind the policy change informing this study, three major criteria were selected in relation to reaching a decision as to whether and where to locate an additional facility, these were: total district travel to school; maximum individual travel; de facto racial segregation (in particular, permitted variation from the district average). Within the travel dimension the indices of: time, distance, percentage previously bused and dollar cost were employed,



FIGURE 5.13 a) DISTRIBUTION OF HIGH SCHOOL AGE POPULATION IN CHICAGO DISTRICT 18 BY RACE, IN 1970

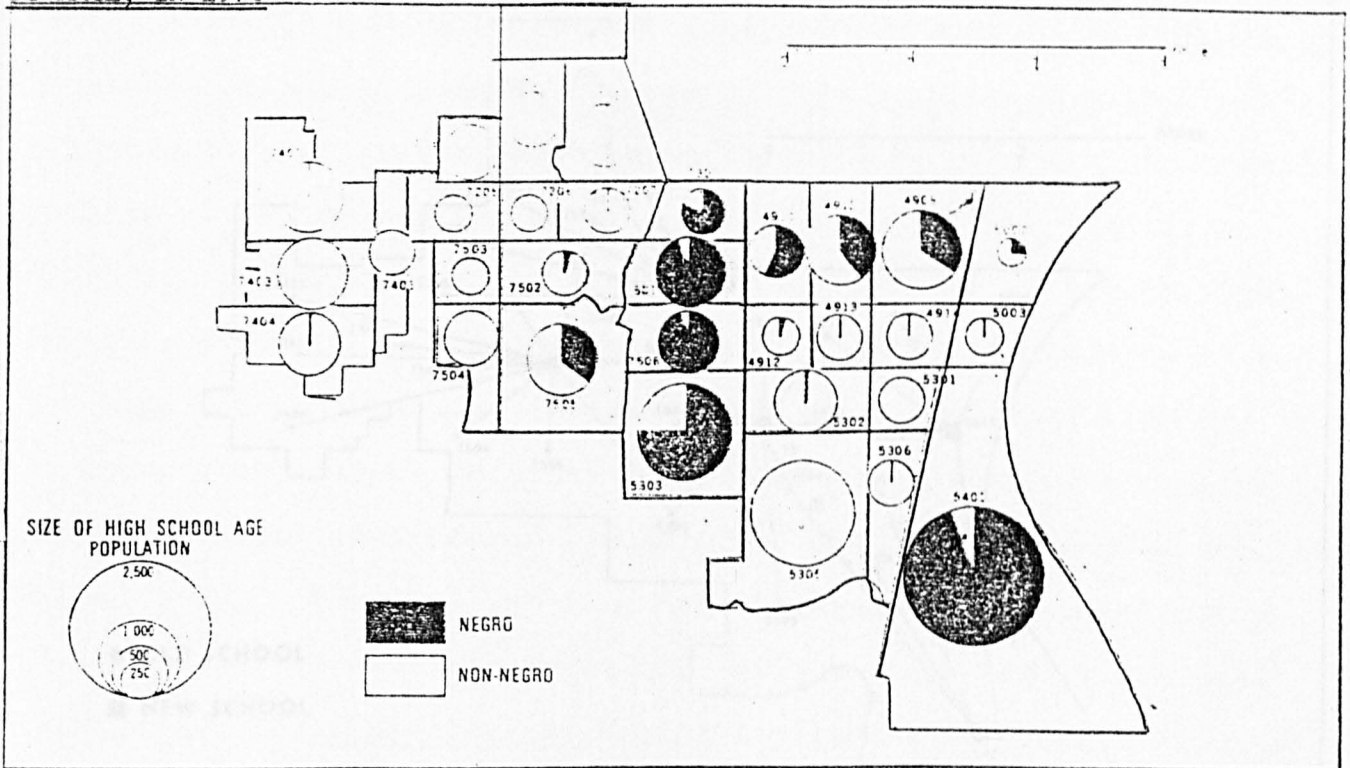
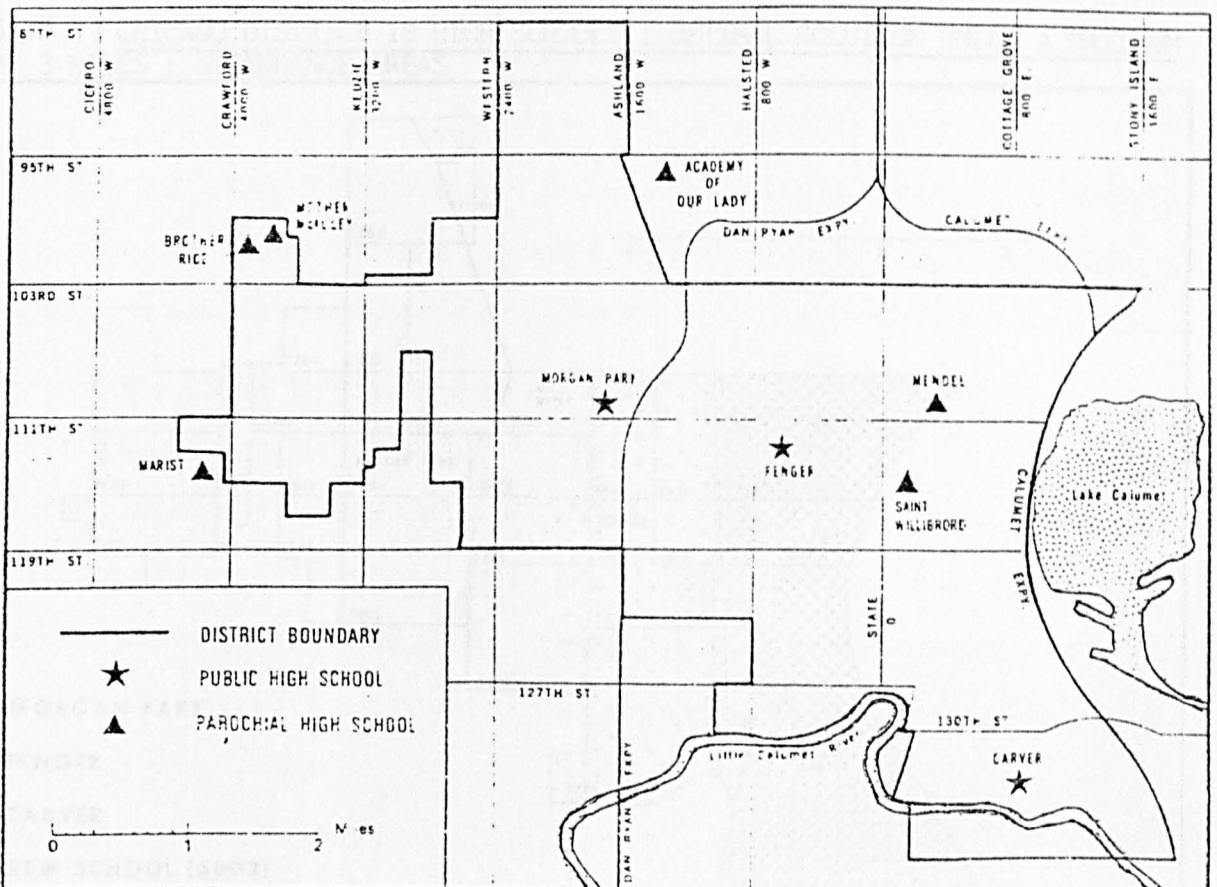


FIGURE 5.13 b) LOCATION OF PUBLIC AND PAROCHIAL HIGH SCHOOLS IN OR NEAR CHICAGO DISTRICT 18



Source: Fred L. Hall, Location Criteria for High Schools: Student Transportation and Racial Integration, University of Chicago (1973).



FIGURE 5.13c) CHICAGO DISTRICT 18 HIGH SCHOOLS : OPTIMAL SOLUTION UNDER A MAXIMUM TRAVEL OF 3 MILES : NODAL ASSIGNMENTS

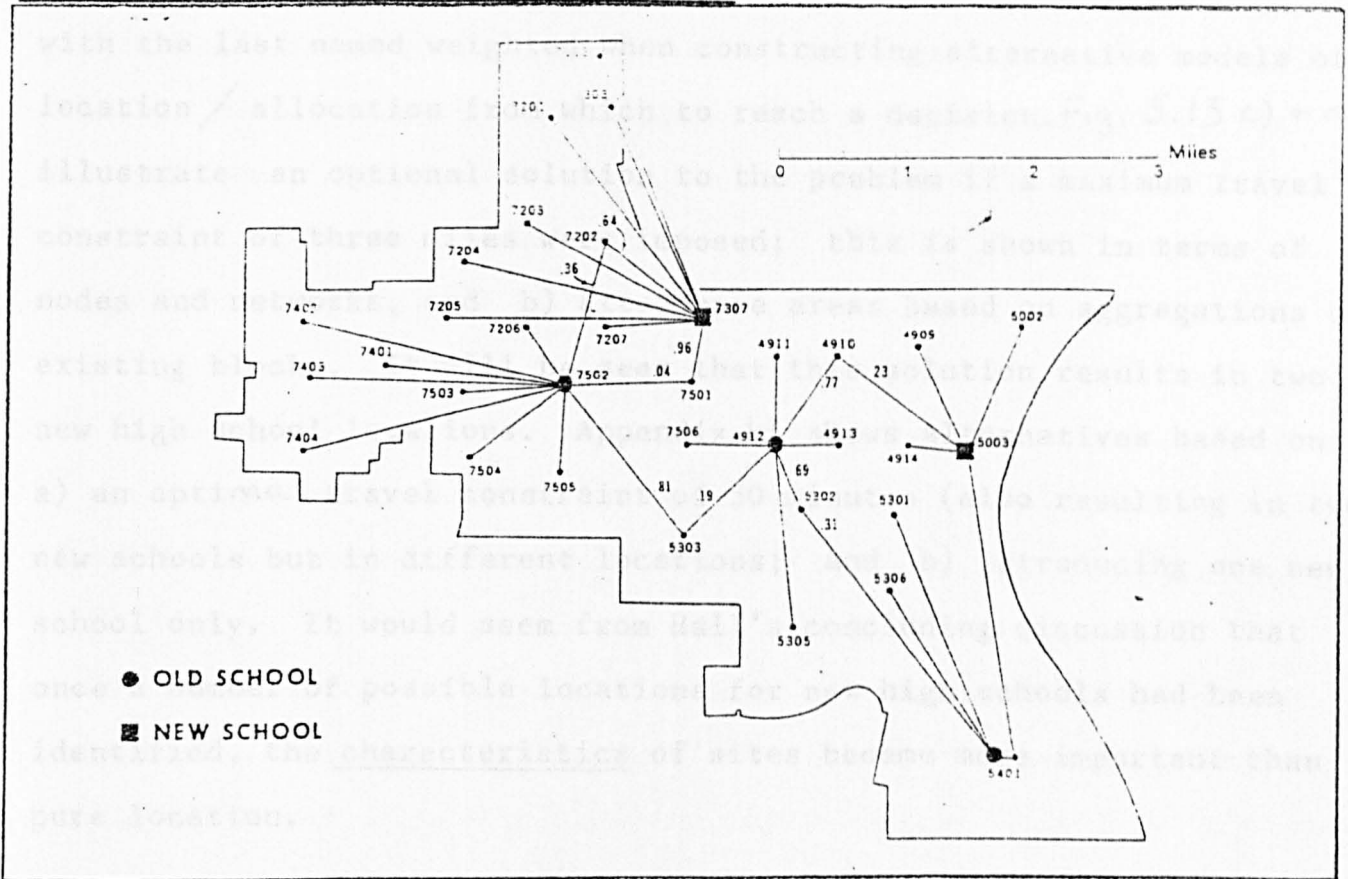
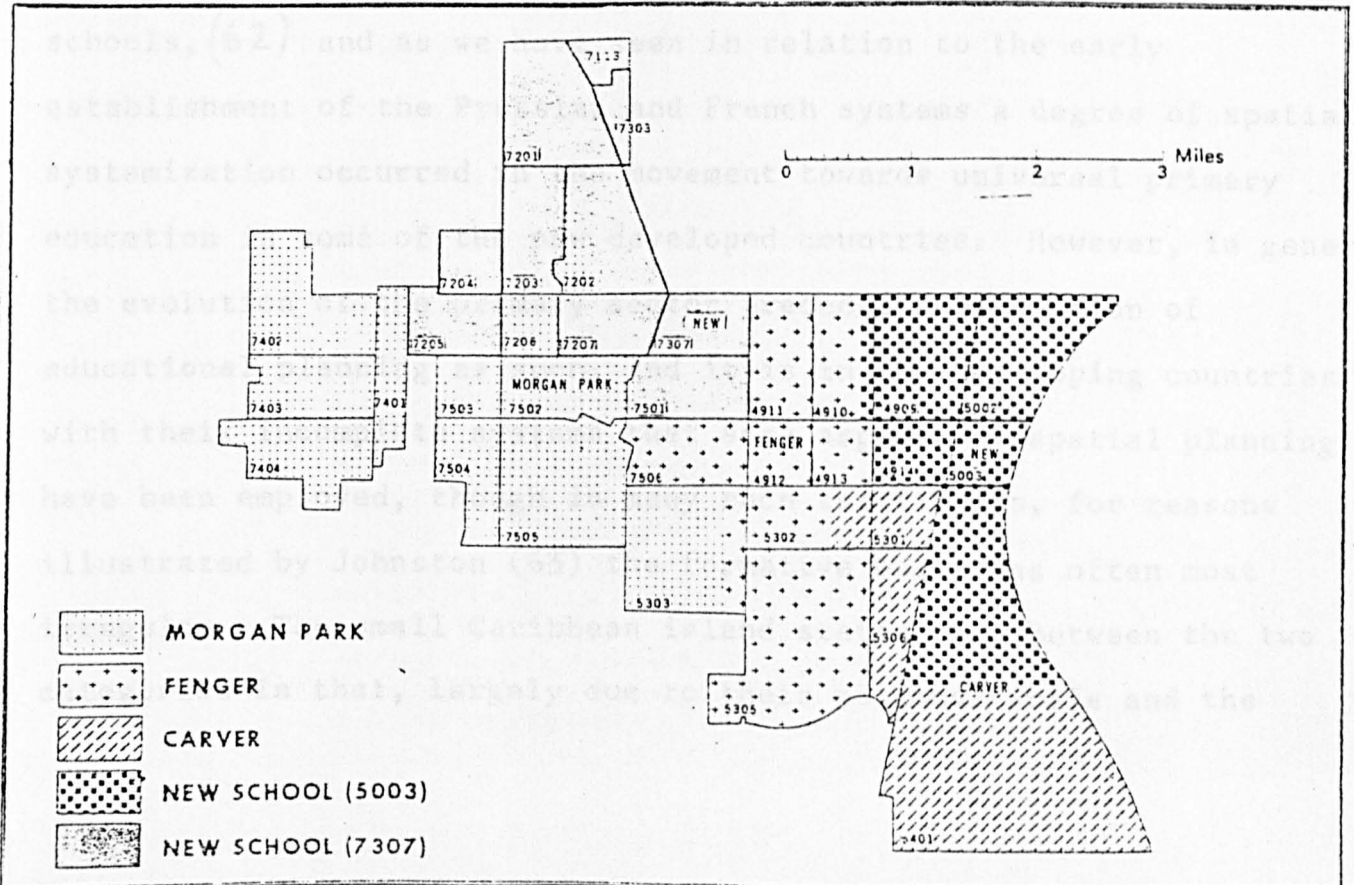


FIGURE 5.13d) CHICAGO DISTRICT 18 HIGH SCHOOLS : OPTIMAL SOLUTION UNDER A MAXIMUM TRAVEL OF 3 MILES : ATTENDANCE AREAS



Source: ibid.

with the last named weighted when constructing alternative models of location / allocation from which to reach a decision. Fig. 5.13 c) + d) illustrate an optional solution to the problem if a maximum travel constraint of three miles were imposed; this is shown in terms of a) nodes and networks, and b) attendance areas based on aggregations of existing blocks. It will be seen that this solution results in two new high school locations. Appendix H shows alternatives based on a) an optimal travel constraint of 30 minutes (also resulting in two new schools but in different locations; and b) introducing one new school only. It would seem from Hall's concluding discussion that once a number of possible locations for new high schools had been identified, the characteristics of sites became more important than pure location.

As with the secondary sector, so with the primary, there is a small body of literature concerning the location and planning of schools, (62) and as we have seen in relation to the early establishment of the Prussian and French systems a degree of spatial systemization occurred in the movement towards universal primary education in some of the now developed countries. However, in general the evolution of the primary sector preceded the adoption of educational planning as such, and it is in the developing countries with their incomplete systems that some aspects of spatial planning have been employed, though in many such territories, for reasons illustrated by Johnston (63) the formative basis was often most irregular. The small Caribbean island states fall between the two categories in that, largely due to their national scale and the

impetus of post abolition grants, universal primary education was achieved earlier than in other parts of the developing world. As it happens, the prime example of a geographical approach to educational planning comes from Jamaica and the work of Elizabeth Thomas-Hope. (64)

The object of the exercise undertaken by Thomas-Hope was to effect the allocation of children to primary schools with minimal 'cost', and distance travelled from home; that is to say to minimise the distance decay factor. The problem of wasteful allocation arises from disparities in provision in relation to population clusters within each parish. A transportation model of linear programming is employed which provides a means for reducing the number of locational choices, in order to achieve the efficiency level of optimum access for all children. Before proceeding to look at this case in more detail one must remember that Thomas-Hope accepts the parish as the parameter for allocation, thereby preserving the dominance of the political geography over demographic distribution. She outlines her procedure in the following terms:

"In dealing with an assignment problem such as this, where the three most important elements may vary, the only reasonable way of handling it is to simplify, by structuring a model in which two things may be held constant while allowing the third to vary. This allocation of children to schools is directly related to the transportation, or spatial equilibrium model of linear programming. Here it is used normatively to indicate how children should be allocated to schools. Further, it enables the researcher to examine the optimal arrangements of school assignments (and thus school

districts) under varying sets of conditions. The capacities of schools are also determined by this procedure and lastly, locations of additional schools are suggested in areas where capacities of existing schools would have to exceed 500 in order to accommodate the children assigned to them." (65)

Having recorded exact origins and current destinations by their Cartesian coordinates, from the initial mapping of each, the calculation of distance is made using roads and major footpath routes in view of the accidented nature of the parish of St. Ann. Then the "obvious assignments are made visually." This reduces the problem to dealing with cases where options are geographically evident. In this case there are 62 existing schools remaining in the problem with 115 settlement clusters containing the children to be assigned. Successive applications of the linear programme model, are carried out until it is possible for school districts to be cartographically defined and then original school capacities can be compared to the normative model. (Figure 5.14 a) through d) In preparing this model the fact that most of the deficit in capacity is in the central 'belt' of the parish and that in two other places there are surpluses of over 400 places represent the extremes to be moderated. Thomas Hope comments:

"In reality these deficits could be eliminated either by enlarging the existing schools or by two teaching shifts. However, in such small rural centres, a strong case could be made against either of these alternatives. For illustrative purposes the four districts with deficits of more than 400 are selected for the inclusion of a new school." (66)

FIGURE 5.14a) ST. ANN, JAMAICA: LINEAR PORTRAYAL OF EXISTING FLOWS

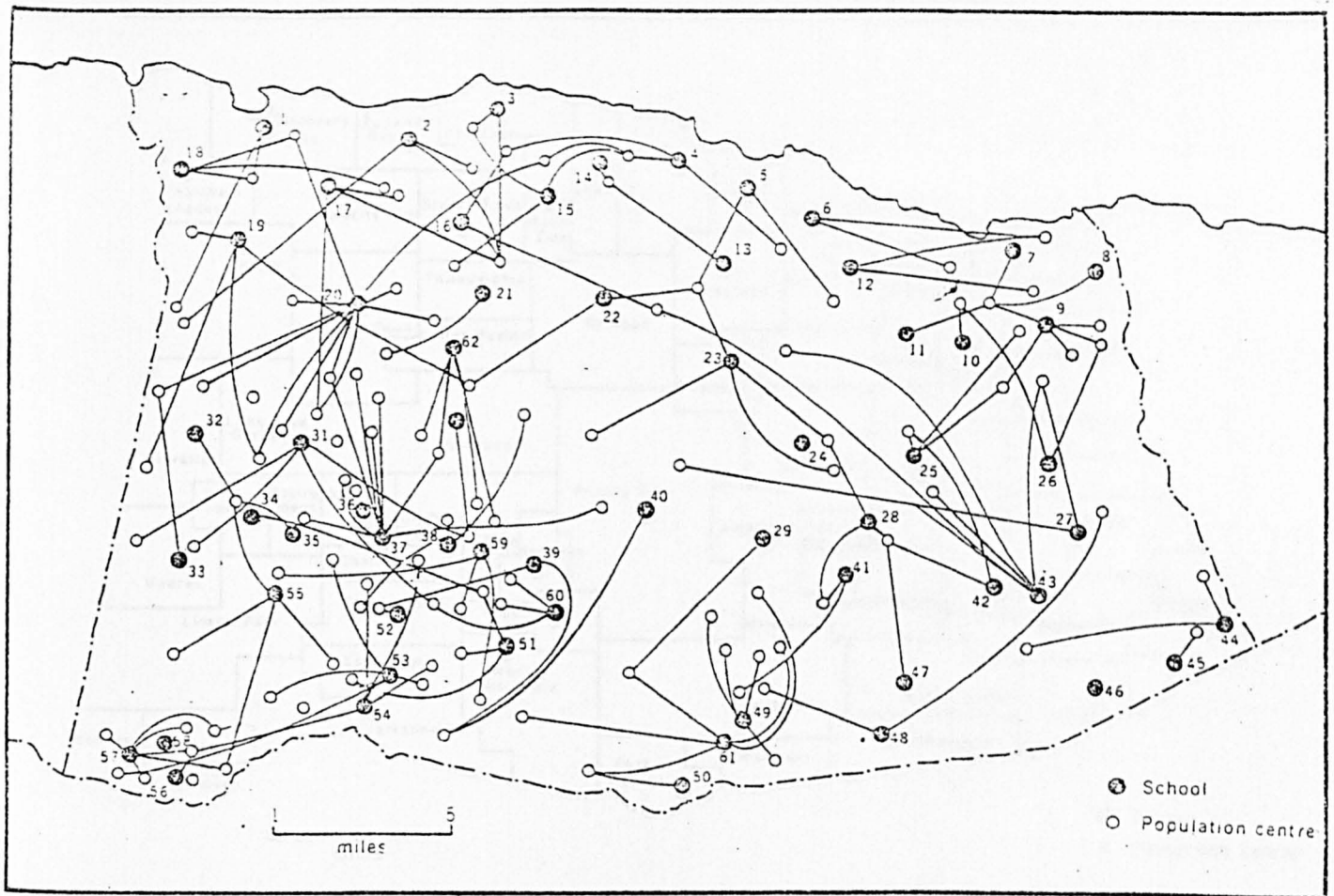
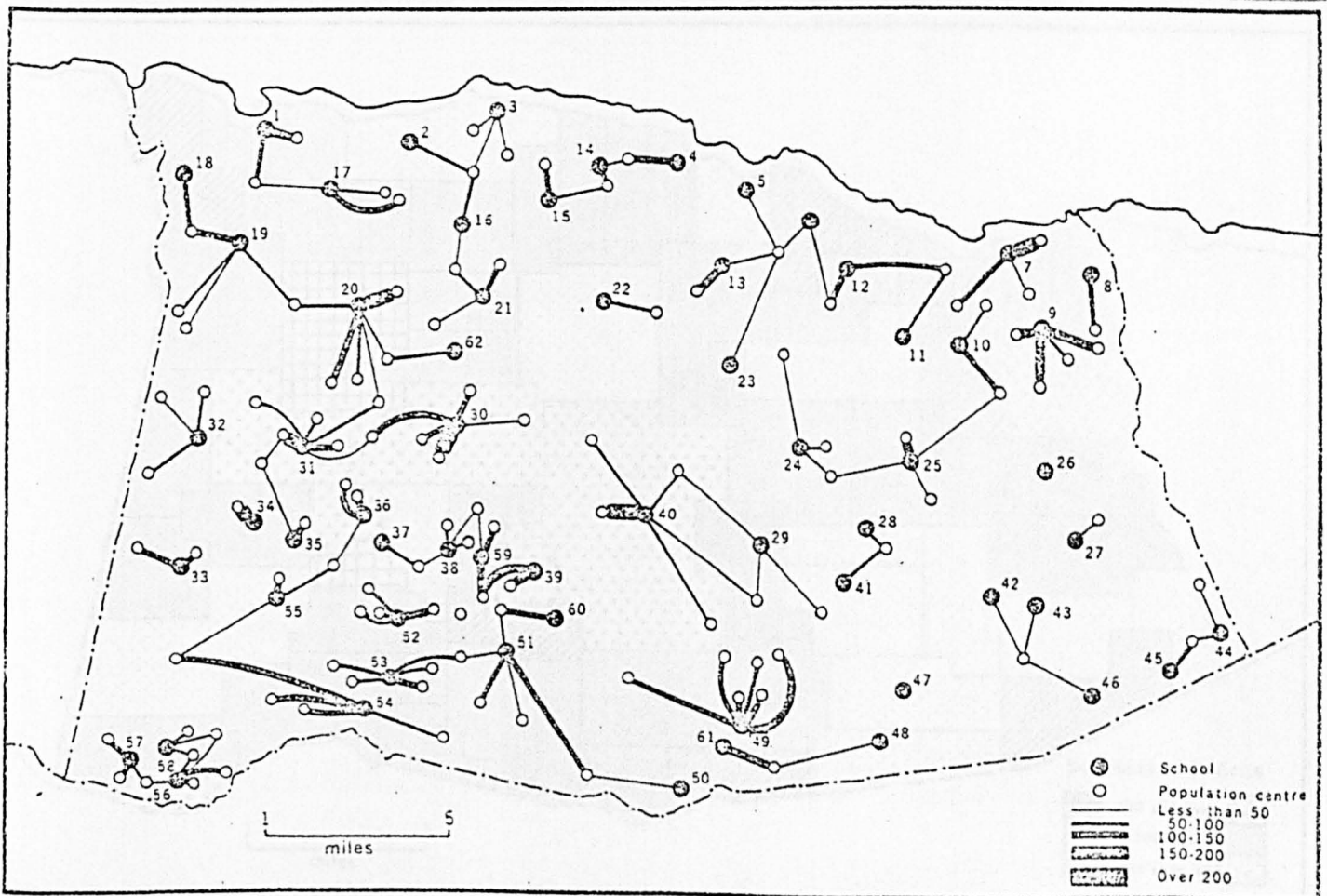


FIGURE 5.14b) ST. ANN, JAMAICA : OPTIMAL LINEAR FLOW PATTERN



Source: Elizabeth Thomas-Hope in *Social and Economic Studies*, 24 (1975)



FIGURE 5.14c) ST. ANN, JAMAICA : EXISTING PRIMARY CATCHMENTS DISCOVERED

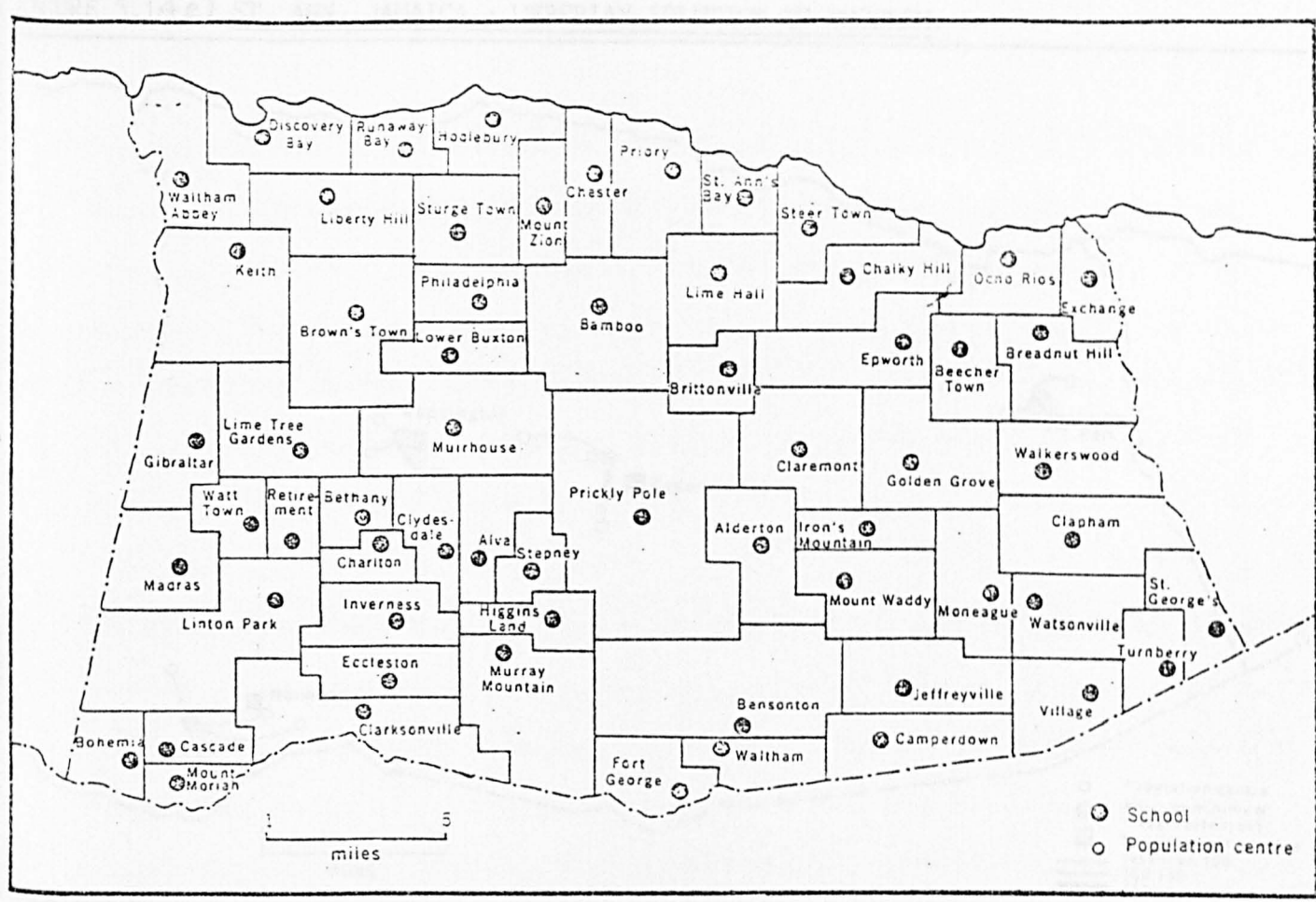
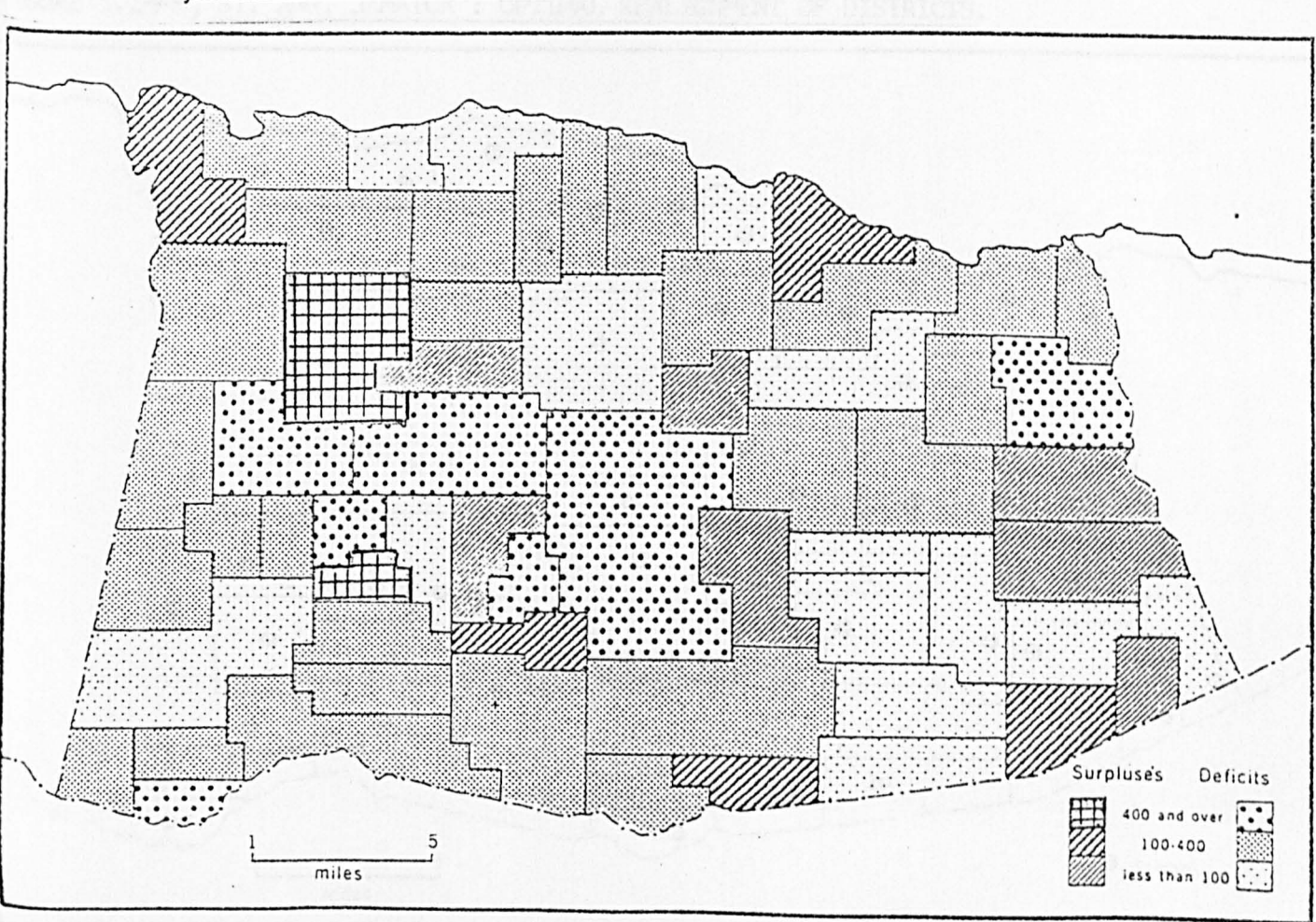


FIGURE 5.14d) ST. ANN, JAMAICA : PRIMARY CATCHMENT SURPLUSES AND DEFICITS



Source: Elizabeth Thomas-Hope, op. cit.,

FIGURE 5.14e) ST. ANN, JAMAICA : WEBERIAN SOLUTION TO PROBLEM.

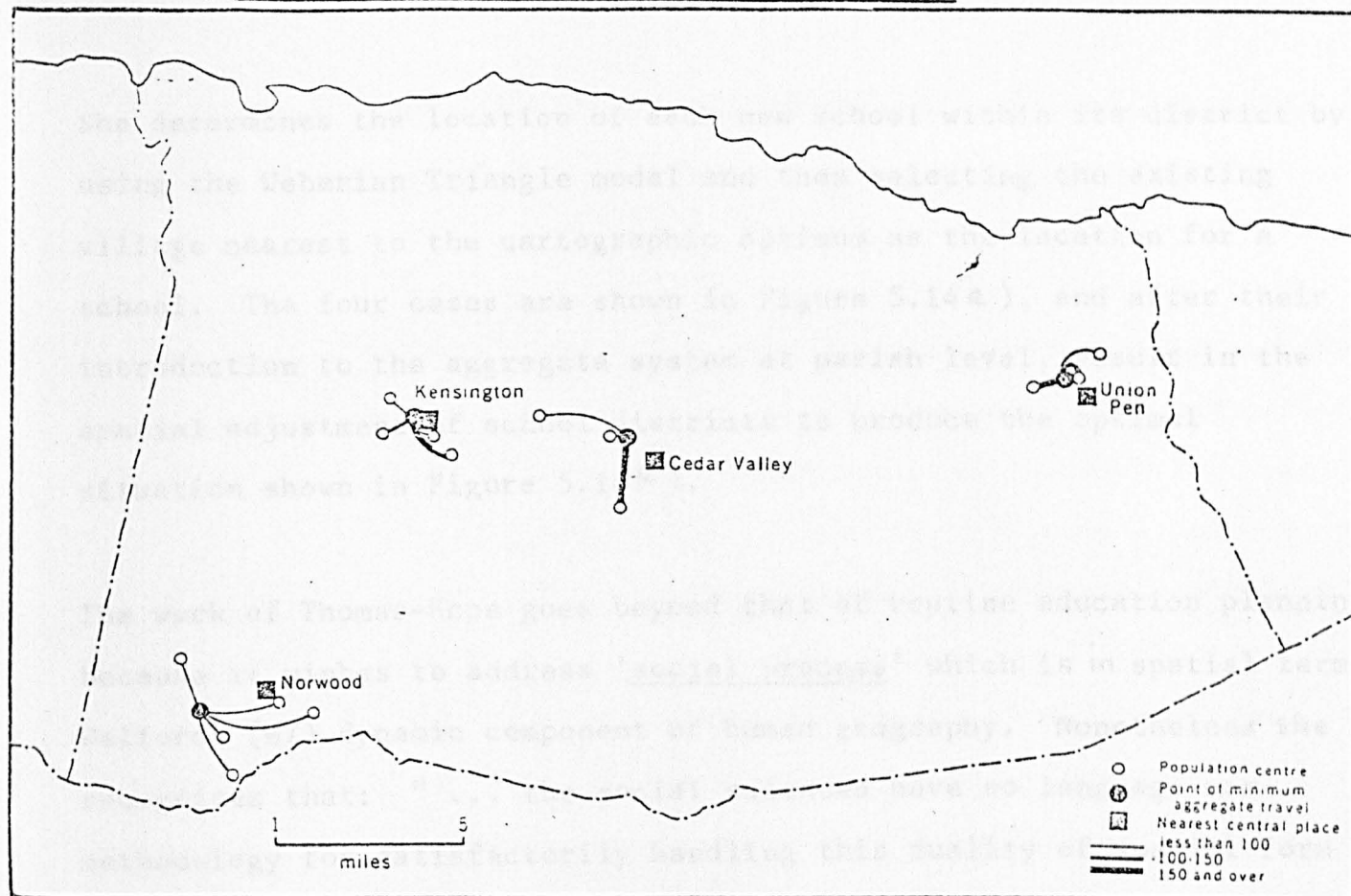
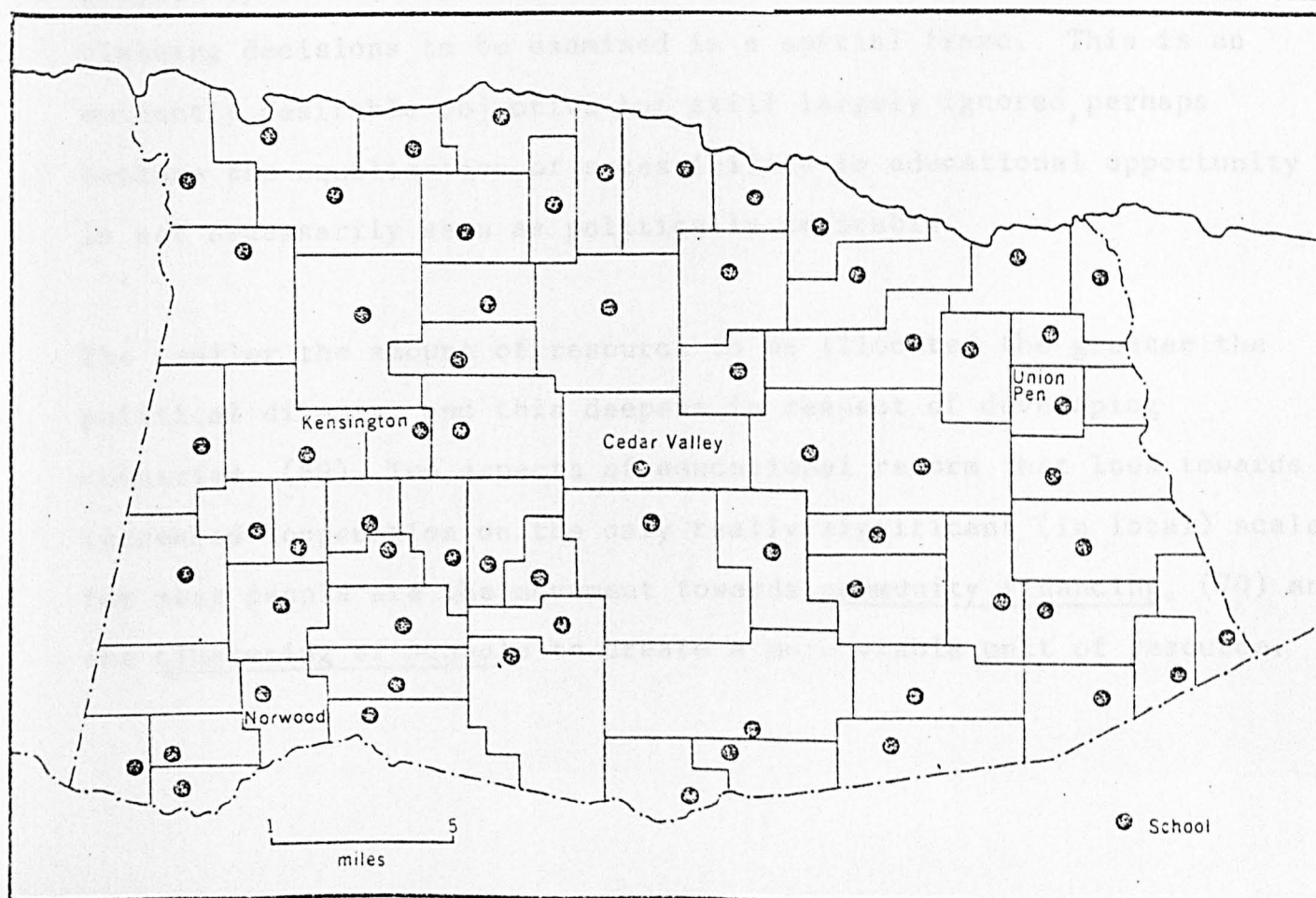


FIGURE 5.14f) ST. ANN, JAMAICA : OPTIMAL REALIGNMENT OF DISTRICTS.



Source: Elizabeth Thomas-Hope, op. cit.,

She determines the location of each new school within its district by using the Weberian Triangle model and then selecting the existing village nearest to the cartographic optimum as the location for a school. The four cases are shown in Figure 5.14<sup>e</sup> ), and after their introduction to the aggregate system at parish level, result in the spatial adjustment of school districts to produce the optimal situation shown in Figure 5.14<sup>f</sup> ).

The work of Thomas-Hope goes beyond that of routine education planning because it wishes to address 'social process' which is in spatial terms Walford's (67) dynamic component of human geography. Nonetheless she recognises that: "... the social sciences have no language nor methodology for satisfactorily handling this duality of spatial form and social process". (68) It is claimed that a procedure such as that adopted by Thomas-Hope enables the social implications of political/planning decisions to be examined in a spatial frame. This is an eminently desirable objective but still largely ignored, perhaps because the equalisation of accessibility to educational opportunity is not necessarily seen as politically desirable.

The smaller the amount of resource to be allocated the greater the political dilemma, and this deepens in respect of developing countries. (69) Two aspects of educational reform that look towards increased cooperation on the only really significant (ie local) scale for most people are the movement towards community financing, (70) and the clustering of schools to create a more viable unit of resource.



The former is included within the economic geography section below (5.2.4), while the latter will be briefly considered here. (71).

In his UN monograph, Bray both addresses the issues relating to the policy of clustering and also provides six case studies from parts of Asia and Latin America. Clustering is fundamentally geographical. It may be designed within a sector of provision (eg. primary) or across sectors, or even incorporating both formal and non-formal components. It may have any combination of four purposes: economic, political, administrative and pedagogical. The balance of intent will vary from case to case and may not necessarily involve every aspect of the operation of the schools involved, but the spatial imperative is central to a cluster policy. Indeed such innovations have tended to be developments of school mapping exercises which have illustrated severe spatial disparities in educational provision:

"School maps are a particularly valuable instrument for microplanning, for they help identify the existing distribution of resources and the major development gaps ..... Seen in this light, the growth of the school cluster concept results from the intersection of concerns about microplanning, school mapping, decentralisation, and popular participation." (72)

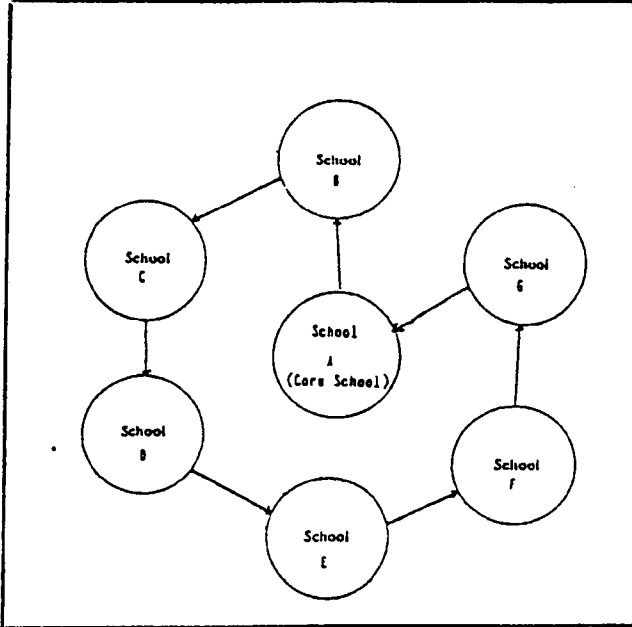
Clearly the economic objective is of prime concern in developing countries where clustering enables the sharing of physical facilities, materials and staff. Figure 5.15a) illustrates different spatial patterns arising from different policies in this respect. On the political and administrative side clusters can be very instrumental in

resolving the tension between core and periphery within a system. At the same time they can address local problems that create disparities within the network but also act as an important node in the cascade of information and instruction from the core. According to Bray, all schools in Thailand are required by national regulation to be members of a cluster, but most clusters are more limited, with only partial geographical coverage, such as the examples he gives from Sri Lanka (Figure 5.15b).

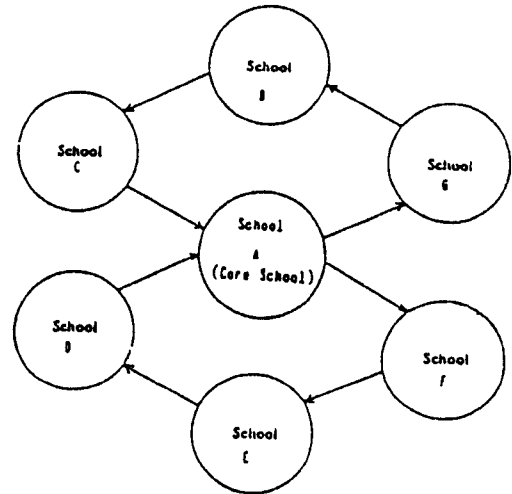
School clusters are not limited to developing countries, indeed they are employed by Northumberland Education Authority in both rural and urban contexts. (73) There are also clusters which do not arise from relative geographical proximity and a mutual need to survive in circumstances of significant constraint on resources. For example there are groups of schools with a common foundation link such as the Woodard Schools within the independent sector in England, the Steiner Schools of Germany though not geographically limited to that country, and the United World Colleges. How can these be clusters when they are not geographically proximate? This can be achieved by exclusive space reducing mechanisms, enhanced by modern technologies. Are we not then describing networks? Clusters are perhaps just mini-networks or subordinate networks in a hierarchy of national scale. While this is clearly the case in Thailand it does not have to be so elsewhere, though in aggregate, disconnected clusters, even either side of the private/public divide, constitute the total national resource in education.

FIGURE 5.15a) SPATIAL ASPECTS OF SCHOOL CLUSTERS I

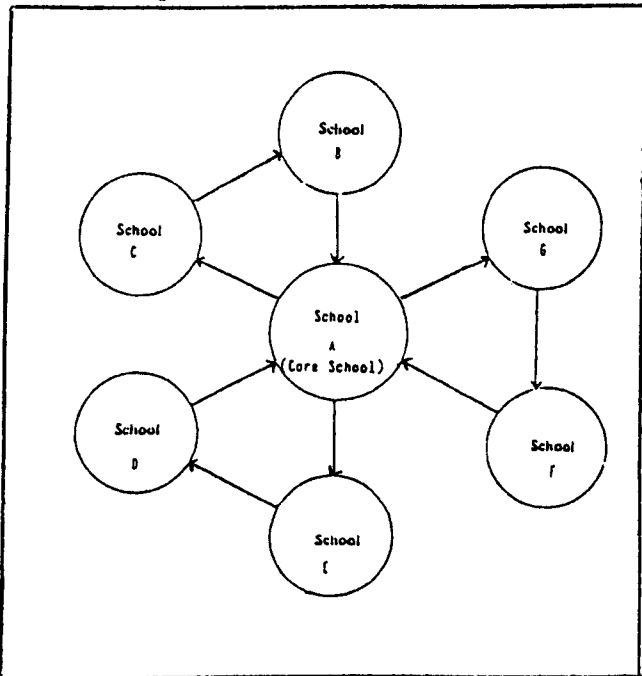
i) Method of sharing only one set of particular materials



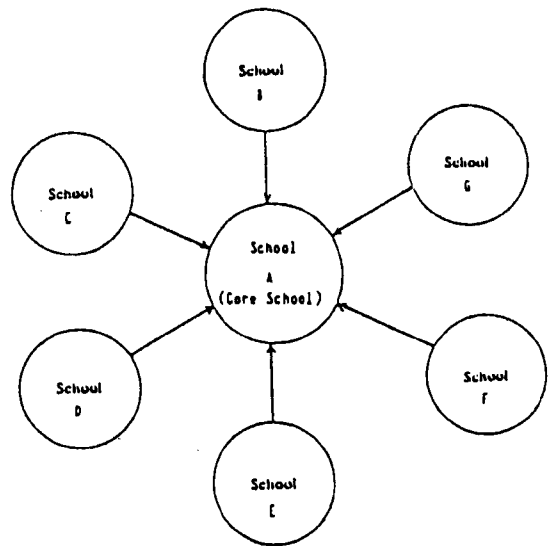
ii) Method of sharing two sets of particular materials



iii) Method of sharing three sets of particular materials



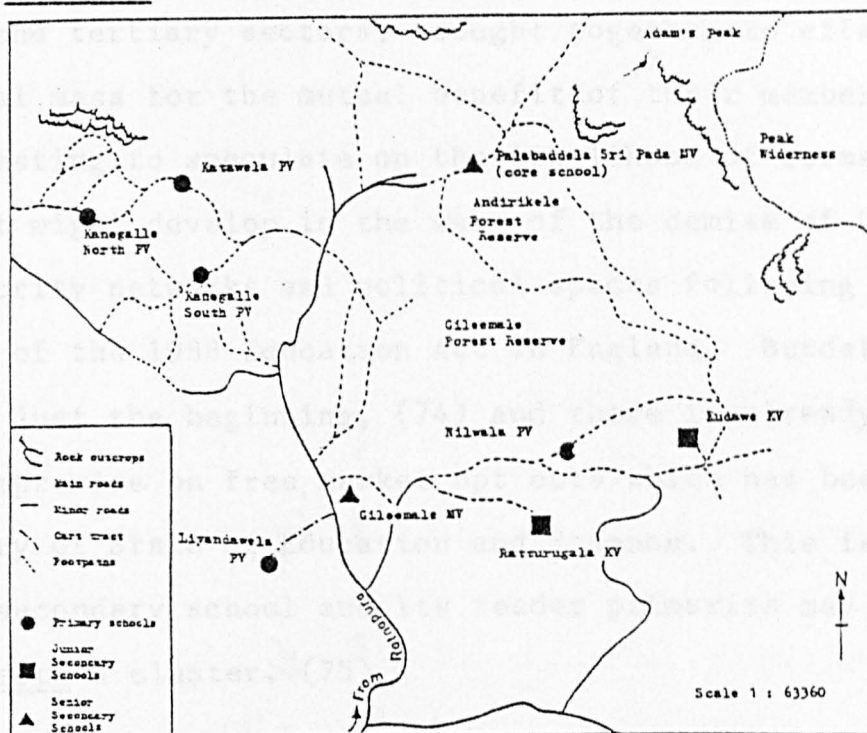
iv) Simultaneous use of equipment in the core school.



Source: Mark Bray, School Clusters in the Third World: Making them Work, UNESCO, (1987), pp. 15 - 16.

FIGURE 5.15b. SPATIAL ASPECTS OF SCHOOL CLUSTERS II

i) Location: The Schools in Palabadella Sri Pada Cluster, Sri Lanka.



ii) School Characteristics and Forms of Distance

Name	No. of Pupils	No. of Teachers	Pupil:Teacher Ratio	Miles from Core School	
				motorable	on foot
Palabadella Sri Pada MV	713	30	24:1		
Gileemalle MV	551	25	22:1	5	+
Kudawe KV	211	5	42:1	20	+
Ratturugala KV	163	11	15:1	9	+
Katawela PV	125	5	25:1	2	+
Liyandawela KV	91	5	18:1	6	+
Nilwala KV	58	5	12:1	12	+
Kanegalle South PV	31	2	16:1	3.5	+
Kanegalle North PV	17	1	17:1	5	+

Key to School types:

PV (Pratamika Vidyalaya)  
KV (Kanishtha Vidyalaya)  
MV (Maha Vidyalaya)

MMV (Madya Maha Vidyalaya)

Primary (grades 1 - 5)  
Jun. Sec. (grades 1 - 10)  
Sen. Sec. (grades 1 - 12  
or 6 - 12)  
Sen. Sec. Central School  
in a Provincial Centre.

Source: Mark Bray, op. cit., (1987), pp. 43 - 45.

Finally in relation to educational clusters one would wish to mention the growing incidence of consortia at all levels, but especially in the secondary and tertiary sectors, brought together to effect a greater critical mass for the mutual benefit of their members. It would be interesting to speculate on the likelihood of forms of clustering that might develop in the wake of the demise of Local Education Authority networks and political spaces following the implementation of the 1988 Education Act in England. Burdett's four tiers are only just the beginning, (74) and there is already an interesting compromise on free market opt outs which has been approved by the Secretary of State of Education and Science. This is to the effect that a secondary school and its feeder primaries may opt out as a group - de facto a cluster. (75)

It is evident that applied geography of education comprises both professional educational planning and the application of locational and spatial theory to educational distributions. One of the most interesting contributions connecting these two dimensions and looking to the future is that of Cedric Price. (76)

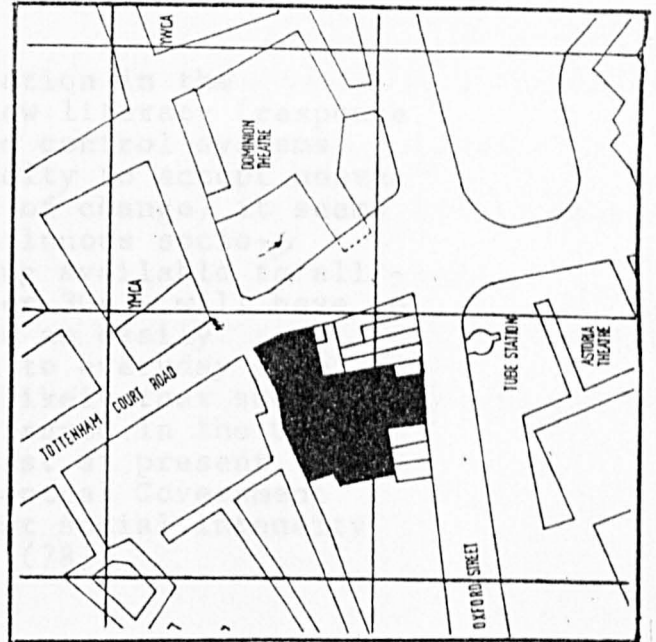
Price, an architect by profession, begins his critique of formal and non-formal education by noting its structurally determined bias towards reproduction, with so-called reform being marginal in its effect. "What is likely to cause the real change", he observes, "is the increasing variety and rate of learning available to all in forms, and at times and places unrelated to the present educational structure." (77) Because of this, even modern provision of schools is

becoming increasingly limited in its relevance to the overall educational process in terms both of location and of building design. The actuality of formal educational experience, a highly individual and private occurrence, will become increasingly formed by stimuli and pressures from without the school environment, so that the: "difference between schools due to their location is likely to increase." What would be more helpful in terms of the applied geography of education would be the creation of "well serviced anonymous spaces", within which "multi-disciplined self-paced learning" could be supported. This of course implies 'client' selection which is what in practice happens anyway but constrained by a fossilised spatial context. Price challenges what he saw as the conventional wisdom of the providers of education in the 1960s/70s; that is to say, " ... if it's good for you it should be difficult to get". He advocates the incorporation of a 'think grid' into physical planning and provides four case studies that were live planning exercises at the time of writing (1970) but which have not materialised: a) Potteries thinkbelt; b) Oakland County-Greater Detroit New Forms of Learning (a 900 square mile Think Grid); c) Information Hive-Central London; d) Birmingham and Midland Institute - New HQ. Figure 5.16 illustrates two spatial aspects of the projected Central London Information Hive.

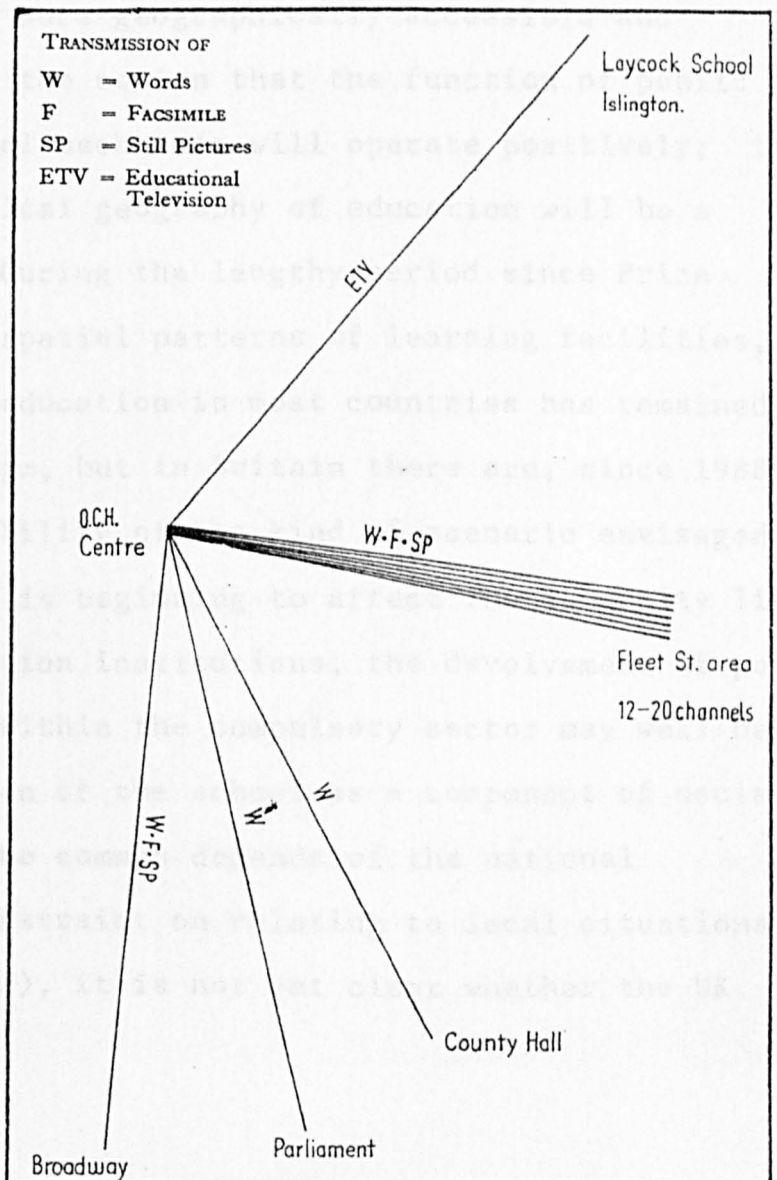
To the best of the writer's knowledge none of the four schemes put forward by Price has materialised, yet his summary, written nearly a quarter of a century ago is now beginning to ring true on a large scale:

FIGURE 5.16 THE IDEA OF A CENTRAL  
LONDON INFORMATION HIVE

a) Location



b) Extent of Invisible Two-Way Information/Learning Feeds



Source : Cedric Price,  
'Learning', in :  
Peter Cowan (Ed),  
Developing Patterns in  
Urbanisation, Oliver and  
Boyd (1970), pp. 186 - 200.

"With rapid acceleration in the necessity for the new literacy (response to machine dominated control systems, visual acuity, capacity to accept uneven and unrelated rates of change) it seems probable that a continuous socio-educational servicing available to all - particularly the over 30s - will have to be made available as an easily digestible additive to everyday life. It is considered unlikely that such services as are envisaged in the Open University or as exist at present through local and central Government will be of sufficient social intensity to meet that need." (78)

Price is thinking in operational terms and accepting the spatial implications of new technologies as they apply to the potential for making learning experiences more geographically accessible and instrumental. This implies the notion that the function of public education as a social control mechanism will operate positively; in other words, that the political geography of education will be a benign contextual factor. During the lengthy period since Price published his ideas on the spatial patterns of learning facilities, the political geography of education in most countries has remained the dominant spatial paradigm, but in Britain there are, since 1988, the beginnings of the possibility of the kind of scenario envisaged by Price. However, while this is beginning to affect the community links of further and higher education institutions, the devolvment of power to individual headteachers within the compulsory sector may well help to increase the fossilisation of the school as a component of social geography, especially as the common demands of the national curriculum may well be a constraint on relating to local situations. At the time of writing (1992), it is not yet clear whether the UK



Government's objectives in the public education domain are to create a consumer led decentralised knowledge market or a subtle form of centralisation. The answer will emerge partly in the spatial changes in educational provision and processes that will occur, and it is the writer's hope that both geographers and educationists will have a geography of education in place to monitor and publicise such changes.

### 5.2.3 Population Geography and Education

There is obviously an important link between educational planning and demographic change. The ongoing relationship between three indices determines the rate and nature of population change: birth rates; death rates; migration rates. As has already been indicated in previous chapters the issue of migration is the most crucial of these to education. Changes in birth and death rates only become more important if nobody moves in or out of a locality which is becoming increasingly unusual, even in areas with pre-industrial economies, and that is due to the knowledge that exists (of whatever quality) of external opportunity. So there is immediately a fundamental relationship between education and migration. Because of the space devoted to aspects of this relationship above, just a few additional examples will serve here to develop and illustrate the argument.

Price's vision of a more flexible spatial pattern of educational activity was based largely on the British scene, which has included the now famous 'North-South divide' widely regarded as deepening in the 1980s. (79) One contribution to this increasing polarisation already

commented on above is the inequitable pattern of location of assisted places scheme capacity arising from the residual pattern of independent schools. Linked with this is the fact that there was a continued drift of population from north to south during the 1980s, and that: "... it was mostly high income professional people". (80) However, as Abbott also observes within both the south and the north the rate of urban to rural movement was of a significantly higher order than the general drift to the south. This serves to remind us that migration flows are complex and may illustrate different factors at work when examined at different spatial scales. When linked to educational changes which, in general, are likely to effect additional migrations, albeit probably local in scale, the patterns become even more complex as schools lose clientele in some locations and gain in others.

Within the general southward drift, Johnston has detected a component comprising graduate career patterns. (81) He draws on Chisholm's earlier argument that while the southward drift is not inevitable in terms of optimal geographical distributions it could well become a self-fulfilling prophecy. (82) That is to say: "the problem is one of attitudes and therefore, in the widest sense, is an educational issue", (83) and relates to the 'mental maps' of Gould and White; an aspect of behavioural geography. (84) Johnston draws on a massive 1986/87 survey of almost all British first degree students who had graduated in 1980. The first significant finding was that there was certainly a drift south from origins to institutions but more markedly from institutions to first jobs, whereby "most parts of Great Britain

were net exporters of 1980 graduates". (85) It would seem also that once having gained a first job in any region, most graduates remained and gained subsequent jobs in that same region. Figure 5.17 abstracts some of the tables for illustration.

Johnston does not comment on the possible imbalance of higher education provision in relation to population distribution, but he does introduce a different and interesting educational point:

"The cohort of graduates here has been following the initial stages of its career development over the first decade of that market-led-location-selection process. The outcome is clear; they have drifted southwards. Since that cohort is likely to be the source of many of the future generations of graduates (perhaps more so than before, given government policies on the funding of higher education), the drift may then become a self-fulfilling prophecy." (86)

So it would seem that the initial home to institution to first employment migration has placed regions outside the southeast in a peripheral position in respect of distributions of the skilled workforce on which future, especially service industry, economic growth might be based. The findings of the survey and Johnston's analysis of it are in general accord with the substantive work of Halsey et al on 'Origins and Destinations', which while being more sociological than geographical, nonetheless implies a spatial dimension. (87)

Comment has already been made on aspects of international student mobility, especially in respect of tendencies towards the maintenance

FIGURE 5.17 DATA CONCERNED WITH EDUCATION: THE SOUTHWARD DRIFT OF GRADUATES IN THE UK.

Table 1  
The regional distributions of 1977 students' homes, the institutions they attended and their jobs after graduation (%)

	Origins	Institutions	First job	Second job	Third job	Fourth job
London and South	48.1	34.6	45.4	47.4	49.5	52.6
East Anglia	2.8	4.6	3.9	4.6	4.0	3.5
Midlands	13.9	16.1	12.4	10.9	10.7	8.8
North	24.8	28.4	18.8	16.3	15.1	13.0
Scotland	7.1	10.7	3.5	3.2	3.3	2.7
Wales	5.2	5.6	9.0	8.1	7.0	6.3
N. Ireland	1.2	*	0.2	0.3	0.2	0.5
Overseas	*	*	6.9	9.3	10.3	12.5
(N)	100 (71,578)	100 (19,524)*	100 (9,511)	100 (6,663)	100 (3,580)	100 (1,457)

\* Excluded from survey.

+ The size of the target sample.

Table 2  
The regional distribution of 1977 students' homes, the institutions they attended, and their current locations (by number of jobs held)

	Origins	Institutions	One job	Two jobs	Three jobs	Four jobs	All jobs
London and South	43.1	34.6	42.2	46.4	47.7	52.6	46.6
East Anglia	2.8	4.6	4.4	5.5	4.3	3.5	4.6
Midlands	13.9	16.1	14.0	11.8	12.0	8.8	12.1
North	24.8	28.4	20.4	16.9	16.2	13.0	16.7
Scotland	7.1	10.7	3.4	3.3	3.8	2.7	3.4
Wales	5.2	5.6	10.2	8.9	7.3	6.3	8.6
N. Ireland	1.2	*	0.4	0.3	0.1	0.5	0.3
Overseas	*	*	5.0	6.9	8.6	12.5	7.6
(N)	100 (71,578)	100 (19,524)*	100 (2,848)	100 (2,997)	100 (2,034)	100 (1,457)	100 (9,283)

\* Excluded from survey.

+ The size of the target sample.

Table 3  
Inter-regional flows between successive pairs of jobs

J2									
J1	LS	EA	M	N	S	W	NI	O	'N'
LS	78.4	3.2	4.2	4.5	1.4	1.0	0.1	7.2	(3115)
EA	23.3	50.8	7.0	6.7	2.9	1.2	0.8	8.2	(244)
M	23.4	4.1	55.8	9.8	7.6	15.2	0.3	4.6	(785)
N	17.1	0.9	7.7	65.5	2.2	1.7	0.2	4.7	(1204)
S	9.0	2.7	0.7	3.7	76.8	0.4	0.4	6.7	(564)
W	19.2	2.6	6.4	4.4	3.4	60.3	0.0	3.8	(234)
NI	*	*	*	*	*	*	*	*	(10)
O	34.3	3.2	4.9	6.9	3.7	1.0	0.0	46.4	(507)

Table 4  
Inter-regional flows between first and fourth jobs

J4									
J1	LS	EA	M	N	S	W	NI	O	'N'
LS	76.0	2.1	4.6	3.5	1.7	1.3	0.4	11.1	(713)
EA	*	*	*	*	*	*	*	*	(49)
M	30.5	3.1	45.0	9.9	0.8	2.2	0.0	9.9	(131)
N	23.7	2.1	7.9	53.5	5.0	2.5	0.0	6.2	(241)
S	20.8	2.0	3.0	5.9	61.4	3.0	0.0	5.9	(101)
W	*	*	*	*	*	*	*	*	(45)
NI	*	*	*	*	*	*	*	*	(3)
O	41.5	1.7	8.0	7.4	2.8	1.7	1.7	36.4	(176)

\* Percentages (of row totals) not calculated where denominator less than 50.

Source: R.J. Johnston, 'The Southwards Drift: Preliminary Analysis of the Career Patterns of 1980 Graduates in Great Britain', *Geography*, 74 ; 3, (1989), pp. 239 - 244.

of metropolitan connections. This would seem to be supported by the UK Universities Statistical Record as of August 1991. (88)

Disproportionate Commonwealth representation would appear to be especially evident in respect of medical, ~~veterinary~~, planning and commercial/administrative programmes. At the European level there has been some interest in the issue of student mobility in the literature, (89) which has been enhanced by the introduction of EC schemes to support greater interaction of both staff and students. (90)

On the wider international scale, Andrew North has developed the discussion beyond the 'brain drain' typology of Gould and suggests that "the significance of brain drain movements has decreased", and been replaced by "skill circulation". (91) Whereas the former normally implies permanent settlement in the country of destination, the latter does not. This development has been associated with the increase of western trans-national corporations which operate both within the developed world and in developing countries, and unlike the brain drain is being increasingly seen as mutually beneficial:

"..... countries such as India are now changing their stance as it emerges that the outflow of skilled people is not necessarily permanent. Many graduates and other professionals who emigrated from India to Great Britain and the US in the last 20 years have eventually returned. Furthermore they are the more experienced than when they first emigrated and tend to hold qualifications unavailable in India. Arguably these returnees are of greater benefit to their country for having spent some years working abroad." (92)

The incidence of civil strife, political turmoil and associated

discrimination are all aspects of the 'push' factor for educated refugees. This has always been so, but there are current examples on a larger scale such as Somalia, Ethiopia, the Lebanon and in fairly recent times Chile, Central American republics and Namibia. In most of these cases a returning flow, often educationally enriched is well established, but there are new areas of outflow coming on stream, most notably the former USSR.

"Statistics from the US State Department show that over 110,000 Soviet people migrated to the US between 1987 and 1990, when travel restrictions began to ease. Of the 50,000 who arrived in 1990 the majority had degree standard qualifications. Some 10,000 were engineers and another 1,000 were PhD level scientists." (93)

Amid these massive contemporary intercontinental migrations we must not forget that the difficulties facing many families in accessing even the primary sector, in respect of distance remain as acute as when analysed by Gould two decades ago, (94) but in general now within a worsening economic context. At the lower primary level, school has to be local to be utilised at all but, as Gould indicates in respect of Uganda:

"As one ascends the educational ladder to higher primary schools, the percentage of children attending school declines and there are fewer schools. Average home-school distance is greater. Flows of school pupils will therefore be over longer distances and of longer duration, with more pupils living away from home while attending school. Living away from home is even more necessary for secondary school pupils, for it is inevitable that where less than 5% of the age-group go to school, the family home of most pupils will be beyond daily travelling distance of any school." (95)

The nature and scale of migration in relation to school in the Ugandan case is moderated by the combination of selection by merit alone, on the basis of the national primary leaving examination, and a completely free choice of schools throughout the country for those who are successful in that selection. For reasons of prestige, first choices tend to be nationally rated, often in the capital; second choices are well established schools in regional centres; and lastly, third choices tend to be more local. Figure 5.18a shows the distribution of Uganda's 73 secondary schools at the time of Gould's study as well as the relationship between such schools and the four major regions. But again the large scale of the spatial unit of analysis obscures local variation and: "there are greater discrepancies within the regions than between them." (96)

The matrix (Figure 5.18b) shows that, while more than two-thirds of secondary pupils remain within their home regions, there are significant flows into Uganda and Eastern regions from the north and west, but as Figure 5.18a) illustrates, Uganda's secondary schools are predominantly urban in location, due to mission decisions. For the two main receiving regions, this means two types of flow.

It is clear that in the Ugandan case geographical migration and upward educational mobility are tied together by a combination of the residual pattern of secondary schools. It follows therefore that migration is directly linked to enhancement of qualifications.

Highland Ecuador presents a very different context in respect of both

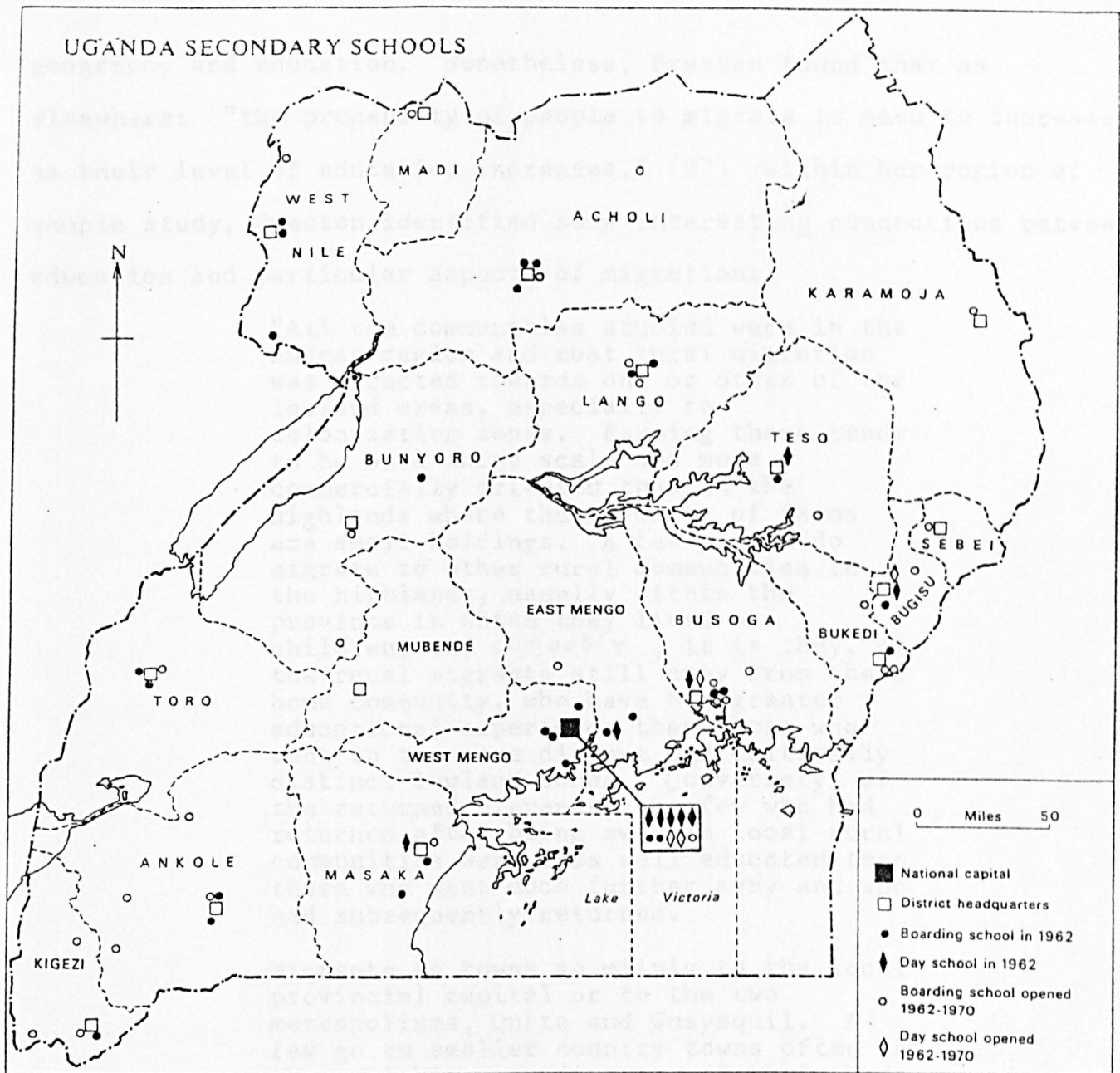
FIGURE 5.18a) DISTRIBUTION OF UGANDAN SECONDARY SCHOOLS IN 1970

FIGURE 5.18b)

INTER-REGIONAL FLOW OF  
SECONDARY SCHOOL  
STUDENTS: 1970

<i>Region of Secondary School</i>	<i>Buganda</i>	<i>Eastern</i>	<i>Northern</i>	<i>Western</i>	<i>Outside Uganda</i>	<i>Total</i>
<i>Boys</i>						
Buganda	5,785	1,005	924	2,442	215	10,373
Eastern <sup>1</sup>	325	8,046	898	284	49	9,602
Northern	49	199	4,265	94	5	4,612
Western <sup>1</sup>	217	160	413	4,496	46	5,350
Total	6,378	9,410	6,518	7,316	315	29,937
<i>Girls</i>						
Buganda	2,806	917	137	624	54	4,540
Eastern <sup>1</sup>	184	1,893	220	105	9	2,411
Northern	59	177	952	91	1	1,280
Western <sup>1</sup>	73	12	17	1,300	1	1,403
Total	3,124	2,999	1,326	2,120	65	9,634

<sup>1</sup>Incomplete; one school in each region did not provide a regional breakdown of students.

Source: W.T.S.Gould, Movements of School Children and Provision of Secondary Schools in Uganda, Working Paper No. 3: African Population Mobility Project, University of Liverpool Department of Geography, (1975).



geography and education. Nonetheless, Preston found that as elsewhere: "the propensity of people to migrate is seen to increase as their level of education increases." (97) Within her region of sample study, Preston identified some interesting connections between education and particular aspects of migration:

"All the communities studied were in the Andean region and most rural migration was directed towards one or other of the lowland areas, especially to colonization zones. Farming there tends to be on a large scale and more commercially oriented than in the highlands where the majority of farms are small holdings. A few people do migrate to other rural communities in the highlands, usually within the province in which they lived as children, and curiously, it is they, of the rural migrants still away from their home community, who have had greater educational experience than those who went to the more distant and culturally distinct lowland zones. Conversely, of the returned migrants, the few who had returned after being away in local rural communities were less well educated than those who went much further away and who had subsequently returned.

Migrants to towns go mainly to the local provincial capital or to the two metropolises, Quito and Guayaquil. A few go to smaller country towns often to those within easy distance of their home community. Again contrary to expectations, the migrants to the provincial capitals and to the other nearby towns were generally more schooled than those who travelled much further to either of the two large cities. One exception to this was the group of migrants from Quilanga in Quito who were considerably more educated than other Quilanga urban migrants. As was the case with the migrants to other rural areas, the returned migrants with most educational experience were those who had been to the most distant places." (98)

Although Preston found that these various patterns of migration did not leave the rural areas disadvantaged in that many quite well educated people remained there, it was nonetheless the case that a significant gap existed between educational possibilities in rural and urban areas. While in all the cases mentioned in this section various links between education and migration undoubtedly exist, it remains the situation that the prime causal factor is economic.

#### 5.2.4 The Economic Geography of Education

Economics have to do with systems of production, exchange and consumption; the least advanced having only production and consumption, the most advanced having a predominantly exchange orientation, including the service sector of which education forms a part. Exchange means trade, and trade means towns. As we have seen in Chapter Two, above, (99) the development of education in medieval Europe had a great deal to do with the colonisation of new areas and the extension of the urban network. Clearly education had an integral role in this process through both its technical and diffuse skills, and was associated with the economic dimension of development as well as with the religious and cultural side. (100)

Nonetheless, education followed political and economic change rather than the opposite, at least in respect of the formal institutions and their interconnection in emergent systems, although as Parker was able to illustrate, the general increase of geographical knowledge was a factor in promoting further expansion. (101) We have also seen above, as exemplified by the development of literacy in rural England and France in more-or-less pre-industrial days, (102) that non-formal variants of education were in operation outside the urban domain as well as within it.

However, very little of the economic dimension appears in the stock of literature developed in the historical geography of education and to which reference has already been made. Had this situation been different, and at an early enough time, a more sophisticated understanding of the geography of educational development might have moderated the notion, popular in the 1960s, that prime investment in education on a national scale leads directly to economic development. (103)

We may identify such literature as exists in the economic geography of education as having to do with: aspects of education and development; education as a commodity; and the funding of education - the last being a reminder that formal education is probably more often a net consumer of wealth than a creator of it. Or at any rate the creational aspect would tend to be indirect, indistinct and indeterminate in terms of causal relationships, making massive

investment in formal education for economic development essentially an act of faith.

As always the issue of geographic scale is significant, with possibilities ranging from the global analysis of Rojeck (104), through the superstate dimensions of Khavalyanskaya's work on the economic geography of higher education in the USSR, (105) to the work of the writer on education in microstates, some of which pertains to the economic dimension. (106) In theory it is clear that a capitalistic approach to economic development would be likely to result in greater selectivity and spatial disparity in educational provision than would a socialistic approach. But this would depend in practice, on the ground, on the intervention of other geographical factors. For example in the former USSR, problems of isolation, distance and sparse population patterns in many areas did not permit the delivery of the full national curriculum as operated in the urbanised areas. At the same time, within the cities, there were significant qualitative variations in educational experience, especially in respect of additional, private, tuition. On the other hand, in the USA, at the level of the small New England school district a strong community spirit tends to operate in respect of public education provision, which is funded at that spatial scale.

With respect to educational indices and levels of development, the SSRC survey on the 'quality of highland life' conducted by Cottam, Knox and Hirsch (107) included not only levels of educational provision per se, but also the percentage of children receiving free

school meals. This was a survey of peripherality and underdevelopment, in which, with relation to this particular index they say:

"The percentage of schoolchildren receiving free school meals provides a good measure of financial hardship among young families, since it is a means tested benefit over which local authorities had (until 1980) no discretionary power. One of the most striking features is the relatively high level of financial hardship throughout much of the central highlands in 1979. Fifteen of the 62 settlement zones have a higher proportion of children receiving free school meals than the overall Scottish level of 25 per cent. And although financial hardship is most widespread in west coast communities such as Achiltibuie, Poolewe, Torridon and Sheildaig, it is by no means confined to remote rural areas. In many of the settlement zones bordering the Dornoch Firth, Cromarty Firth and Moray Firth (including Tain, Alness, Invergordon and Muir of Ord, which have all experienced a good deal of industrial development), more than one in every four children were in receipt of free school meals in 1979." (108)

This is a small indication of the potential contribution of educational indices, whether of an 'academic' or as in this case, an organisational nature to the building of a picture of economic well being. Indeed it may well be that the organisational or administrative indices are more relevant in view of the intractable problem of linking curriculum with economy. High levels of attainment at school level or above, do not necessarily have any relevance for local well being, social or economic, and as we have already seen are often linked to emigration from peripheral regions.

Despite the rather negative outcome of educational investment in terms of macro level economic development, on a micro scale it may be more feasible. A case in point is made by O'Cinnéide (109) in respect of the peripheral west of Ireland where attempts have been made to stimulate local development through educational intervention.

He illustrates how adult education programmes of University College, Galway (UCG) through a combination of reactive and proactive approaches, have played a crucial role in the generation and support of new micro economic initiatives. The case of Inishowen is described, the most northerly peninsular of Ireland whose: "peripheral geographic location is compounded by an international boundary which distances Inishowen from its nearest major urban centre of Derry." (110) (see Figure 5.19a). Three main objectives of the input of a year long programme by UCG were: a) to replace the sense of powerlessness and apathy by a "can do" mentality; b) to provide relevant skills for group members; c) to identify credible projects for local economic development. The membership of the 'Community Development Group' is built around course members, so that a 'bottom-up' approach is guaranteed that will be supported by local resource awareness; human, natural and financial. The non-formal education of the wider community of Inishowen is essential in order to increase popular support, to which end: "an elaborate magazine is produced on a quarterly basis ..... which represents a vital instrument in the hands of ICDG to promote its objectives." The wide range and potentially integrative nature of these objectives is shown in Figure 5.19b. These have all been active but special thrusts have been made

FIGURE 5.19a)  
LOCATION OF THE  
INISHOWEN AREA OF  
IRELAND

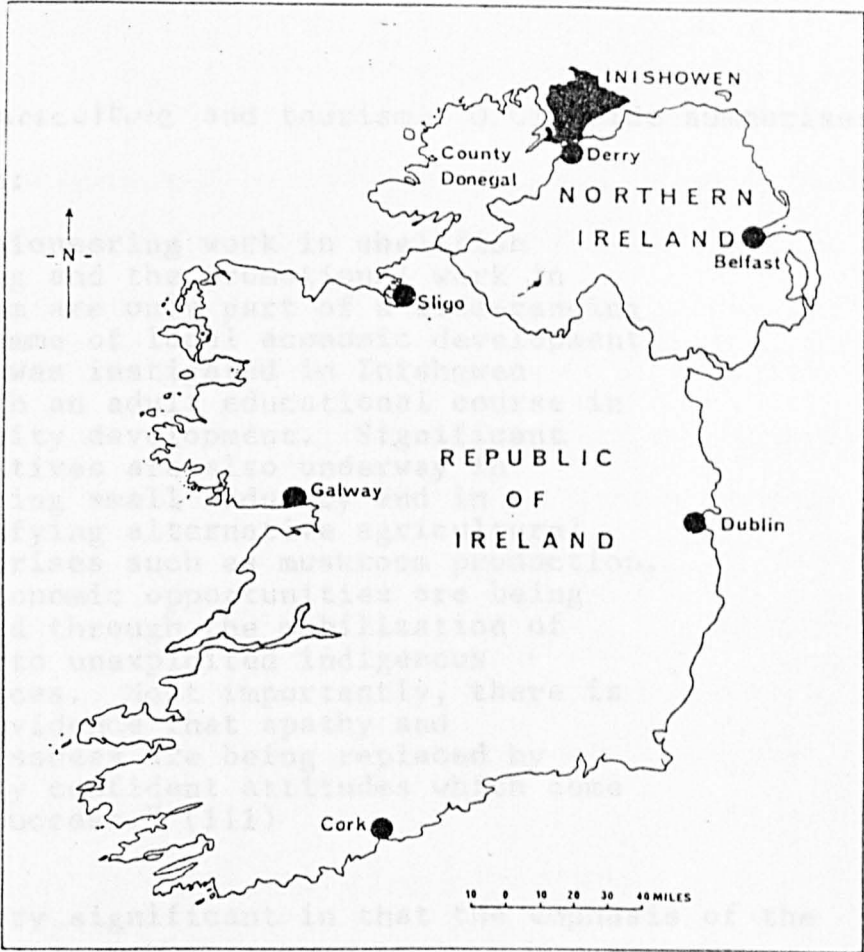
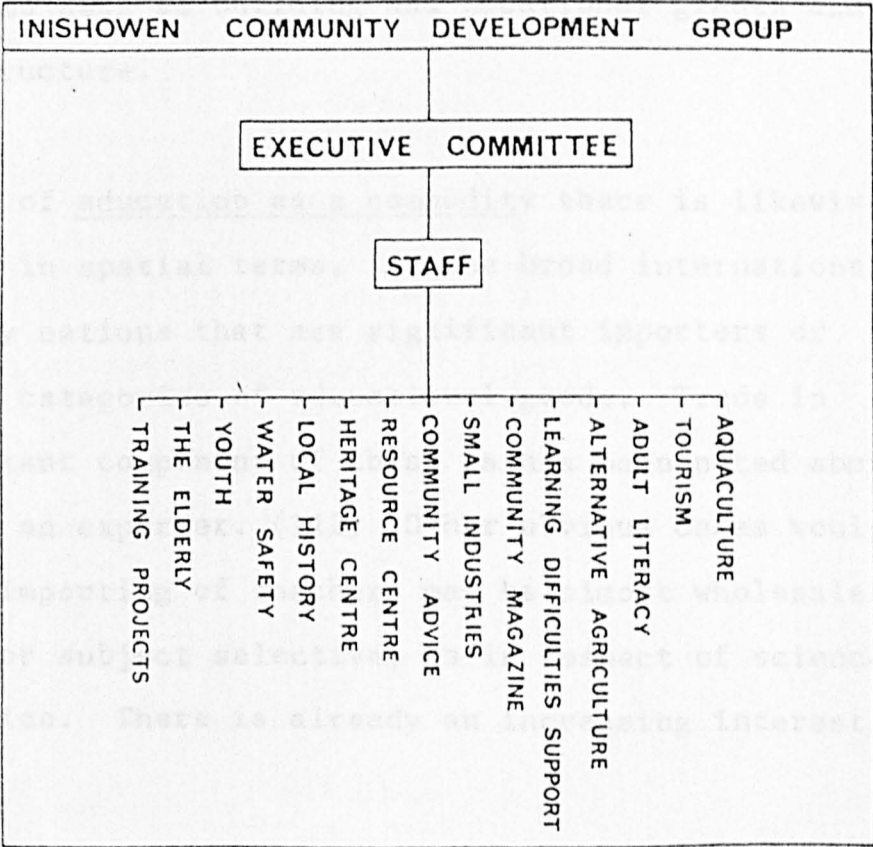


FIGURE 5.19b)  
STRUCTURE OF THE  
INISHOWEN COMMUNITY  
DEVELOPMENT GROUP



Source: Micheál O'Cinneide, 'Stimulating Local Development Through Educational Innovations', Education: the Journal of the Faculty of Education, University of Malta, 4:1, (1991), pp. 14-19.

in the fields of mariculture and tourism. O Cinnéide summarises the initiative as follows:

"The pioneering work in shellfish farming and the promotional work in tourism are only part of a wide-ranging programme of local economic development which was instigated in Inishowen through an adult educational course in community development. Significant initiatives are also underway in promoting small industry and in identifying alternative agricultural enterprises such as mushroom production. New economic opportunities are being created through the mobilization of hitherto unexploited indigenous resources. Most importantly, there is some evidence that apathy and hopelessness are being replaced by quietly confident attitudes which come with success." (111)

The final point is very significant in that the emphasis of the educational investment has been in human resources and not through more traditional items such as building and locational grants and upgrading of infrastructure.

Turning to the issue of education as a commodity there is likewise a dearth of literature in spatial terms. At the broad international scale we may identify nations that are significant importers or exporters of various categories of educational goods. Trade in teachers is an important component of this, as has been noted above in respect of Jordan as an exporter. (112) Other obvious cases would be Ireland and Wales. Importing of teachers may be almost wholesale, as in the Gulf States, or subject selective, as in respect of science teachers in West Africa. There is already an increasing interest in



teacher mobility within the EC, with proactive hiring practices in operation in The Netherlands and Germany on the part of some English local authorities. The coincidence of a newly redundant skilled labour force and a shortage of teachers of technology can be put to good use by imaginative teacher training programmes without any need for migration such as that instigated by Sunderland Polytechnic for skilled shipyard workers who would wish to become primary school teachers. (113)

At a higher level, Patel sees the potential for Britain to be a major exporter, not of teachers in the tertiary sector but of higher education itself:

"If there is to be one Europe in 1992, it is not just money and goods that should move freely across national frontiers. Talent must do so too. If Germany could be the chief automobile producer for Europe, why should not Britain aspire to be the premier centre of higher education?.....  
..... Britain will have and should have a surplus of trade in higher education with the EC. It should also have a surplus with most of the rest of the world. This would be good for the United Europe as it reflects real comparative advantage. Should not Britain then argue for a Common European Education policy." (114)

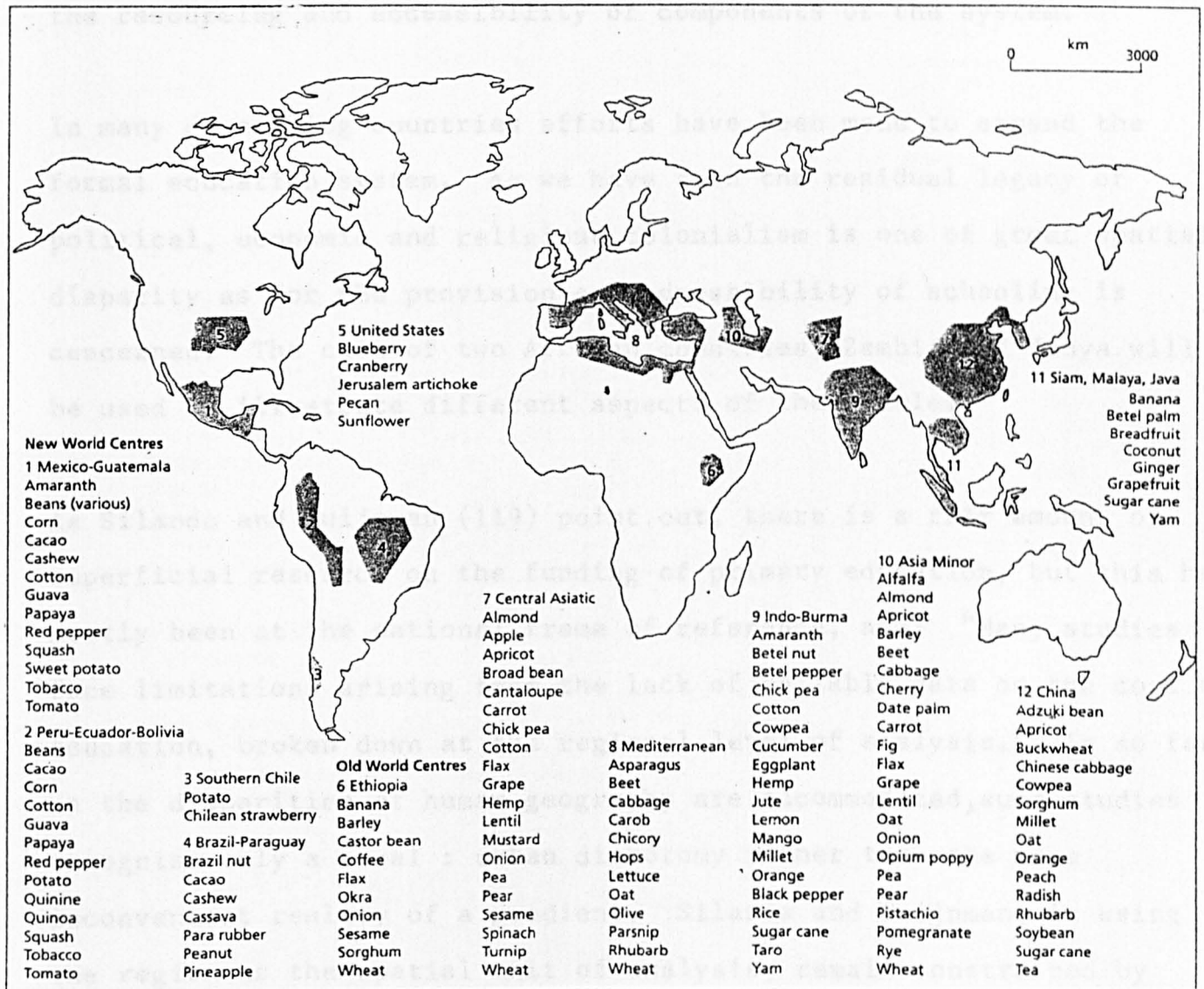
Patel goes on to argue for a voucher system to enable free movement of students and thereby the opportunity for British universities to attract the very best postgraduates. As far as fee levels are concerned he extends the argument to the global scale. He is moving here into the realms of the international ownership of knowledge, an

area in which, as both Altbach (115) and Porter (116) have pointed out, inequity is entrenched with the first world countries operating a neocolonial network of control as tightly woven as any other strand of the world economic order.

Damien Lewis describes a particularly interesting aspect of this problem in his examination of the ownership of ideas with special reference to the stealing of 'medicine man wisdom' from the South. (117) As he points out: "The North is poor in genetic resources, but rich in money; the South is rich in genetic resources, but poor in money." This has led to a breach of 'intellectual property rights', namely: "the rights of indigenous people where germplasm (genetic material) is being taken from their lands, or their knowledge is taken." It is not just the ownership of such information that is currently in question, but the potential income from as yet undiscovered additional applications of these genetic materials: that is to say "the development of intellectual property right guarantees in the future". The geographical location of the areas with the greatest level of germplasm resource is illustrated in Figure 5.20. Goldsmith also comments that: "The issue of the ownership and control of germplasm is set to become one of the most contentious in the years to come". (118)

The third, and rather more mundane, aspect of the economic geography of education in which there is a small amount of spatially oriented literature is in the funding of education. In most countries of the world, funding for educational provision comes from a variety of

FIGURES 5.20 THE GREAT GENETIC TREASURE MAP: AREAS OF GREATEST GERMPLASM RESOURCE



Source: Damien Lewis, 'The Gene Hunters', Geographical LXIII : 1, (1991), pp. 36-38

sources. It is not uncommon for money to be raised at all levels of the hierarchy of political geography: local, regional, national; and if these sources are linked to sectors of provision: primary, secondary, tertiary there can be direct spatial consequences affecting the resourcing and accessibility of components of the system.

In many developing countries efforts have been made to expand the formal education system. As we have seen the residual legacy of political, economic and religious colonialism is one of great spatial disparity as for the provision and accessibility of schooling is concerned. The case of two African countries, Zambia and Kenya will be used to illustrate different aspects of the problem.

As Silanda and Tuijnman (119) point out, there is a fair amount of superficial research on the funding of primary education, but this has mostly been at the national frame of reference, and: "Many studies face limitations arising from the lack of reliable data on the cost of education, broken down at the regional level of analysis." In so far as the disparities of human geography are accommodated, such studies recognise only a rural : urban dichotomy rather than the more inconvenient reality of a gradient. Silanda and Tuijnman, in using the region as the spatial unit of analysis, remain constrained by political geography but at the smallest scale possible before empirical research becomes necessary. Their model of analysis (Figure 5.21a) at least shows some recognition of the geographical dimension, as does their table of indices by regions. (Figure 5.21b) Here the significance of the 'line of rail regions' (Lusaka, Central,

FIGURE 5.21a) PRINCIPAL MODES OF EDUCATIONAL FINANCING IN ZAMBIA

	CENTRAL MODE	PERIPHERAL MODE
PUBLIC MODE	1. Central Government - internal revenues - foreign aid	1. Regional Government - district and regional authority - community authority
PRIVATE MODE	2. Institutions  3. Entrepreneurs	2. Community  3. Parents  4. School production units

FIGURE 5.21b) INDICES OF REGIONAL DISPARITY

Region	% Share of population (1985)*	% Share of enrolment (1984)	% Share of revenue (1985)	% Share of recurrent expenditure (1984)	% Share of student requisites (1984)
Copperbelt	23.0	22.0	43.9	22.1	20.7
Lusaka	13.5	11.5	23.3	9.0	8.7
Southern	11.8	13.1	9.6	15.2	24.1
Central	9.2	9.9	9.2	10.5	7.2
Northern	11.3	12.6	4.1	8.8	4.3
Eastern	11.1	10.2	3.6	10.9	8.9
Luapula	7.1	7.4	2.2	8.0	9.6
North Western	5.2	5.6	2.1	7.3	7.2
Western	8.0	7.7	1.9	8.1	9.2
Total (million)†	6.7	1.2	205.6	104.3	2.1

\* Projected population from 1980 Census (Zambia, 1985).

† At current prices in Zambian Kwacha.

FIGURE 5.21c) EXPENDITURE PER PUPIL BY REGION

Region/Year	Total recurrent expenditure (in Kwacha)			Total salary cost (in Kwacha)			Operation cost (in Kwacha)			Student requisites (in Kwacha)		
	1981	1985	1986	1981	1985	1986	1981	1985	1986	1981	1985	1986
Lusaka*	58	82	120	53	78	110	3	3	10	1.5	0.5	0
Copperbelt	60	99	112	56	93	103	3	4	9	1.0	2.0	0
Central*	56	87	130	52	84	125	2	0.8	4	1.7	0.8	0
Northern*	51	71	116	49	69	114	1	1	2	1.0	0.4	0
Western	62	92	114	58	89	113	2	1	1	2.0	1.9	0
Luapula*	76	94	97	72	89	97	1	2	†	2.2	2.0	0
North Western	60	81	116	57	78	115	2	0.9	1	0.7	2.1	0
Southern*	58	99	126	55	93	123	1	2	2	1.5	3.0	0
Zambia Total*	59	89	115	55	85	111	2	2	4	1.4	1.5	0

Amounts quoted in Kwacha are at current prices.

\* Regions having boarding schools. Totals may not add to the total expenditure shown.

† Quantity less than one-half Kwacha.

Source: Emmanuel Silanda and Albert Tuijnman, 'Regional Variations in the Financing of Primary Education in Zambia', International Journal of Educational Development, 9:1, (1989), pp. 5-18.

Copperbelt and Southern) is evident as with only 58 per cent of the population they raised 87 per cent of the revenue in 1985. It may well be here that the policy of decentralisation, allied with the incapacity of the poorer regions, by definition, to raise 'top-up' funds, increases rather than decreases educational disparity.

When recurrent expenditure per pupil is examined, even greater disparities become evident. (Figure 5.21c) Luapula region moved from highest in 1981 to lowest in 1986. Does this mean a lower commitment? A study by Johnston et al (120) identified an absolute reduction in pupil numbers in this region in the mid 1980s, and although teacher salaries increased it may well be that Luapula employed less experienced, cheaper staff. Obviously further studies at regional and local levels would be needed to explain this kind and degree of change, including spatial disparities in pupil-teacher ratio with its direct cost implications. Although full details and reasons are not evident at this level of analysis it is clear that there is a disproportionate allocation of public funding of primary education as between regions and this may well: "endanger the equitable distribution of learning materials." This particular form of disparity tends to be prevalent in developing countries.

Furthermore public funds are not the only source of income for Zambia's primary schools, there being also private funding and self-help schemes. Parental contributions for uniforms and books are expected in the public sector, and there are of course private and/or denominational schools. A significant cost with geographical

implications at local level is that of transportation and meals, for the: "Magnitude of experiences incurred for meals is influenced by school location," and in respect of learning materials it appears that: "parents in three of the four 'line of rail' regions (Lusaka, Copperbelt and Central) seem to be in a position to disburse about two and a half times as much .... as parents in the remaining six regions ...." (121) As far as self-help schemes are concerned these are concentrated in the poorer regions whether they take the form of construction and maintenance of buildings or of funds raised through the productive work of the school. In summarising their findings, Silanda and Tuijnman relate that they found:

".... a striking degree of inequality between regions in terms of the funds being proportionally available for the funding of the non-salary related components of the recurrent budget. Evidence of substantial regional variation in private expenditure on primary education is also found. Parents living in more urbanised regions spent more on their children's education than their counterparts in less urbanised regions. By contrast, schools located in predominantly rural regions generated more income from production units than did urban-based schools."  
(122)

Given the likelihood of inequitable distribution of learning materials, plus the additional time spent on fund raising products, the disparities in actual curricular experience must be very wide ranging. In order to ascertain the degree and nature of educational inequity: "future research could attempt to study these variations at a micro level, constituted by local communities." What they mean by this is that without knowledge of realities of the geography of

education on the ground, we have only a very imperfect idea of education in any given country.

The particular issue of community financing of education in less developed countries has been highlighted by Bray and Lillis. (123) The latter addresses the issue in relation to geographical and social inequalities and with some reference to Kenya. (124) He concludes that in general, self-help education in Kenya tends to wide the disparities within the country because: "communities in some areas are more interested and/or more able to embark on self-help projects." This accords with the situation in Zambia outlined above. In Kenya, a UNICEF study (125) identified three types of district as being particularly disadvantaged educationally:

- "a) arid and semi-arid districts, especially those with a pastoral economy;
- b) poorer and agricultural districts, some of which also had semi-arid portions and dispersed populations;
- c) municipalities." (126)

Residual patterns of mission schooling tend to lead to compounded disparities, generally favouring urban areas. On top of this "governments often exploit the income generating capacity of rural groups, and give grants to town schools." (127) and "... community projects become mechanisms through which poor people create facilities which are then used by the relatively rich". (128)

Whereas the African studies discussed above are only broadly geographical, coming from educationists with some sensitivity to the



spatial dimensions, the final contribution to this section on the economic geography of education is the opposite - one of the very rare efforts in this field by professional geographers. (129) Bradford and Burdett are concerned with the substitution of pure public provision by private provision with subsidies in England. As geographers they are primarily concerned with the spatial dimension and the issue of access which:

" .... includes spatial access, which involves the differential availability of alternatives from one area to another, as well as the varying distances that people live away from the alternatives in any one area." (130)

They see spatial, social and intellectual access as being linked directly to access to finance.

State subsidy to private education is not limited to the aforementioned assisted places scheme, (131) and is based on the assumption that in the English context a private education is preferable to a public one. A major form of subsidy is the affording of charitable status to private schools which, according to Pring (132) constitutes about 25 per cent of state subsidy of private schools in 1983. There are other forms: LEA fees to private schools for places taken up; the payment of tuition and boarding fees of government and other public personnel working overseas; the use of INSET opportunities, advisory services and the training of teachers at public expense. The last named will of course change ever more to the advantage of private schools as the British Government moves from 1992 into a school based mode of initial teacher training with schools

receiving the bulk of the fees for carrying out this responsibility. Private schools are being encouraged to compete and are clearly seen as, in general, exemplars of good educational practice, though, returning to Bradford and Burdett, they see the assessing of the efficiency of schools as being almost impossible, due to the value laden nature of any decision.

While the private sector of secondary schooling in England has expended in the 1980s, this has been supply rather than demand led, there having been the acquisition of many of the former direct grant schools by this sector and an increase in the availability of coeducation private schooling. Much of this expansion has been of day places, popular with the meritocratic middle classes with no tradition of sending children to boarding schools. But as mentioned above the location of private schools is uneven and inequitable in relation to the distribution of population. In the areas where there is greater, especially day, provision of private education, there will be better marketing of it, and the financial packages that can enable its take up. So Bradford and Burdett see a strong 'push' element alongside the old established 'pull' of prestige. (133) They predict increasing disparity because:

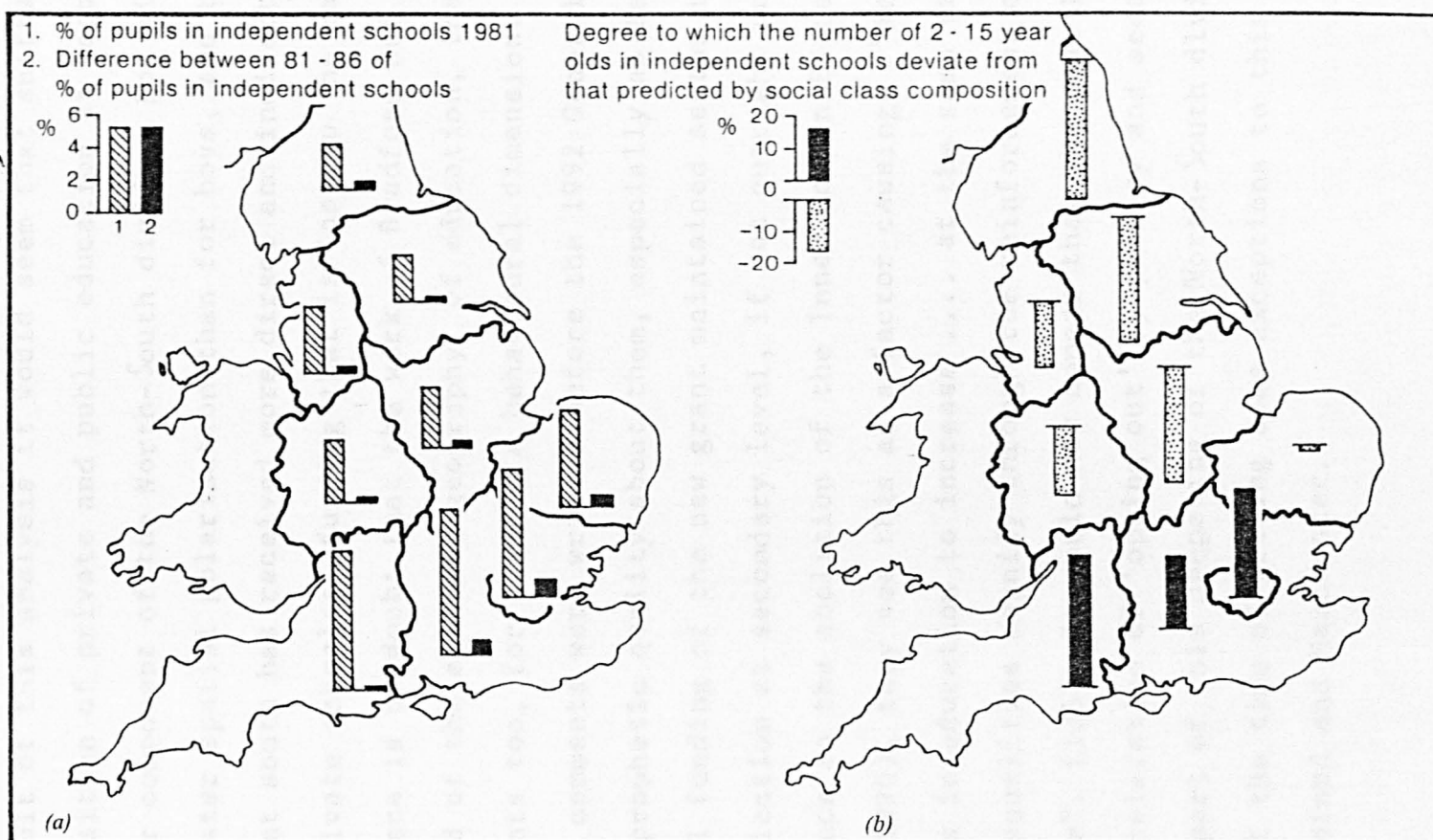
"Any geographical variation in private education has consequences for the spatial distribution of State subsidy. If private education is unevenly distributed relative to the population and/or growing at a faster rate in certain areas of the country, then this is a further way in which some regions will be indirectly gaining at the expense of others. Paradoxically, this may be achieved by greater exit from the State system." (134)

They also note the gender bias towards males in English private education, which they feel has not been balanced by private expansion in education.

In respect of the north-south divide, illustrated by Coates and Rawstron in respect of education in 1971 (135), Bradford and Burdett see a deepening disparity in the position of private schooling relative to not only the distribution of the population but also the social class composition region by region (Figure 5.22). As they use a regional scale of analysis, the cross-boundary flows of day pupils at local level are obscured, but the cross regional flows of boarding pupils are accommodated.

The expansion of private schooling in England has occurred at the same time as a demographic down turn due to a declining birth rate. This has caused contraction and even closures in the public sector, but as the birth rate of the more affluent social strata has held up, there is less of a problem in the private sector. However, as Figure 5.22 illustrates there has been a decline in the absolute numbers of private as well as state school pupils in the north and south-west (also an old industrial area). So we now have an educational 'Tees-Exe line' to parallel the old physical one! In fact the south-west suffered the closure of 13 per cent of its private schools, due it is thought to the relatively high boarding figures in that region and few new day independent schools. Furthermore, the north-west region only achieves the absolute figures it does have, due to the high incidence

FIGURE 5.22 ENGLAND : PERCENTAGE OF PUPILS IN INDEPENDENT SCHOOLS (1981 - 86) AND PERCENTAGE DEPARTURE FROM SOCIAL CLASS PREDICTION (1981).



Source : Michael Bradford and Frank Burdett, 'Privatization, Education and the North-South Divide', in : Jim Lewis and Alan Townsend (Eds), The North-South Divide, Paul Chapman (1989), pp. 192 - 212.

of Assisted Places allocated to the cluster of former direct grant grammar schools there before the late 1970s.

So as a result of this analysis it would seem that shifts in the relative position of private and public education at secondary level form a clear component of the North-South divide. For girls, there is an even greater spatial polarisation than for boys, and the generally more affluent south has received more direct and indirect subsidies into its private schools; funding that is lost to the maintained sector. There is no doubt that the work of Bradford and Burdett lies in the field of the economic geography of education, though it has other elements too, for example a behavioural dimension. Given that their final comments were written before the 1992 General Election, there is a prophetic quality about them, especially as favourably differential funding of the new grant maintained sector is likely to increase selection at secondary level, if not outright privatisation. With reference to the abolition of the Inner London Education Authority (1990), they see this as a factor causing; "intra-regional inequalities in education to increase .... at the same time as inter-regional inequalities magnify through the reinforcement of the North-South divide". (136) It would now appear that the post 1992 General Election acceleration of 'opting out' by primary and secondary schools is forming part of this deepening of the North-South divide though there are at the time of writing some exceptions to this demarcation, notably Bradford and Manchester.

#### 5.2.5 Some Socio-Cultural Dimensions of the Geography of Education

There is a considerable literature supporting the foundation discipline, sociology of education, some of it comprising the sub-field of education in multicultural societies. Since the populations that are the subject of these researches and writings have locations of residence and of education there is a profound geographical dimension to the situation which is rarely addressed, and even then in very basic general and descriptive terms. Even the literature concerning problems of education in relation to segregation and desegregation in the USA has very few geographical inputs, one of which has been highlighted in section 5.2.2 above. (137) One of the few other significant contributions is the work of Lowry on the evolution of the geography of schools in Mississippi in the mid-twentieth century. (138) His article provides a valuable insight for outsiders of the dynamics of educational manipulation in social and spatial terms as operable within the socio-political framework of the USA. In particular it illustrates the crucial conjunction of urban social segregation and a highly localised political unit - the school district - as the spatial dimension for raising the bulk of the funding of public education. As with the example of nineteenth century England discussed above we see again the discordance that will almost certainly occur as between social and political geography, including the educational components of both, if there is no overall and ongoing adjustment of the latter to meet the dynamic changes inherent in the former.

As mentioned in Chapter three, Peach has been the leading geographical scholar in the field of urban social segregation, especially in relation to minority groups in Britain, and some use was made in a recent thesis by Coleman (139) to apply this to the American scene and especially the case of the City of Waterbury, Connecticut. At this scale of examination it was possible to see the relationship between residential location of distinctive groups and the ethnic composition of first, middle and high schools. However, the geographical dimension was a contextual contribution to the main focus of the study and was not pursued in depth. Nonetheless there was another geographical factor in relation to the Puerto Rican minority in Waterbury and its failure to relate to mainstream culture and efforts to provide compensatory support for education in the form of bilingual programmes. The nature of political relationship between the USA and Puerto Rico is such that unlimited movement and settlement is mutually operative. This is activated by the relative proximity of Puerto Rico to New York, in respect of air travel, and accounts for the high concentration of this group in towns and cities on major rail and road routes diverging from that city through the states of New Jersey, New York, Connecticut and Massachusetts in particular. With periodic return to Puerto Rico possible for most, we can see again how the influence of political geography holds a prime position in the geography of education.

In order to find more detailed geographical treatment of urban based cultural and social factors as affecting education we shall turn to the contributions of the aforementioned Robert Geipel in relation to

Munich, (141) and of Bradford and Moulden in relation to Manchester. (142)

Geipel's work connects with the previous sub section on the economic geography of education in that the prime motivation of Turkish migrants was to obtain work, so that the spatial pattern of 'migrant' children in the school zones of Munich is a function of the labour market. The general picture of Gastarbeiter in the former West Germany (143) is well known as contrasting with the colonially related minorities of Britain, France and the Netherlands, (144) but in respect of urban social geography, the dynamics and resulting structures parallel those discussed above in relation to London. So migrant families are concentrated: "in districts around the periphery of the inner city as part of a segregation process," which is accentuated further by the 'flight' of young German professional families to the outer suburbs.

The link with the labour market has a gender differentiation in the case of Munich which further complicates the spatial pattern as it differs within itself in relation to country of origin and type of occupation. While the construction industries take mainly male labour, as does machine manufacture, females predominate in precision tool engineering, optics and electronics. There is also the question of children, for whereas few Yugoslav female workers brought their children, proportionately many more from Italy, Greece, Spain and Turkey did so. Given the obvious ties between mother and child, the location of work in relation to home becomes very significant, and



Geipel recognises two basic types of housing provision for migrant workers:

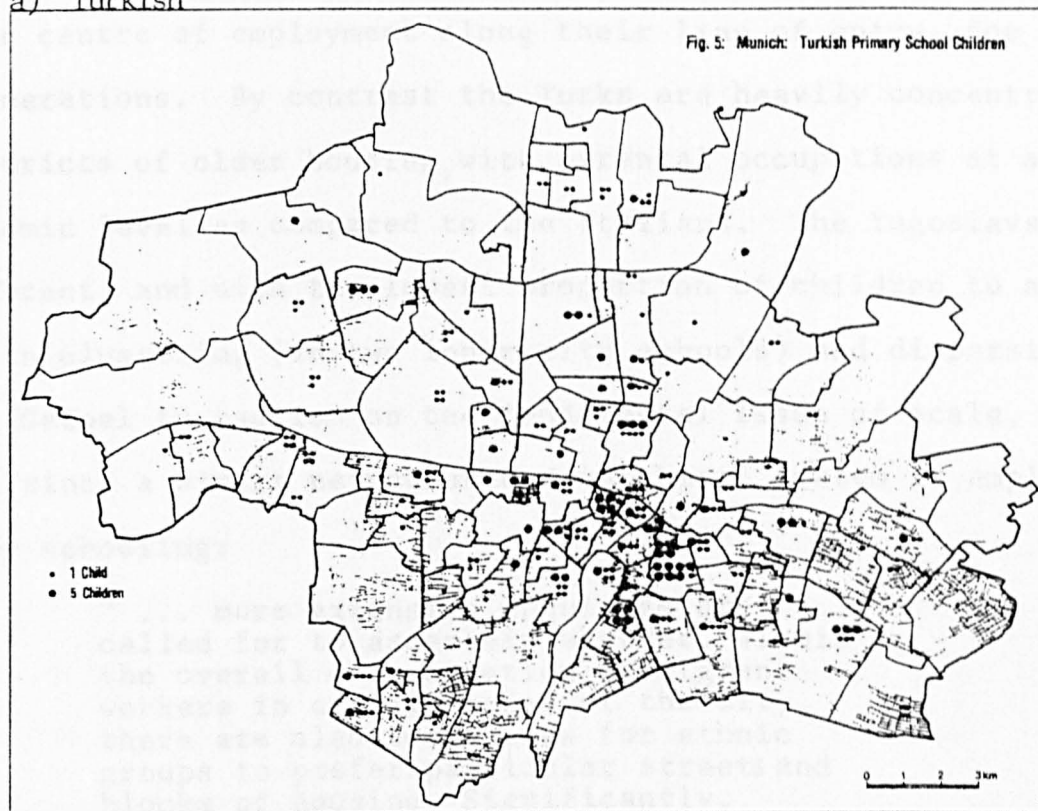
- "a) housing centred on the firm, with closely regulated provision mainly for single persons;
- b) housing subject to market forces sought mainly by families operating within the restrictions imposed by the economy." (145)

Much depends on whether a company is operating: a single plant; several plant sites; a shifting series of (building) sites, as to the determination of migrant family location. Consequently, the: "mapping of migrant children registered in primary school, permits an accurate view of the processes of segregation occurring in different degrees among individual nationalities." (146) The segregation index, highest among Yugoslavs and lowest among Italians gives some idea as to the differential degrees of concentration within Munich, but when the percentage of 'non-Germans' in school is provided, the Turks show the highest figure. They also show a marked increase in their proportion of the total migrant group, as do the Yugoslavs, while the Italians, Greeks and Spanish all show a decrease. So length of stay seems also to be significant, which is accentuated by the fact that the three longer established groups (Italians, Spanish and Greeks) are all EC members, like the host community.

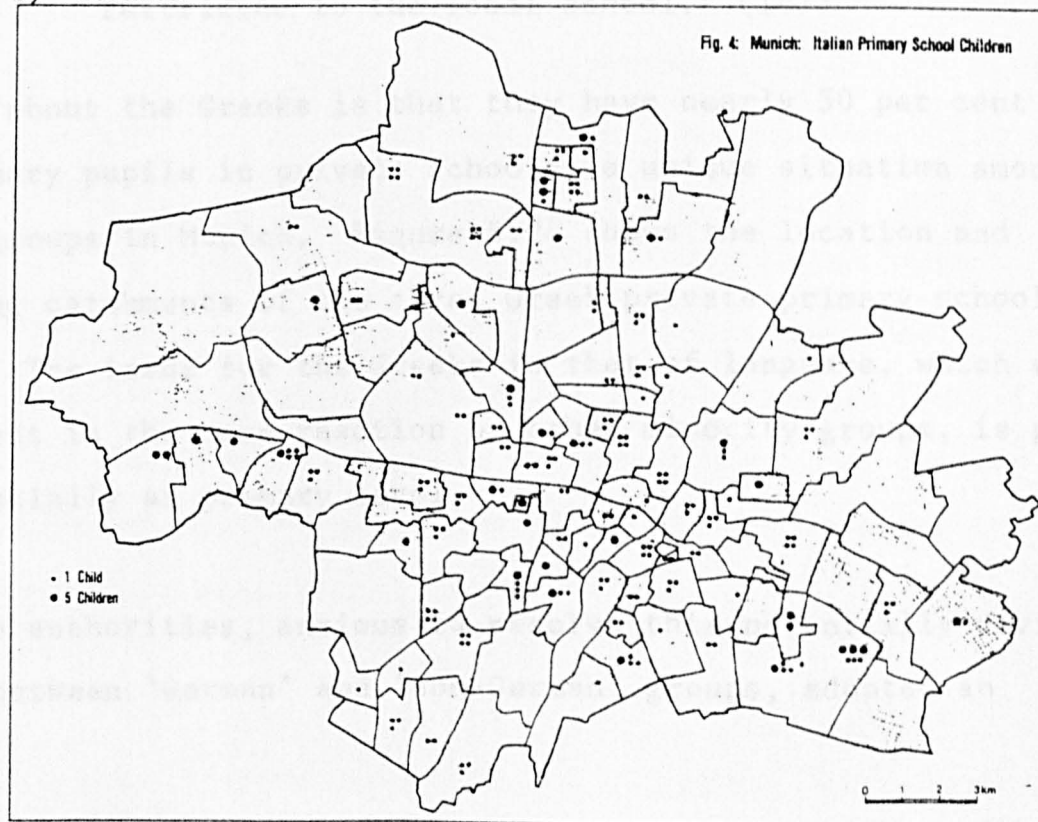
The outcome in distribution of primary school children can be seen by comparing parts a) and b) of Figure 5.23. Clearly Italians are much more widely distributed; the pattern resembling: "that of native Germans of comparable income". They have been coming to Munich, the

FIGURE 5.23 CONCENTRATION AND DISPERSION OF TURKISH AND ITALIAN PRIMARY SCHOOL CHILDREN IN MUNICH

a) Turkish



b) Italian



Source: R. Geipel, Schools, Space and Society, Liverpool University Press, (1986), pp. 13 and 15.

first major centre of employment along their line of entry, for several generations. By contrast the Turks are heavily concentrated in the districts of older housing, with parental occupations at a lower socio-economic level as compared to the Italians. The Yugoslavs being the most recent, and with the lowest proportion of children to adults, exhibit both clustering (in two inner city schools) and dispersion. This leads Geipel to caution on the fundamental issue of scale, especially since a strict neighbourhood catchment system is employed for primary schooling:

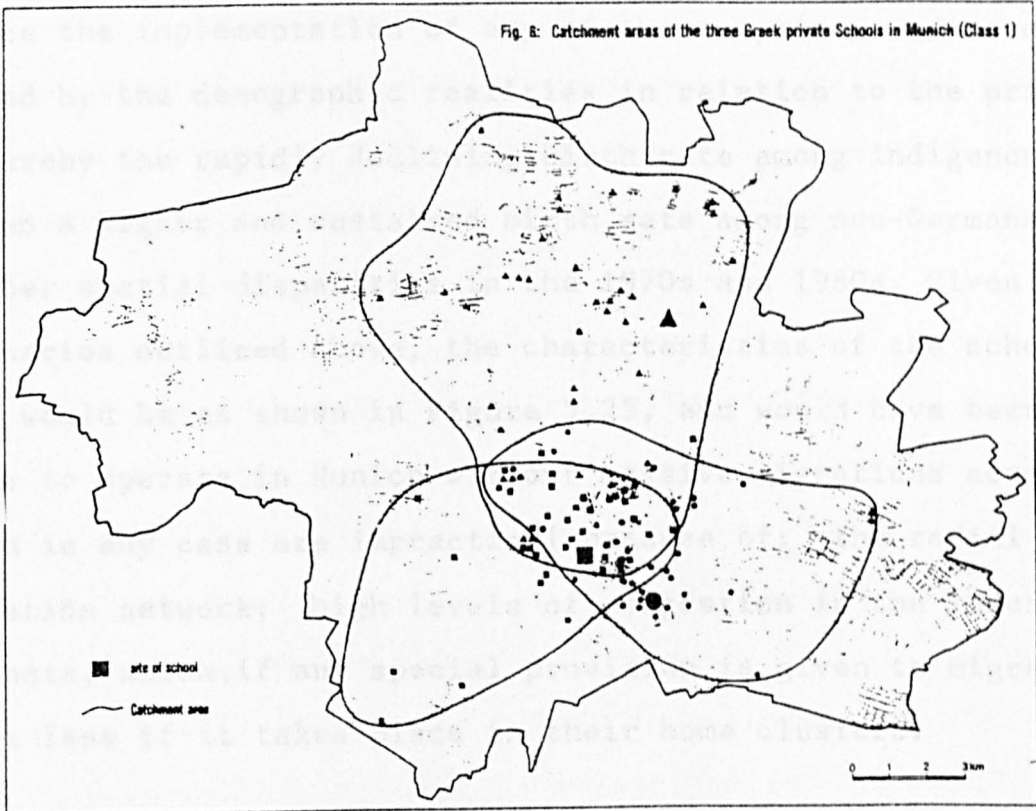
" ... more extensive enquiries are called for to ascertain whether, within the overall concentration of migrant workers in certain areas of the city, there are also tendencies for ethnic groups to prefer particular streets and blocks of housing. Significantly, selection of residence is the only mechanism by which parents (excluding the Greek group, as described below) can 'choose their primary schools' for admission for each community is restricted to the local school." (147)

The point about the Greeks is that they have nearly 50 per cent of their primary pupils in private schools, a unique situation among minority groups in Munich. Figure 5.24 shows the location and overlapping catchments of the three Greek private primary schools in the city. The issue for the Greeks is that of language, which while not manifest in the same reaction by other minority groups, is present in all, specially at primary level.

The Munich authorities, anxious to resolve this potentially divisive issue as between 'German' and 'non-German' groups, adopted an

objective of 'special classes for non-German children' while being opposed to 'special schools for non-Germans'. This dichotomous situation arose as a result of policy conflict between the authorities of the City of Munich and those of the Lande of Bavaria - once more an indication of the significance of political geography of all scales. Whereas the city accepts the permanency of the majority of migrants, the lande does not. However, the outcome of this conflict, at the scale of the city itself, presents three alternative strategies for the location of schooling and the spatial implications of each are quite clear. The first possibility would be complete absorption of the non-German children into the local schools. This has to take into account that existing regulations require that zone boundaries for both primary schools and Hauptschulen are binding, and that there would be no attention paid whatever to the languages or national cultures of children. The second possibility would be the specification of particular sites for international or supranational schools for non-Germans, but still with the aim of integration. There would have to be extensive catchments. The third model could be the identification of particular sites for national schools for non-Germans. This would only be at all feasible for the largest national groups, with catchments even more extensive than the international alternative. The cultural objective of such a school would be fundamentally different from the other two, namely to preserve the language and culture in preparation for return to the country of origin and re-entry to the system there at any educational level.

FIGURE 5.24 OVERLAPPING CATCHMENT AREAS OF PRIVATE GREEK PRIMARY SCHOOLS IN MUNICH



Source: R. Geipel, op. cit., p. 21.

FIGURE 5.25 TYPES OF SCHOOLING IN MUNICH ACCORDING TO LANGUAGE, SOCIAL AIM AND CATCHMENT SIZE

School type	Main language	Second language	Overall social aim	Size of catchment area
(i) German local school	German	n/a	integration	Small
German local school with special classes:				
(A) all languages in one class	German	n/a	integration	Small
(B) one language per class	German	L1+L2	integration + maintaining capability to return to the home country	Medium
(ii) International school for non-Germans (one stream per language)	L1+L2+Ln in transition to German	L1+L2+Ln	integration + maintaining capability to return to home country	Large
(iii) School for separate national groups classes organized on a year basis	Foreign Language (L)	German	maintaining capability to return to home country	Very Large

Source: R. Geipel, op. cit., p. 27.

In practice the implementation of any of these options was severely constrained by the demographic realities in relation to the primary sector whereby the rapidly declining birth rate among indigenous Germans and a higher and sustained birth rate among non-Germans led to even sharper spatial disparities in the 1970s and 1980s. Given the three scenarios outlined above, the characteristics of the schools resulting would be as shown in Figure 5.25, and would have been impossible to operate in Munich without massive migrations across the City which in any case are impractical because of: the radial transportation network; high levels of congestion in the inner urban zones; costs, which, if any special provision is given to migrant groups, are less if it takes place in their home clusters.

As in the case of Bradford and Burdett's prediction of increasing disparity of access to secondary schooling in England, Geipel's concluding remarks are equally prophetic in the light of an imminent Single Market Europe with free movement of labour. With respect to micro level school location planning, he states:

"Necessary to a solution is a special school transport system and that is a device which throws up considerable organizational, legal, and, in particular, financial problems. In the light of an increasingly international labour market and of high mobility among the work force, we shall no doubt have to get used to living with such problems. Better still, we should solve them." (148)

His final point is very pertinent to the case advanced by this thesis, for a geography of education. Any chance of solutions to problems of

this sort, which will undoubtedly become increasingly severe, will depend on the kind of analysis Geipel provides being widely understood and undertaken. Orthodox physical planning fails to effect a meaningful convergence between the spatial and educational (cultural) dimensions.

That residential environment affects educational possibilities, partly through attitudes as shown by Robson's study of Sunderland, (149) is understood at crude spatial scales. But as he also indicated, only a very local unit of spatial study will uncover the realities. Part of that very local scale may be the effect of an individual school for better or for worse, (150) but as Geipel's study implies the physical, including residential environment is an influential factor. The study of Moulden and Bradford, following significant forbears such as the work of Wiseman (151) and Ainsworth and Batten (152) in respect of the same city, sets out to show this to be the case.

Once again the value of a geographical approach to an educational subject is evident in the concern for the scale of spatial analysis, although the attainment variable is somewhat constrained in its potential value by the age range of the students comprising the sample. Their aim is: "to discover the effect on thirteen-year-old and fifteen-year--old school children of the local residential environment within a catchment area. This scale of analysis permits the influence of different schools and resources to be minimised, at least at the secondary school level." (153)

A multivariate analysis comprising 24 variables in four clusters was assembled and operated in order to determine the nature of the residential environment. (Figure 5.26a) Data was derived from the 1971 census at the level of the enumeration districts comprising the area of the local authority, which was processed and mapped. From this range of residential environments it was possible to see the parts of the survey area "most likely to offer a wide variety of residential environments within the catchment area of an individual school". (Figure 5.26b) Two secondary schools within this most varied zone were involved in the aspect of the research designed to identify educational attainment and occupational aspirations and expectations. The former was obtained from information determining the streaming system in each school, the latter was correlated with social class, but also gleaned from pupil questionnaires: "... this provided 674 usable sets of data on educational attainment, occupational aspirations and expectations, intelligence, personality characteristics, attitudes and home backgrounds ..." (154) The outcome for educational attainment is also shown in Figure 5.26b), which includes the location of the two schools providing the sample populations.

Path analysis was used to effect simultaneous comparison of the effects of each of the independent variables on the dependent variable in question according to the selection illustrated in Figure 5.26a). From this analysis the researchers found a relationship between residential environment and educational attainment that is not based on social class alone. From the application of independent variables



FIGURE 5.26 ASPECTS OF RESIDENTIAL ENVIRONMENT  
AND EDUCATIONAL ATTAINMENT IN MANCHESTER

a) Residential Environment  
in the Matrix of Variables

b) Selected Enumeration  
Districts, Location of  
Sample Schools and  
Educational Attainment

Dependent variables

Possible independent variables

Occupational aspirations

occupational expectations  
educational attainment  
intelligence  
social class (combined mother's and father's)  
number of children in the family  
position of the child in the family  
residential environment (score on component I)  
all first-order personality factors (A-Q<sub>4</sub>)

Occupational expectations

educational attainment  
intelligence  
social class (combined mother's and father's)  
number of children in the family  
position of the child in the family  
residential environment (score on component I)  
all first-order personality factors (A-Q<sub>4</sub>)

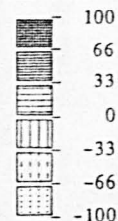
Educational attainment

intelligence  
social class (combined mother's and father's)  
number of children in the family  
position of the child in the family  
residential environment (score on component I)  
attitude to education  
attitude to school work  
perceived attitude of friends to school work  
all first-order personality factors (A-Q<sub>4</sub>)

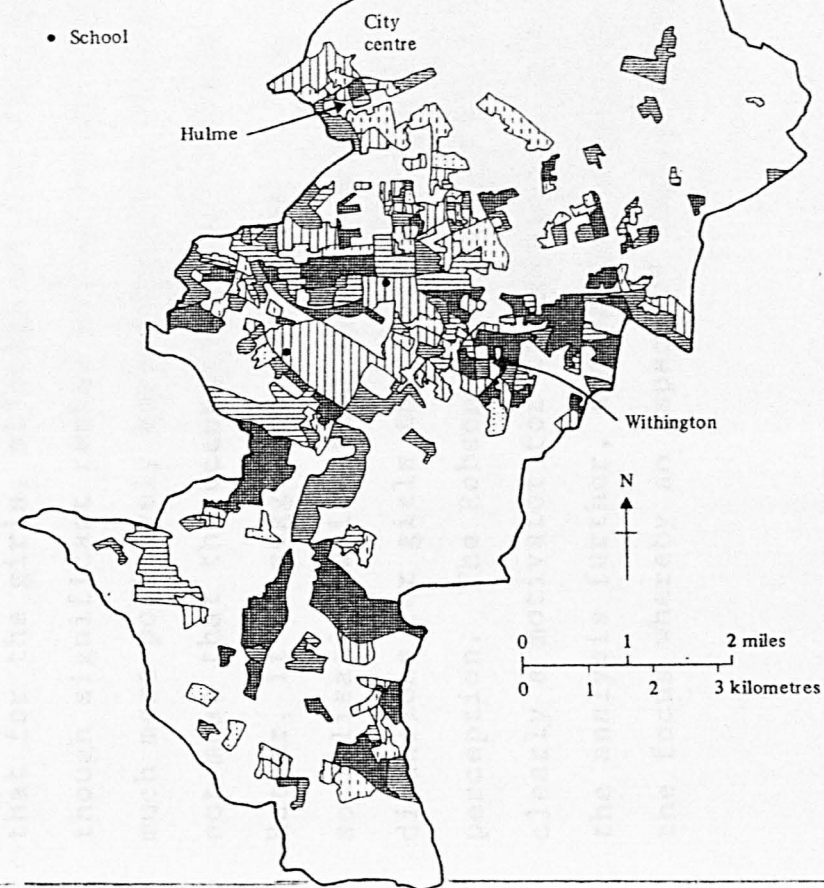
Attitude to education

intelligence  
social class (combined mother's and father's)  
perceived attitude of friends to school work  
residential environment (score on component I)  
all first-order personality factors (A-Q<sub>4</sub>)

Key for average  
educational  
attainment



• School



to educational attainment it was found that residential environment ranked twice as highly as did attitude to education. Processing of the data from pupil questionnaires, also by path analysis found, at both age groups, that: "educational attainment seems to be affected chiefly by intelligence, social class, number of children in the family, and residential environment." (155) It is clear from the analysis of both documentary and empirical data that residential environment is an influential variable affecting educational attainment in its own right, though of course it operates in conjunction with other variables. It is interesting however that Moulden and Bradford found an inverse relationship between quality of residential environment and occupational aspiration on the part of the older sample which they attribute to: "a form of mental escapism which, if correct, brings in the behavioural aspect of geography."

The final element of the analysis concerned gender, where it was found that for the girls, although as with the boys, residential environment though significant ranked behind social class and family size, was much more positively correlated with educational attainment. This did not mean that the occupational aspirations of girls were lower. Rather, it is suggested, it has to do with the effect of processes of socialisation which tend to include more constrained spatial dimensions for girls than for boys in respect of environmental perception. The Robson study, examined above in Chapter three was clearly a motivator for the Manchester research, but the latter takes the analysis further, adding some significant variables and reversing the focus whereby an aspect of education (attainment) is analysed from

a spatial perspective in contrast to local environmental quality being approached through educational attitudes.

Gender, an aspect of the Manchester study, is the major social factor involved in one of Meusbürger's few publications in English. (156) While undoubtedly being a significant contribution to the geography of education it was produced as one of the IGUs Working Papers on gender geography which now number 20 or more and add to the other items of literature in this new sub-discipline. (157) To date it is the only one to consider the educational dimension, and the vast literature on gender and education is similarly lacking. As Brock and Cammish discovered, there is considerable potential for geographical analysis in this area. (158)

The aim of the paper by Meusbürger and Schmude is: "to show that the rank of a city in the urban system (the size of a city) also strongly influences both the age-specific female employment rates and the educational level of the female labour force at the place of work." The study was conducted in Austria. There is, of course a general and crude dichotomy in educational levels between urban and rural regions, but this applies albeit differentially to males and females. The authors borrow from organization theory and in particular issues of centralized or decentralized regulation of businesses, which itself depends to some degree on size. Education, broadly defined to include information processing and communications, is an important factor at work here. Workers involved in routine production do not necessarily have to be located where communication potential is high, whereas

the opposite is true of decision makers at management level. This relates directly to the: "spatial distribution of jobs occupied by highly qualified females."

As this study has to do with the hierarchy of the urban system, the ranking of the urban system accords with the size categories of the communes within Austria where the jobs in question are located. The educational level of the work force is a particularly good indicator of the spatial distribution of power and influence particularly in countries, like Austria, where the percentage of graduates in the population is low. (159) This relates to the core-periphery model in that the sectors of the economy and administration where the most important decisions are taken tend to be concentrated in the largest cities and/or the capital. Whereas the central-peripheral gradient of the proportion of graduates in sectors with a preponderance of male employees is steep, that where females are in the majority is relatively shallow. (see Figure 5.27a). However, the issue of scale is significant again here in that, if the broad categories of employment are internally disaggregated, it is not necessarily the case that the gradient for female graduates would be shallower in every sub-category. For example, Meusberger and Schmude found that the reverse was the case in respect of the sub-categories: 'publishing', 'banking and finance', 'private insurance' and to a lesser extent 'public administration' (the last named necessarily including the offices of peripheral units of the political geography). Nonetheless they also found a decrease in core-peripheral disparities in the areas of 'health services and public welfare', and 'education

FIGURE 5.27a) CORE-PERIPHERY GRADIENTS OF THE AUSTRIAN GRADUATE WORKFORCE 1971 AND 1981 BY GENDER

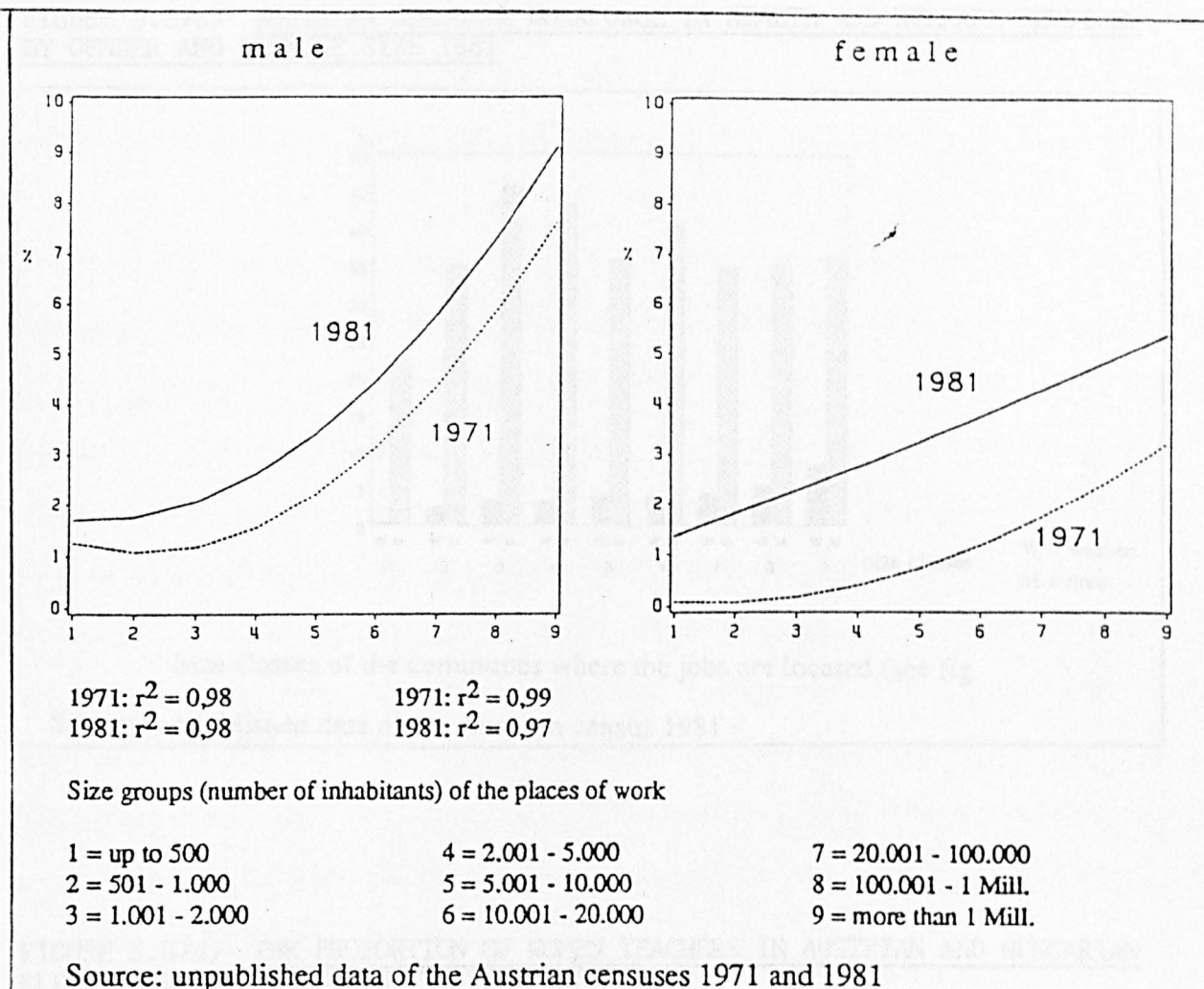


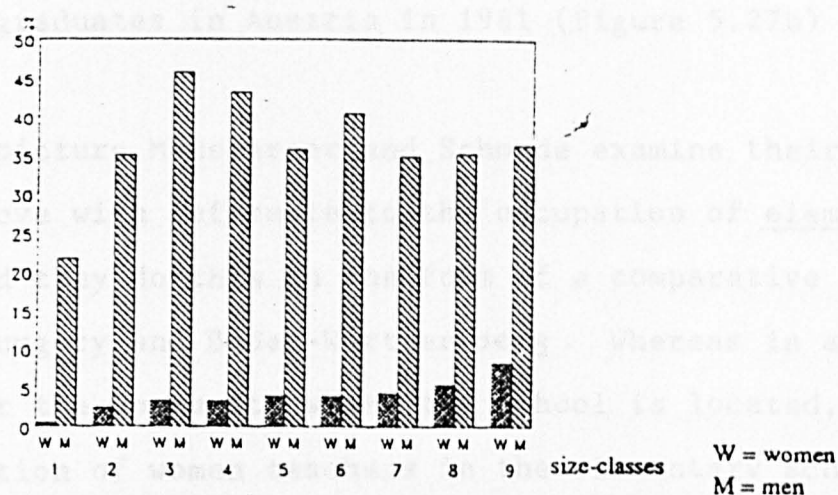
FIGURE 5.27b) AUSTRIAN GRADUATE WORKFORCE IN THE FIELDS OF EDUCATION, WELFARE AND RELIGION, BY GENDER

size-classes of the communes where the jobs are located	proportion of jobs for university graduates belonging to the three branches		
	male	female	total
up to 500 inhabitants	74,2	74,3	74,1
501 - 1.000 inhab.	75,5	89,0	81,0
1.001 - 2.000 inhab.	73,3	87,6	79,3
2.001 - 5.000 inhab.	66,5	87,4	75,4
5.001 - 10.000 inhab.	52,7	82,5	63,9
10.001 - 20.000 inhab.	54,8	82,2	63,9
20.001 - 100.000 inhab.	48,8	78,6	58,0
100.001 - 1 Mill. inhab.	41,2	69,3	49,0
more than 1 Mill. inhab.	30,2	59,4	39,8

Source: special (unpublished) tabulation of the Austrian Census 1981



FIGURE 5.27c) AUSTRIAN GRADUATE WORKFORCE IN HEALTH AND WELFARE SERVICES BY GENDER AND COMMUNE SIZE 1981



Size classes of the communes where the jobs are located (see fig.

Source: unpublished data of the Austrian census 1981

FIGURE 5.27d) THE PROPORTION OF WOMEN TEACHERS IN AUSTRIAN AND HUNGARIAN ELEMENTARY SCHOOLS COMMUNITY SIZE 1980/81

Number of inhabitants in the commune where the school is located	Percentage of female teachers in elementary schools	
	Austria	Hungary
	1981	1980
up to 500	47,6	59,1
501 - 1.000	63,6	57,0
1.001 - 2.000	70,9	57,5
2.001 - 5.000	75,8	58,1
5.001 - 10.000	79,7	61,7
10.001 - 20.000	81,7	65,5
20.001 - 100.000	85,5	69,5
100.001 - 1 Mill.	87,9	71,7
more than 1 Mill.	90,3	73,8

Source: Special (unpublished) tabulation of the Austrian Census 1981 and the Hungarian Census 1980

Source: Peter Meusburger and Jurgen Schmude, op. cit.,

and research', which together took up two thirds of all the employed female university graduates in Austria in 1981 (Figure 5.27b) and c).

Within this broad picture Meusberger and Schmude examine their central thesis outlined above with reference to the occupation of elementary school teacher, and they do this in the form of a comparative study as between Austria, Hungary and Baden-Wurttemberg. Whereas in all three areas: "the larger the community where the school is located, the greater the proportion of women teachers in the elementary schools" certainly did apply, it did so to significantly different degrees. Austria showed the steepest gradient (with the proportion of female teachers in the elementary schools of Vienna being 92.5 per cent in 1987/88), followed by Hungary. (Figure 5.27d). The contrast was attributable to the differential incidence of elementary school closures. That is to say:

"Most of those small communities in Hungary which retained their own elementary school were usually centrally located and had a better infrastructure than those whose schools were closed, and thus they were more 'suitable' for women anyway." (160)

Baden-Wurttemberg exhibited a shallower gradient even than Hungary, but this would be due to its status as a province rather than a country with all that that implies for the size of the primate city as compared with other cities. Another factor at work here during the 1980s has been the tough policy on teacher employment within a general climate of economic constraint. Again this factor operates at

provincial level and so both points of interest in relation to this case are to do with politics/political geography.

A number of factors seem to affect the degree of feminization of the profession of elementary school teacher in spatial terms. The first is demographic, with respect to variations in birth and migration rates whereby reduced demand for teachers seems to be particularly disadvantageous for female employment in this occupation. The second pertains to changes in regulations concerning the employment of women teachers, and the third the matter of the prestige of the occupation as between males and females and as between large cities and rural areas. Other factors at work seemed to be the extra curricular demands as varying from urban to rural settings, and differences in the quality of the residential environment - a recurrent though variable issue in the geography of education. (161) All these factors were seen to be spatially significant, though not subject to detailed analysis, by Colin Brock and Nadine K. Cammish in their observations of 'Factors Affecting Female Participation in Education in Developing Countries'.

Through this, and other studies, Meusbürger and Schmude, together and separately, have been able to illustrate the potential for studies in 'gender-specific disparities' in education, and the multivariab~~les~~ involved. They conclude with an important general point in relation to educational studies:

" ... the example of the elementary school teachers shows that a great variety of factors contribute to the central-peripheral disparities of the



feminization process. Without a profound knowledge in regional geography and local history these disparities cannot be explained sufficiently." (162)

The final element of the socio-cultural geography of education to be considered here is that of the spatial incidence of language.

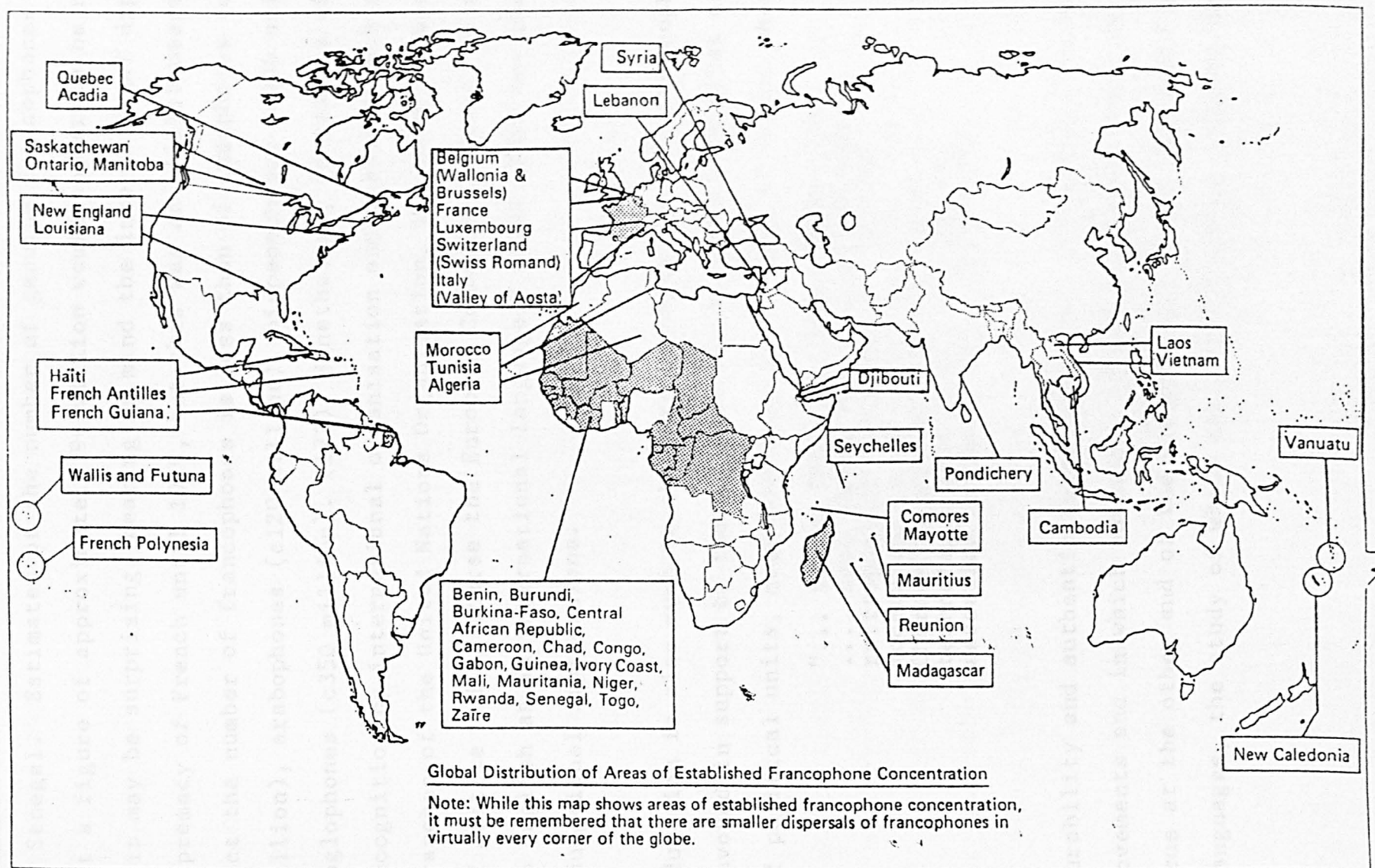
Relationships between language and education are multiple, ranging from the cognitive to the affective and the social to the political. They are often fundamental and critical, language being the key to learning (163) and the most vital attribute of cultural identity. In spatial terms the extent of usage ranges, for example, from the numerous Amerindian languages each limited to a single valley in Oaxaca, to the global extension of English through satellite broadcasting. Spatially one might be concerned with the diffusion of a particular language, and to the extent that aspects of the spread of literacy have been discussed above, this has already been considered. (164) Or one might be concerned with the distribution of a number of languages within a particular city, country or region, and the educational and political implications of that. Some of these implications have been touched upon in relation to migration and at different scales: from migrant communities in Munich (165) to the plural society of West Malaysia. (166) Clearly language is related directly to education at the same time in both instrumental and contextual terms, and the relationship between these two may be in respect of the same language or of different languages. The literature of geolinguistics lies mainly in the contextual sphere, but is none the less significant for that, especially when all forms of education are considered and not just the formal variant.

Mention has been made of the significance of language in the development of the culture area especially with respect to North America. (167) This is of course an extension of the domain of European languages, which within Europe itself have an earlier history of geographical spread and interaction, as illustrated by Krantz. (168) He covers a vast temporal scale from the prehistoric to the early modern; recognizing five major steps of linguistic significance: Neolithic occupation; Germanic shift; Roman Empire; Slavic expansion; Feudal adjustment. In terms of the formal educational dimension the importance of the convergence of classical and Christian traditions of learning and the spread of Latin as a lingua franca is immense, not only during the colonialism of the Roman Empire, but also in the Renaissance. The aforementioned educational dimension of urban colonisation as trading networks developed in renaissance Europe, operated in Latin and primarily through the aegis of various Catholic orders. Such orders developed their educational networks, including grammar schools in the trading towns, such as Mansfeld Latin school attended by the young Martin Luther from the age of 7-14. (169) By this time of course numerous small states had developed around the key towns and cities of the proto Germany and the vernacular was Germanic, having spread southwards from Scandinavia as early as 500 BC and therefore having had about a millenium of development. With the adoption of the vernacular in schools and the expansion of popular education under the guidance of Luther's colleague, Philip Melanchthon, (171) there began a closer association between schooling and the State, turning networks into surfaces. This occurred some two centuries before the Prussian system

discussed in Chapter Two, above. Achievement of mass popular education, especially in association with nationalism, requires either the use of the vernacular if it is more or less universal across the political surface in question, or the enforcement of another language. Despite the continued use of Latin for scholarly purposes well after the rise of the European nation-states, as a dead language it would not be used for the political purposes of education except in support of elitist and exclusive objectives where they operated, as in England until the mid-nineteenth century.

The association between language, political geography and education does not operate only at the level of the nation state. At supranational level, the linguistic dimension of European colonialism has had profound and ongoing implications for an enduring neocolonial legacy of educational networks, especially in respect of English, French and Spanish. Networks of communication, information, publishing and even popular media have their locational and spatial effects, often with strong political support from the metropole through official agencies such as The British Council and the Alliance Francaise. Figure 5.28, from Bostock's study of la Francophonie (172) illustrates areas of established francophone concentration. Bostock defines la Francophonie as "the movement which claims to represent all the populations of the world which speak French". That is to say, a 'supranational language based movement' is not merely a residue or extension of a language beyond its area of origin. There has to be political intent, and this normally involves educational initiatives, whether formal or otherwise. Stimulus does not necessarily come only

FIGURE 5.28 MAJOR AREAS OF ESTABLISHED FRANCOPHONE CONCENTRATION



Source : William Walter Bostock, 'Assessing the Authenticity of a Supra-National Language-Based Movement : La 'Francophonie'', in: Colin H. Williams (Ed), op. cit., (1988), pp. 73 - 92.

from the metropole. As Bostock points out, the resurgence of la Francophonie in the 1960s was led by President Leopold Sedar Senghar of Senegal. Estimates of the number of genuine francophones varies, but a figure of approximately 90 million would appear to be realistic. This may be surprising, bearing in mind the international diplomatic supremacy of French until 1919, but this was an elitist usage and in fact the number of francophones is less than of lusophones (c166 million), arabophones (c120 million), hispanophones (c200 million) and anglophones (c350 million). (173) Nonetheless, in respect of official recognition by international organisation and agencies such as branches of the United Nations Organisation, the International Court of Justice and of course the European Community, French is now second to English as an international language." (174) This has obvious educational implications.

Education is also much to the fore in areas where la Francophonie is invoked in support of the national identity and separatist aspirations of political units, most obviously in the case of Quebec where:

"... in the 1960s the Quiet Revolution .... took place, based on the concept of rattrapage or "catching up" through modernization of the whole of society in Church-State relations, education, technology, administration, and an assertion of Quebec identity." (175)

Durability and authenticity are qualities associated with language movements and in which education plays a key role. This is just as true at the other end of the geographical scale, the world of minority languages, the study of which has attracted more interest than its

supranational counterpart. (176) This may well be due to the innumerable cases that exist and the precarious nature of many that are threatened with extinction by demographic change and the political and economic significance of majority languages. Education, in its spatial impact, whether intensely local in the village school or national/international through popular media networks, can be an agent of destruction, preservation or even regeneration of a minority language. This will involve geographical processes and spatial expression.

Within Great Britain, the examples of Gaelic and Welsh have attracted the interest of geographers in respect of their spatial fortunes, and each has a significant literature. (177) The national scale of most of these studies obscures the detailed analysis of the role of formal education, but in a wider, more diffuse, cultural sense learning processes are obviously involved, especially in situations of stability and regeneration.

Looking briefly first at Scotland, the political educational geography is different from that of Wales in that Gaelic does not have status parity with English in respect of the system as a whole. Consequently its geographical identity is more organic, having to do with realities of economically marginal communities on the periphery of the UK, and indeed of Scotland itself. Such conditions do exist, though to a lesser degree, in Wales of course, but there are other factors of a geographical nature operating there that have assisted the regeneration of the Welsh language, of which more below.

Gaelic medium schooling, not surprisingly, accords with the distribution of gaelic as the first language, on which Withers is the main geographical authority. He records that: "Gaelic was introduced into what is now Scotland by the Scottic people of Ireland about the year AD 500," (178) and had become the dominant language by about AD 1200. From this maximum extent it has retreated almost from that date under the force of Rait's nine influences on its decline, (179) though this process was neither temporally nor spatially consistent. As recently as 1806 the effective boundary of the Gaidhealtachd was not very much further north and west of where it had been over a century before (Figure 5.29a), but as can be seen from Figure 5.29b the pace of decline gathered in the nineteenth century.

Among the factors at work in the process of anglicisation was that of education, and in particular, religious education. This was achieved by the political device of encouraging education, including significant curricular reform, in the vernacular while at the same time aiming to supplant that vernacular as a result of the educational process. This was made easier to achieve by the fact that education in the Gaidhealtachd was still traditional and organic in form well into the eighteenth century. That is to say, there were no schools as such, so that when the policy of 'cultural imperialism' (180) was put into effect the planting of schools, albeit accommodating Gaelic, was the front line of the offensive. Whereas at the turn of the eighteenth century there were hardly any Highland parishes with schools, fifty years later there were more than a hundred, operating under the auspices of the SSPCK, and whose "location .... lent

FIGURE 5.29a)

THE GEOGRAPHIC EXTENT  
OF THE GAIDHEALTACHD  
1698 - 1806, AND  
CENTRES OF GAELIC  
SPEAKING IN THE  
LOWLANDS

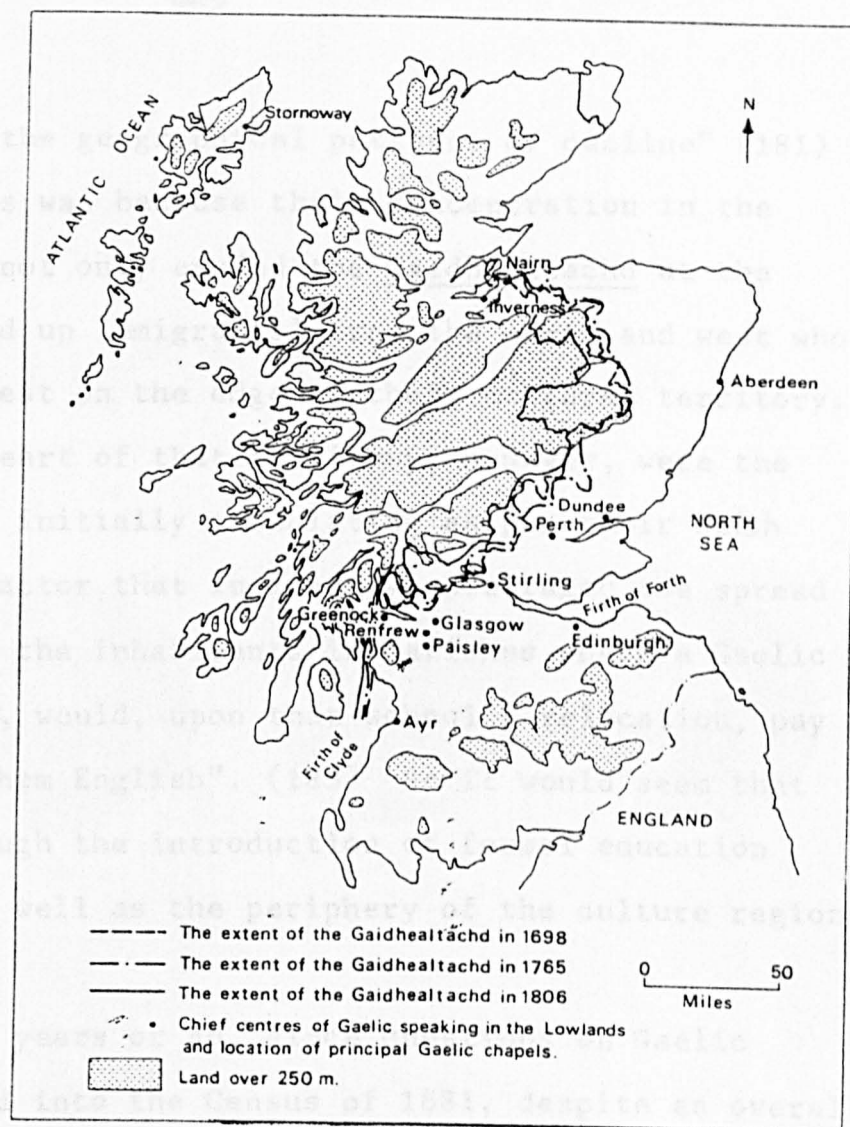
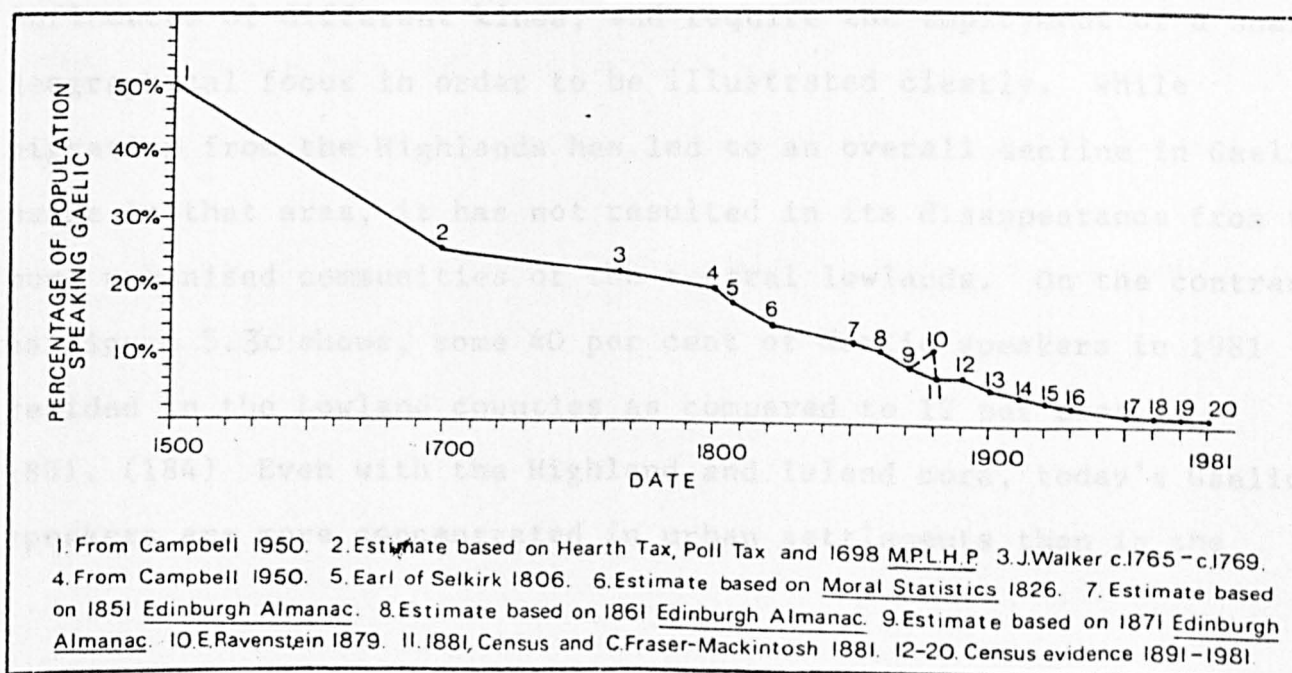


FIGURE 5.29b) GAELIC SPEAKERS AS A PERCENTAGE OF SCOTLAND'S POPULATION :  
1500 - 1981



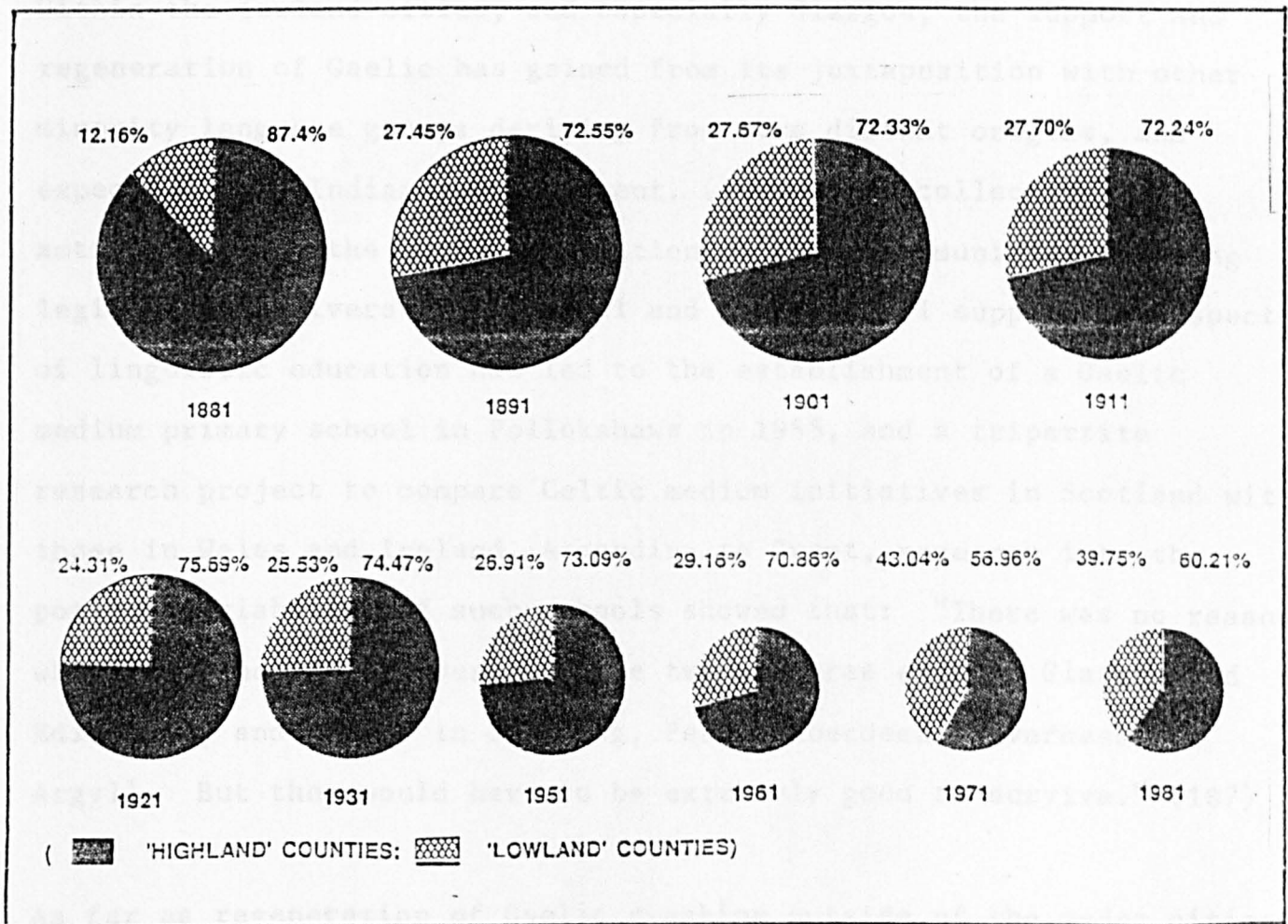
Source: Charles W.J. Withers, 'The Geographical History of Gaelic in Scotland',  
in: Colin H. Williams, op. cit., (1988), pp. 136 - 166.



particular emphasis to the geographical patterns of decline" (181) in respect of Gaelic. This was because their concentration in the linguistic border zone not only eroded the Gaidhealtachd at the margins, but also picked up 'emigrants' from the north and west who had initially come to rest on the edge of their cultural territory. Much further into the heart of that territory, however, were the Gaelic Society schools, initially circulating as per their Welsh counterparts, (182) a factor that indirectly encouraged the spread of English in that: " ... the inhabitants in parishes where a Gaelic school had been located, would, upon that school's relocation, pay a schoolmaster to teach them English". (183) So it would seem that erosion of Gaelic, through the introduction of formal education operated at the core as well as the periphery of the culture region.

During the past hundred years or so, since questions on Gaelic speaking were introduced into the Census of 1881, despite an overall decline there have been significant signs of retrenchment and even regeneration. These patterns of change owe something to educational influences of different kinds, and require the employment of a sharper geographical focus in order to be illustrated clearly. While migration from the Highlands has led to an overall decline in Gaelic usage in that area, it has not resulted in its disappearance from the more urbanised communities of the central lowlands. On the contrary, as Figure 5.30 shows, some 40 per cent of Gaelic speakers in 1981 resided in the Lowland counties as compared to 12 per cent in 1881. (184) Even with the Highland and Island core, today's Gaelic speakers are more concentrated in urban settlements than in the

FIGURE 5.30 Gaelic Speakers in Highland and Lowland Counties of Scotland :  
1881 - 1991



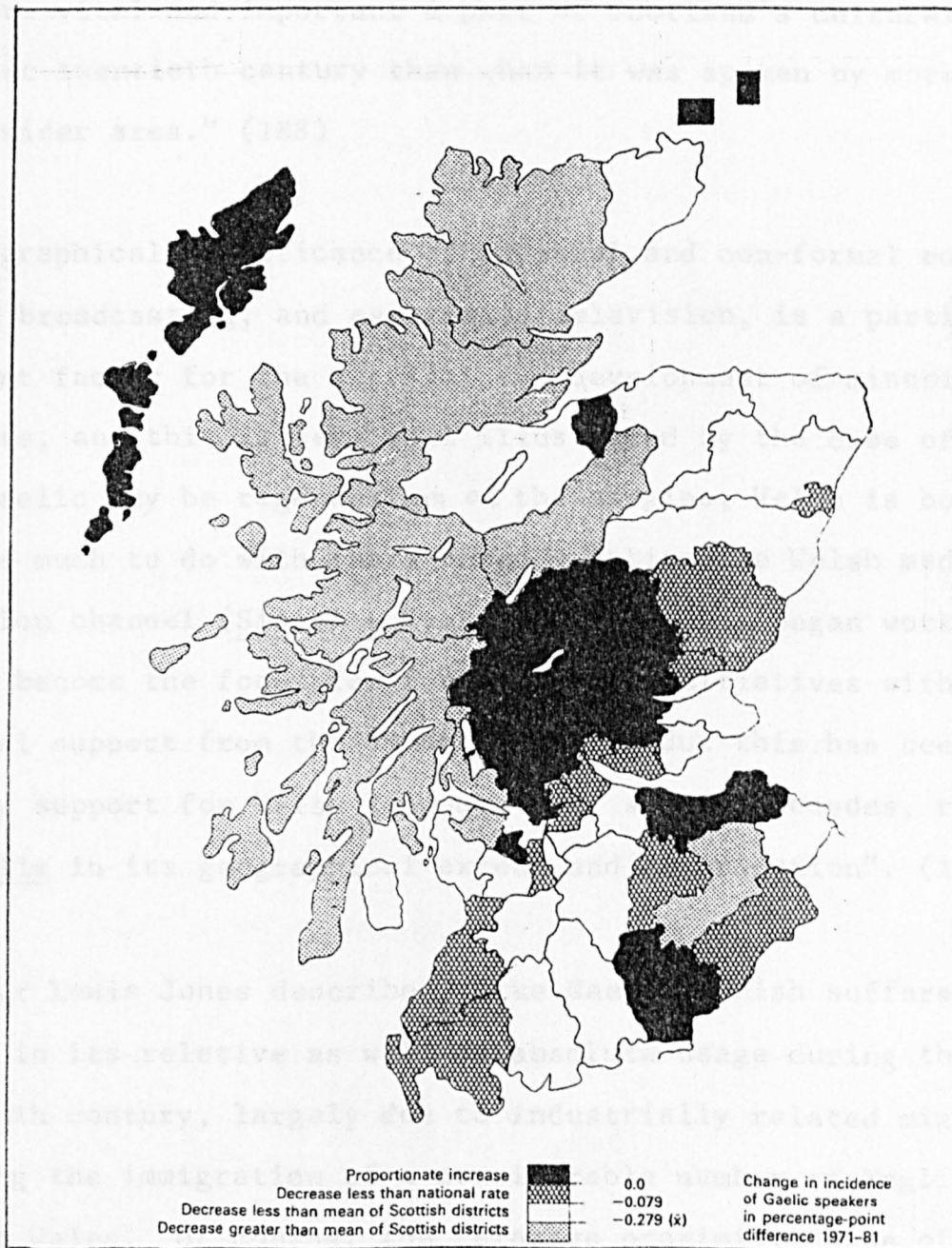
Source: Kenneth Mackinnon, 'Language Retreat and Regeneration in the Present-Day Scottish Gaidhealtachd', in Colin Williams (Ed), Linguistic Minorities, Society and Territory, Multilingual Matters, (1991), pp. 121 - 149.

nineteenth century (see Figure 5.31). As Mackinnon puts it: "Were the 'colonies' of Gaelic speakers in the Lowlands true communities, they would constitute a Gaelic Archipelago in a Lowland Sea of greater consequence than that of the Hebrides themselves." (185)

Within the lowland cities, and especially Glasgow, the support and regeneration of Gaelic has gained from its juxtaposition with other minority language groups deriving from more distant origins, and especially the Indian sub-continent. (186) Their collective activation, and the early recognition of Asian communities as being legitimate receivers of financial and professional support in respect of linguistic education has led to the establishment of a Gaelic medium primary school in Pollokshaws in 1985, and a tripartite research project to compare Celtic medium initiatives in Scotland with those in Wales and Ireland. According to Grant, research into the potential viability of such schools showed that: "There was no reason why there should not eventually be two or three each in Glasgow and Edinburgh, and others in Stirling, Perth, Aberdeen, Inverness and Argyll. But they would have to be extremely good to survive." (187)

As far as regeneration of Gaelic speaking outside of the major cities is concerned, and of associated forms of education, a number of contextual forces have been influential, including: oil related industrial development in Gaelic speaking areas, or attracting Gaelic speakers; radio and television programmes in, or about, Gaelic (since 1926); a small but vigorous Gaelic press (since 1951) and book publishing enterprises; a Gaelic medium tertiary college (on Skye

FIGURE 5.3| PROPORTIONATE CHANGE IN INCIDENCE OF GAELIC SPEAKERS  
IN SCOTTISH DISTRICTS AND ISLAND AREAS, 1971 - 81.



Source: Kenneth Mackinnon, op. cit., (1991).

since 1973); a bilingual education programme for the Western Isles (since 1975). All of these have spatial implications and effects and have contributed to the fact that: "... in several ways, Gaelic is much more vital and important a part of Scotland's cultural life in the later twentieth century than when it was spoken by more people and over a wider area." (188)

The geographical significance of informal and non-formal education through broadcasting, and especially television, is a particularly important factor for the survival and development of minority languages, and this is very well illustrated by the case of Welsh. While Gaelic may be regenerating at the margins, Welsh is booming, and this has much to do with there being a nationwide Welsh medium television channel (Sianel 4 Cymru). (189) This began work in 1982 and has become the focus for further media initiatives with strong financial support from the UK Government. But this has been based on a steady support for Welsh language over several decades, reflected inter alia in its geographical extent and distribution". (190)

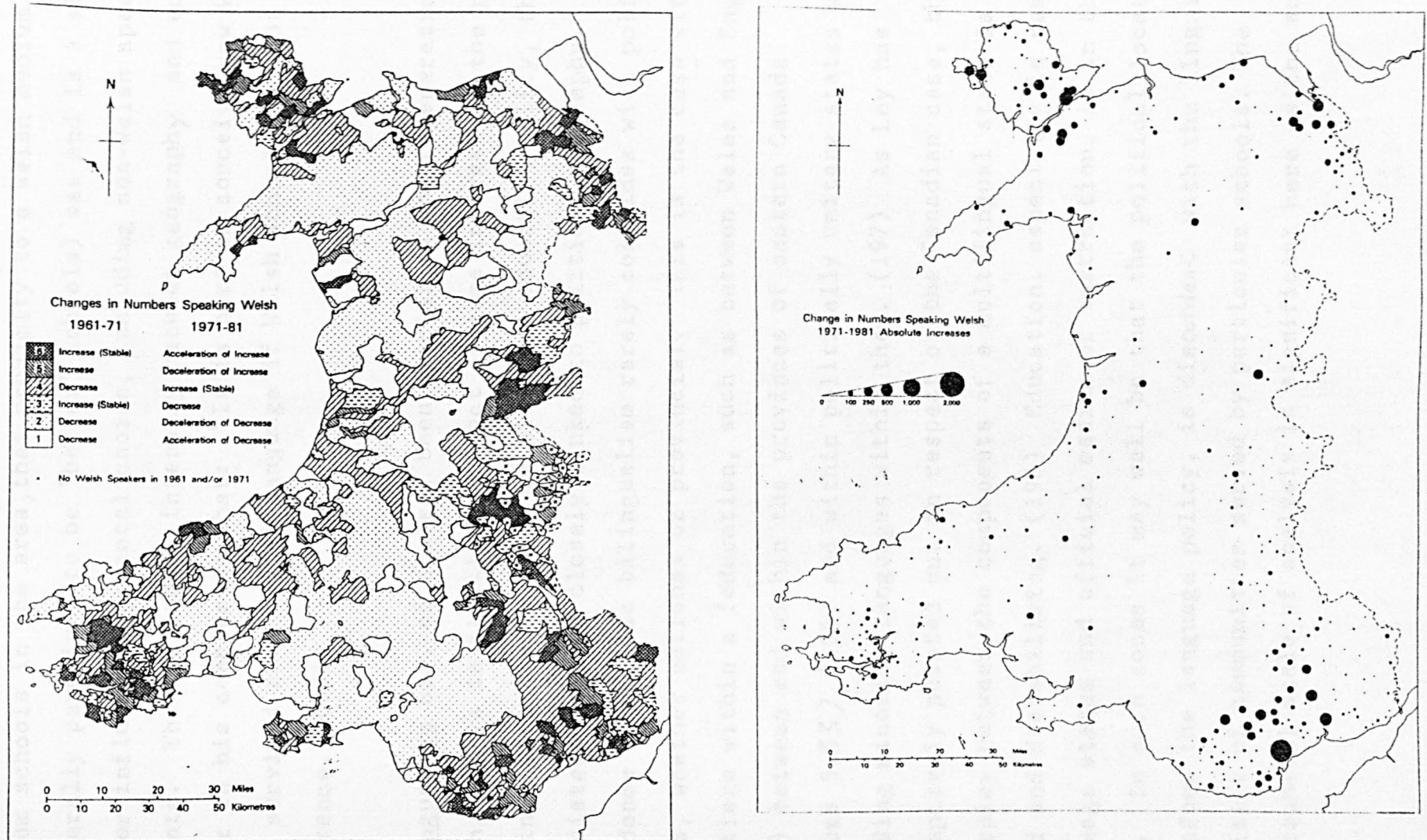
As Bedwyr Lewis Jones describes, like Gaelic, Welsh suffered a sharp decline in its relative as well as absolute usage during the nineteenth century, largely due to industrially related migration including the immigration of a considerable number of English speakers to South Wales. Of course, the relative proximity, ease of access and political relationship in respect of England all contributed to creeping anglicisation, but as with Gaelic on the Highland/Lowland border the westward shift of Welsh was not very great. (191) Within

the heartland core, however, the distribution of monolingual Welsh declined and fragmented to the extent that in 1980 only 10 secondary schools were operating in the medium of Welsh, and in urban locations. As with Gaelic, the anglicising role of the Church has been significant, but an additional factor in Wales has been the well developed nature of holiday resorts in both north and south of easy access to English clientele. (192) Nonetheless as Aitchison and Carter illustrate (Figure 5.32), and comparable to the Gaelic experience (see Figure 5.31), an overall decline has been accompanied by local regeneration, particularly evident in South-East Wales.

Schooling both affects, and is affected by, geolinguistic changes such as briefly described above, and the situation of Welsh schools in South-East Wales is a case in point. The increase of Welsh speakers in this region shown in Figure 5.32 is absolute and so not necessarily a function of population concentration in that area. Evans identifies a number of formative influences behind this increase. (193) Firstly he suggests that vigorous activating of a clause in the 1944 Education Act for England and Wales which required LEAs to educate children according to parental wishes. Second comes the establishment of the Welsh Nursery Schools Movement in 1971 for the purpose of enabling pre-school children to acquire the level of Welsh necessary to operate a Welsh medium primary school. Thirdly the change of policy to enable non-Welsh speakers to attend Welsh medium schools, largely brought about by the pressure of the group 'Parents for Welsh Medium Education'. Finally he makes the profoundly



FIGURE 5.32 CENTRIFUGAL TENDENCIES IN THE INCREASE OF WELSH SPEAKERS IN WALES, (1961 - 1981).



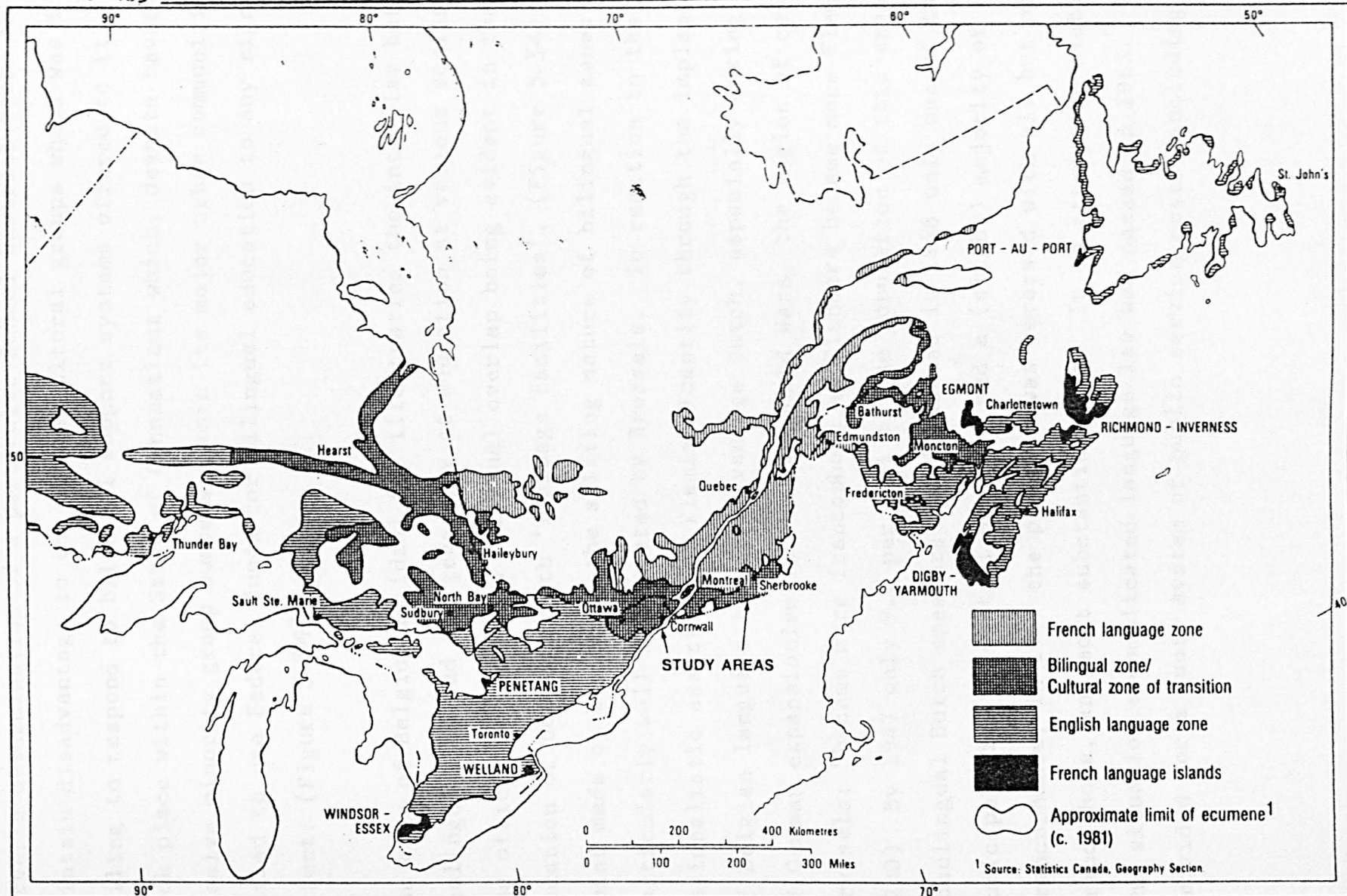
Source : J.W. Aitchison and H. Carter, The Welsh Language 1961 - 1981 : An Interpretive Atlas, University of Wales Press, 1985.

geographical point, strengthened by the cumulative foundation of Welsh medium schools in the area, that proximity to a Welsh medium school (generally perceived to be 'better' schools) was and is a significant factor influencing parental choice, including non-Welsh speaking parents. The reciprocal interplay between geography and education is clear in his conclusion that: "It is hard to conceive how Welsh could have survived as a living language if Welsh schools had not come into existence." (194)

Bilingualism has, of course, been crucial to the regeneration of Welsh, and is in itself the object of some interest on the part of geolinguists. In relation to bilingual education policy, this immediately becomes closely linked to political geography. But the incidence of organic bilingualism rarely coincides with political units, whether national or provincial. This is the case with frontiers within a federation, such as between Wales and England, (195) between and within the provinces of eastern Canada (Figure 5.33), (196) and within politically unitary states with long standing minority languages within them. (197) As Ley has perceptively pointed out in respect of the Canadian case, the interplay between the components of a multilingual state is ongoing, fluid and destabilising. (198) Education, especially in respect of language status and official medium of instruction, is in the front line. In such zones it may well be that the political location, and therefore the language policy, is discordant with the linguistic realities of communities served by particular schools. The geographical scale of analysis is significant here as the actuality of



FIGURE 5.33 LANGUAGE ZONES IN CENTRAL AND EASTERN CANADA, 1981



Source : Don Cartwright, 'Bicultural Conflict in the Context of the Core-Periphery Model', in Colin H. Williams, op. cit., (1991), pp. 219 - 246.

discord may well be intensely local and variable. In the aforementioned case examined by Coleman (199) it bore upon the perverse determination of a particular School District board to maintain disadvantage to one of its cultural groups which was in turn failing to respond to bilingual support systems offered to it. This took place within the State of Connecticut which, despite having massive minority group numbers within its major urban communities failed to use Federal funds for bilingual education to any significant extent. (Figure 5.34)

The case of Belgium is ideal for illustrating the interplay between geolinguistics and the geography of education at various scales with the official response to bilingual overlap being evident in the location of boroughs with 'language facilities'. (Figure 5.34) The point made by Ley about the shifting nature of bilingual zones is particularly well illustrated by Brussels. In reaction to the nationalistic assertion of Flemish identity through the implementation of Belgian language laws to advantage Dutch, especially during periods of German expansionism in the two World Wars, the region of central Brussels: "became more francophone as Flanders became more Flemish." (200) By 1947 only 9.6 per cent of the population of this area were monolingual Dutch speakers; and whereas in 1846 only one of the 19 municipalities of Central Brussels had a (slight) majority of francophones, in 1947 the position was reversed with all but one being francophone, and most substantially so. In an attempt to stabilise the situation a complicated language law was passed in 1963. This provided for a quota system of public service posts (including at the

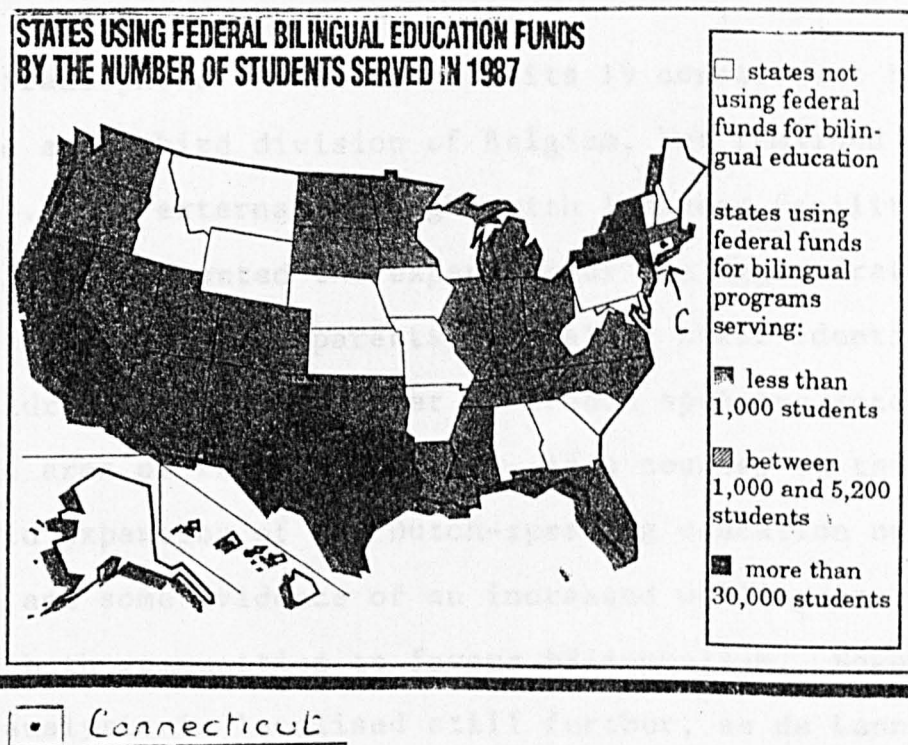
FIGURE 5.34 MINORITY GROUP LINGUISTIC NEED AND OFFICIAL RESPONSE IN CONNECTICUT

a) Need

Language	1977	1978	1979	1980	1981	1982	1983	1984	1985	
									No.	%
Albanian	0	0	21	25	0	0	0	0	0	-
Cambodian	0	0	0	0	66	123	166	139	139	1.3
Greek	43	40	66	20	22	0	0	0	0	-
French Creole	0	0	0	0	0	24	0	22	44	.4
Italian	183	210	54	109	50	64	40	37	37	.4
Laotian	0	0	33	72	174	209	141	99	97	.9
Polish	53	66	35	36	50	44	50	28	45	.4
Portuguese	428	500	480	455	446	336	286	236	164	1.5
Spanish	9,698	10,826	9,328	8,836	8,595	8,864	8,990	9,292	10,074	94.4
Vietnamese	0	0	0	47	90	163	122	89	72	.7
TOTAL	10,405	11,642	9,997	9,600	9,649	9,827	9,795	9,942	10,672	100.0

\*Bilingual education programs serve students in schools with at least 20 students who speak a particular language and who have demonstrated limited English proficiency. Eligible students are served in the subsequent academic year.

b) Response



Source: David J. Coleman, 'Aspects of Puerto Rican Education in the USA', Unpublished PhD thesis, University of Hull, (1991).

clerical level), whereby Dutch and French speakers would have equal numbers and bilingual officials would occupy 20 per cent of appointments. This clearly demonstrated a concession towards the Flemish minority in Brussels, which was also reflected in education legislation the same year. According to Witte:

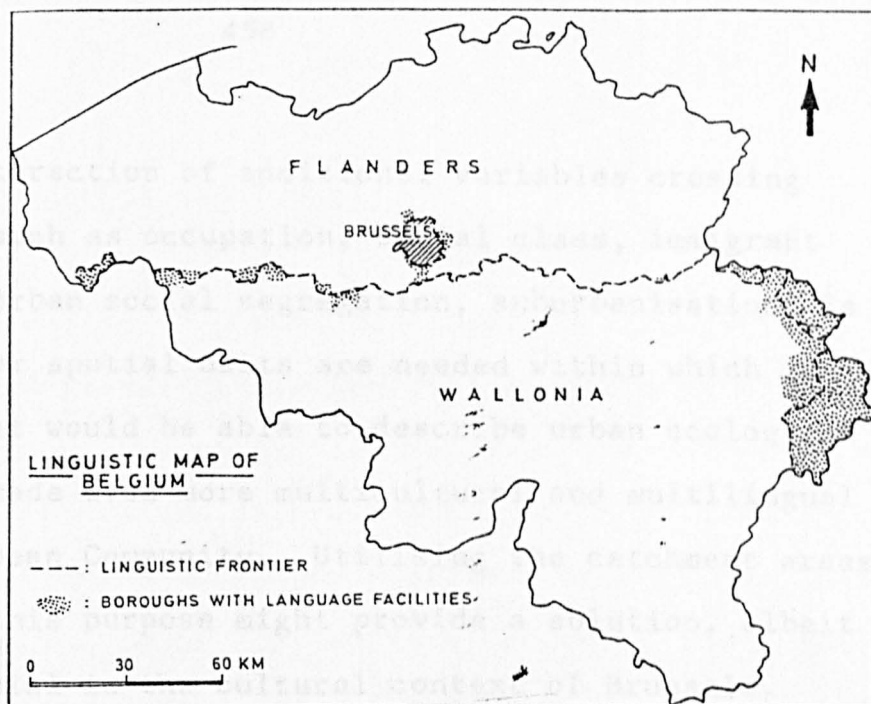
"Transition classes between Dutch-speaking and French-speaking schools were abolished, population norms for Dutch-speaking schools were lowered and the number of hours devoted to second-language learning was increased in Brussels and the boroughs with language facilities. There was also initial agreement on the control to be exercised on the language statement by the head of the family. Children from Dutch-speaking families would no longer be enrolled in French-speaking schools. This part of the law, however, caused heavy protest, not only from French-speakers, but also from Flemish parents who wanted to ensure social promotion for their children via the French-speaking school system." (201)

In 1970 'francophone' Brussels with its 19 constituent boroughs was recognised as a third division of Belgium, but remained 'national territory'. The external boroughs with language facilities (see Figure 5.35) represented the expansion of the agglomeration and in these units, francophone parents maintained their identity by sending their children across the border to French speaking secondary schools within the area of the 19 boroughs. As a counter to this trend there was a rapid expansion of the Dutch-speaking education network in Brussels, and some evidence of an increased willingness by the mid 1980s for both communities to favour bilingualism. However, when the scale of analysis is localised still further, as de Lannoy illustrates,

FIGURE 5.35

GEOLINGUISTIC  
ASPECTS OF  
BELGIUM

a) Linguistic  
Frontiers



b) Political  
Response to  
Linguistic Need  
in Brussels



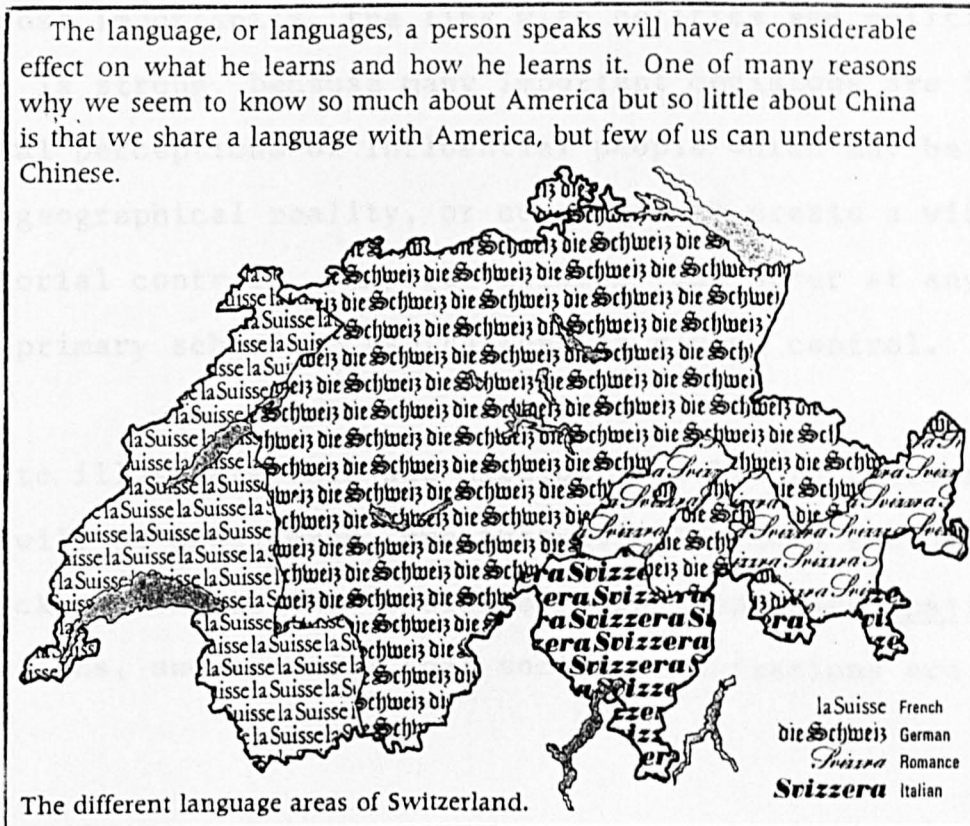
Source: Els Witte and  
Hugo Baetens Beardsmore  
(Eds),  
The Interdisciplinary  
Study of Urban  
Bilingualism in  
Brussels,  
Multilingual Matters  
(1987).



the complexity of interaction of additional variables crossing linguistic divides (such as occupation, social class, immigrant minority ethnicity, urban social segregation, suburbanisation) is immense. Even smaller spatial units are needed within which to generate the data that would be able to describe urban ecological realities in a city made even more multicultural and multilingual by its role in the European Community. Utilising the catchment areas of primary schools for this purpose might provide a solution, albeit inevitably controversial in the cultural context of Brussels.

It is clear from an examination of the language factor that it carries a strong sense of territorial as well as cultural identity; that is to say, a 'sense' of place, which brings us to the behavioural dimension of geography.

FIGURE 5.36 BEHAVIOURAL GEOLINGUISTICS: TEXTUAL/VISUAL



Source : Brian Goody, Where You're At, Penguin, (1974).

### 5.2.6 Behavioural Geography and Education

As was noted in the section on modern developments in geography, this component of the field is relatively recent. It deals with perceptions about places and spaces and how these are passed on and developed. In a non-formal and informal sense it is profoundly linked with education. Behavioural Geography sometimes carries the name Humanistic Geography, and under the two terms there is now a small but significant body of literature. (203) The seemingly cerebral and abstract nature of this approach, belies a very practical significance, (204) which includes the whole world of formal educational space which, as indicated by Price, (205) is under some considerable pressure for change from the forces of the cybernetic revolution. There is obviously a strong link with language, not only as discussed in the previous section, but also in fiction. (206) Perhaps most importantly, the link with politics and political geography is strong, because many important decisions are informed by the spatial perceptions of influential people which may be either, far from the geographical reality, or concerned to create a wider domain of territorial control. 'Empire building' can occur at any scale from within a primary school to aspirations of global control.

In order to illustrate this sub-discipline a little further, two examples will be considered, one theoretical, (207) the other applied. (208) Sack points out that social organisations have spatial manifestations, and secondly that social organisations are often

territorial. We may liken these two points to networks and surfaces respectively, both of which operate in terms of education as has been illustrated above. Sack's second point has to do with political geography and the social enforcement of territorial assertion through institutions such as compulsory systems of state education. This was illustrated above in relation to Dodgshon's work in respect of Europe. (209) All societies have a concept of their own space and perhaps the space of others. In the 'primitive' (ie pre industrial) society: "A constant and intimate knowledge of place enveloped by a mythical view of the land fuses the society to place", (210) and knowledge of this is inculcated through traditional educational means which may involve spatial rituals and symbolism. In the 'civilised' society, by contrast there is an intellectual approach to space whereby alternative patterns of social activities in space can be perceived and the State has developed to effect a coherence among all these abstractions. This is achieved in part through education systems as "space adjusting techniques". (211) Within such a civilised society there may be groups (eg peasant farmers in Southern Italy or Aborigines in Australia) who for different reasons retain fundamentally divergent perceptions of locality and space and incorporate these into their informal education. Whereas such groups have a social definition of territory, the 'civilised' power has a territorial definition of society. Consequently:

"In civilisation, a person's domicile frequently determines the person's membership in social organizations. Each location may be part of several overlapping or hierarchical jurisdictions so that being a resident of a place often means being part of several communities." (212)



One category of such communities would be those concerned with various forms and aspects of education, which, remembering the significance of the informal, would include, for example, being a persistent viewer of regular television programmes of any kind. In the more serious, but not necessarily more influential world of academe, as Becher reminds us, there are academic tribes and territories, (213) and in between there are schools and catchments. Curiously, however Sack does not invoke the educational dimension in his otherwise impressive analysis, save, the writer feels implicitly in the penultimate sentence:

"What marks the modern conception of societal space from the primitive is the range of mixtures available to the modern society, and the fact that the modern, unlike the primitive, has access to more specialised sophisticated views." (214)

It is clear that education, in its different forms can be an element of the political, economic, social or cultural landscapes, and the question of where the geography of education may reside within the parent disciplines will be considered in the next and concluding chapter. The behavioural approach to geography has its strongest links with the cultural dimension, and this is particularly well illustrated by Hong-Key Yoon in his study of Maori forms of 'geomancy', which is:

"... a traditional art of selecting auspicious sites for various purposes, especially those for house, grave, temple, market and settlement by evaluating regional landscape." (215)

In such a society educational functions would reside in most of these

purposes, since teaching and learning tended to be functional, and integrated with various aspects of everyday life and survival. At the ceremonial level the particular form of language, the 'motto-maxim' is used to locate the tribal group in geographical and mythological terms. Since all community activities, including aspects of education took place in the 'marae', or complex of facilities, the selection of a site for this complex is significant. With conversion to Anglicanism the Maoris took to locating their churches and marae together because of their complimentary functions but the joint location was nonetheless determined by a process of geomancy, itself informed by geomentality, which is:

" ... an established and lasting state of mind which is necessarily translated into a particular behavioural pattern in dealing with the environment. Different cultures tend to have different geomentalities which induces different forms of geographical behaviour". (216)

The various forms of education: formal, non-formal, informal have to be accommodated within the overall geomentality of the culture and the notions of what constitutes 'education' that reside within the culture.

In the Western tradition the form taken by the locus of the formal variant has been strongly influenced by the fused traditions of Classical and Christian learning with the monastic ambiance and physical structure bequeathing certain attitudes towards what constitutes educational space. The separateness of that space from the 'real' world outside and the dominance of the holy book in the

learning process has had a profound effect. So that notwithstanding the aforementioned significance of towns, trade and patronage in the spread of that educational tradition, its internal form - the school building - still retains something of that separateness, as does the classroom within it:

"To a boy like Peter a school building, even an old and not very attractively furnished one, is a new world - of large windows and solid floors and doors and plastered ceilings and walls with pictures on them, and a seat that one has, that one is given, that one is supposed to own, or virtually own, for day after day, almost as a right of some sort." (217)

Coles was writing about the seven year old son of migrant farm workers in the USA, but the same sense of stability could apply for children within a massive conurbation where a new geomentality has grown up in association with industrialisation. As Sime asks in respect of the physical creation of schools, are we 'Creating Places or Designing Spaces'? (218) As leading behavioural geographers remind us, (219) place and space are profoundly linked whatever the scale of spatial perception in operation. One should add in passing that the field of environmental psychology, within which Sime's contribution resides is a fertile one for the furtherance of the behavioural dimension of the geography of education. (220)

Hong-Key Yoon claims that geomentality differs from environmental perception in that the former is culturally embedded and enduring, while the latter "may neither endure very long, nor be necessarily translated into a behavioural pattern." (221) Be that as it may, both

involve learning in relation to the environment, as his fellow geographer Chapman illustrates in respect of the role of folklore in relation to the perceived environment of Bihar. (222) Chapman examines the "collective store of traditional information" on the physical environment, and farming practices undertaken within it by four different cultural groups working the land. The temporal dimension of their work is emphasised, which is a reminder of the ongoing, fundamental but oft neglected integration of space and time in dynamic geographical analysis. He is able to illustrate the implications of the tension between the knowledge frameworks of the peasant communities and those of the government agencies, for the process of agricultural extension. Chapman found that traditional environmental knowledge derived from a number of sources, ranging from poetic folklore to written almanacs. Together these contribute to the compilation of lunar calendars but because: "the lunar calendar is not fixed with the solar year, its uses for agriculture are limited." (223) Nonetheless, one of the calendars, based on asterisms (nakshatra), provides 'ideal' time slices for field practice. Clearly here the behavioural imperative is strong for, as Chapman puts it in relation to these cyclical times:

" ... they are so completely ingrained in the rural tradition of Bihar that one feels that Rohini (the time to sow) Hathiya (the swelling of the grain), and Chitra (the beginning of harvest) are the realities which command the seasons to move and the crops to grow." (224)

The issue of what is 'reality' lies at the heart of behavioural geography and affects its (potential) educational dimension as much as

any other. In relation to the Bihar research, undertaken with communities of different linguistic character, the problem of preserving symbolic meaning when translating into a 'modern' language is a significant one, but using linguistic computing programmes, Chapman was able to distinguish different patterns of perception as between the four cultural groups involved, (see Figure 5.37). From disaggregated statistics derived from the knowledge base as researched from almanacs, calendars and interview transcripts, Chapman concludes that: "... the knowledge displayed by the Hos of the 'natural environment' is clearly outstanding, and by the Santhalis possibly at a higher level than for the other two groups." (225)

Another illustration of the power of the behavioural dimension is the status afforded the concept of Rohini (the time to sow). According to local environmental perception:

"Rain that falls before the advent of the monsoon is said to reduce the amount that will fall in the later part of the monsoon. This of course raises the question of the definition of the monsoon, and it transpires that, by definition, rain that falls before Rohini cannot be monsoon rain. Thus the onus of proof of the nature of the rain is removed from the meteorological realm into that of the asterism." (226)

Some of the environmental perceptions derive from legendary figures in poetic folklore, differentially respected as between the four cultural groups involved, which leads to disparity of practice as between groups in the same physical environment and between the actual and optimal use of the environment in material productive terms. Herein

FIGURE 5.37 CULTURE, LANDSCAPE AND LEARNING IN BIHAR

1. Interviews by language and ethnicity			2. Numbers by ethnicity	
Interview language	Ethnic group	Number of interviews	Dominant group	Number of villages
Bengali	Bengali	21	Bengali	15
Bengali	Santhali	3	Bihari	15
Bengali	Ho	1	Ho	6
Bihari	Bihari	18	Santhali	2
Ho	Ho	7		
Santhali	Santhali	6		

3. Substantive Words Used : by Linguistic Group and Subject									
Subject	Bengali		Bihari		Santhali		Ho		
	frequency	%	frequency	%	frequency	%	frequency	%	
Soils	103	4	82	3	7	2	31	4	
Animals, birds, insects	108	4	154	6	31	7	119	15	
Astronomy	46	2	53	2	23	5	24	3	
Weather	536	23	919	30	180	40	287	37	
Plants	100	4	70	3	10	2	86	11	
Calendar	372	15	536	19	76	17	44	6	
Disease	107	4	83	3	1	1	37	5	
Mythical <sup>a</sup>	68	3	76	3	26	6	3	0	
General farming <sup>b</sup>	642	27	528	19	76	17	102	13	
Cultivated crops	321	13	252	9	15	3	38	5	
Total	2403	100	2753	100	445	100	771	100	

<sup>a</sup> Includes names of gods, goddesses, and legendary farmers.

<sup>b</sup> Includes activities such as ploughing, weeding, and mending earth banks.

4. Dissimilarity of Groups, Pairwise*					
	Bengali	Bihari	Santhali	Ho	Total
Bengali	—	28	55	68	151
Bihari	28	—	31	54	113
Santhali	55	31	—	51	137
Ho	68	54	51	—	173

\* The figures are the sums of all absolute differences in each percentage frequency column of table 3 (above) for the named pairs.

Source : G.P. Chapman, The Folklore of the Perceived Environment in Bihar', *Environment and Planning A*, 15, (1983), pp. 945 - 968.

lies the tension between all four groups of farmers and the agricultural extension services, as fundamentally different mental frameworks are in operation: one based on rational scientific endeavour, the other on folklore. Unless efforts to introduce new farming ideas are sensitive to the folklore they are unlikely to be adopted.

The lesson for formal education in relation to environmental matters (physical and social) is clear, and the learning of it lay behind the successful work at Inishowen in Ireland, described above. (227) The Italian geographer Orefice, already mentioned in respect of his contribution to the 1981 geography of education workshop in Geneva, displays similar sensitivities in his community education project in Southern Italy. (228) Although the MOTEP project formed part of the planned decentralisation of Italian educational administration following the establishment of regional government in 1970, it included the unusually enlightened object of enhancing cultural self-awareness at local community level. Four municipalities to the west of Naples were selected and a 'bottom up' identification of locally perceived priorities was effected. This was achieved through a two stage exercise in environmental perception, or as Orefice puts it 'community self-education'. The first, or didactic, phase bears some comparison with the cultural missions set up by Jose Vasconcelos in Mexico (230) in the 1920s which in turn influenced the adult education methods of Paulo Freire in Brazil. (231) Charts with 'shorthand graphics' were used depicting issues that had emerged from participatory enquiry. Schoolchildren also figured in this local

research, producing charts of various aspects of the local environment as they perceived them. All 'phase one' work operated at the municipal level.

Phase two was organised at the scale of the comprensori, or aggregate zone of the four municipalities. In this way recurrent environmental perceptions were identified and five priority areas selected: "agriculture; cultural wealth of historic monuments and places; pollution of the sea; health; maritime work." One of the main outcomes of this behavioural exercise was educational in the form of an 'institute' for the promotion of socio-cultural activities and community awareness, though care was taken not to make this centre too institutional! This was because of the evidently rich seam of human capital that had been struck by this participatory approach. It was:

"... rich in unsuspected possibilities, that is only waiting to come out of the silence into which it is systematically relegated by the institutions. This untapped potential can bring new life to an area that, in its crisis, shows clearly all the negative aspects of power and its ideological trappings."  
(232)

Orefice is recognising here the constraining influence of formal education, especially at the higher levels, and its space adjusting effects. The opposite is true of the behavioural experiment which is clearly and effectively liberating in both spatial and perceptual terms.



On the other hand, especially when viewed externally, prestigious educational institutions can have a positive effect on the diffuse as well as the economic status of a place, and at the same time the choice of name for such an institution may have positive or negative images according to the receiver of information. An interesting case in this behavioural realm was the decision in 1988 by Plymouth Polytechnic to change its name to Polytechnic South-West. This was immediately challenged by Bristol Polytechnic which claimed that Bristol rather than Plymouth was the capital of the South-West, and offered as evidence its own self styled South-West Regional Management Centre! Plymouth's response to this was more geographically perceptive:

"Our back door is Devon and Cornwall and other parts of the South-West. Bristol's back door is the city and the West into Wales and parts of the Midlands. In a sense their term South-West is a measure of convenience." (233)

picking up on the aforementioned 'think-belt' extending west from London through Reading, Oxford, Swindon, Bristol and Cardiff to Swansea. Showing a keen awareness of the mental maps of sixth-formers, (234) the Plymouth statement pointed out, with some justification that:

"Not only will the name change give Plymouth a market advantage, but in a recent survey asking school leavers where they would like to live, most of them pointed to the South-West. We would hope that will reflect on where they would like to study." (235)

So the behavioural geography of education as far as institutions of

higher education in England are concerned would appear to depend on a combination of their own image and that of the settlement or region in which they are located. This was illustrated by Reid in respect of his study of applicants' images of universities. (236) At the time of writing, the polytechnics of England are about to gain university status and titles. To date the view of the University of Exeter as to the prospect of a 'University South-West' in Plymouth is not known. It may well be that the title 'University of Plymouth' will be preferred to the inclusion of a regional element, the status having been elevated by an educational rather than geographical form of imagery!

Mention was made above of different ways of projecting the image of Hull, that with equal validity emphasises either a peripheral or a nodal position (see Figure 4.4). In its current prospectus, the University of Hull seeks to enhance its locational image through an extract from the observations of the poet Philip Larkin on what Dunn calls a 'Rumoured City':

"People are slow to leave it, quick to return. And there are others who come, as they think, for a year or two and stay a lifetime, sensing that they have found a city that is in the world yet sufficiently on the edge of it to have a different resonance." (237)

But perception is affected by scale as the regional battle of the 'South-West' illustrated. Hull, by political geography, is located in Humberside, a unit with some credibility and potential from the viewpoint of economic geography. Humberside Polytechnic will retain the regional title on gaining university status but most of Humberside

will revert in name to Yorkshire as a result of local government reform in the mid 1990s. As one of the alumni of the University of Hull reminds us, the behavioural version of geography can be no less real than the political and tends to be the more enduring:

"Yorkshire is an idea not a place. Of course it is not solely the creation of fey literary imagination. Yorkshire has nothing in common with Camelot. For one thing, no self-respecting Yorkshireman would throw away a perfectly good sword. For another, it was fact before it turned into fantasy. Once upon a time - before the Redcliffe - Maud Report - Yorkshire was marked on the real maps of the real world, an English county only divided into three Ridings because it was too big to be governed in single splendour. But even then, before it only formally and factually existed as the name of a cricket team, the noun Yorkshire was more spiritual than geographical". (238)

Another of the alumni, this time a geographer, is able to capture through operating at the most local scale, that 'meaning of place' which comes from the language of landscape - that most informal, intimate and profound of the organic relationships between geography and education. (239).

### 5.3 SUMMARY

It seems clear from the trawl of literature pertaining to the geography of education that resides within the six aspects of the parent discipline reviewed in this chapter that the position remains potential rather than actual. Yet the scale of the potential is also clear. Together with the examples already discussed under different

heads in Parts A and B, those highlighted in Part C form, in the writer's view, sufficient mass to be 'critical', and in qualitative as well as quantitative terms. Sufficient, that is, to prosecute the thesis. But reference back to Figure 4.8 will show that there are a number of other categories within which relevant literature can, and does reside.

Some of these will be used to inform the following, and concluding, chapter in which the case is made and rested.

## REFERENCES

1. See for example:
  - a) the geographical distribution of schools accepted for the Assisted Places Scheme of the UK Government in respect of England and Wales which, even if allowing for possible lack of selection bias, inevitably depends on the existing locations of independent secondary schools;
  - b) the alleged preferential treatment of Crete within the Greek system in recent times;
  - c) the common practice of national leaders, especially though not exclusively of developing countries, favouring their own (tribal) group in respect of public services and infrastructure, including schools.
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17. Andrea Canevaro, op. cit.
18. Bruce C. Daniels, The Connecticut Town : Growth and Development, 1635 - 1790, Wesleyan University Press, Middletown, (1979).
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  - b) J.S. Hurt, op. cit.
  - c) John William Adamson, op. cit.
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74. F.J. Burdett, op. cit.
75. Although the Secretary of State has, in 1992, permitted such 'local cluster opt-outs', which would seem to be a recognition of the potential chaos and sharpened disparity arising from a genuinely open market, he has not allowed the wholesale opt-out of a complete LEA school system as was desired by the schools of Cambridgeshire.
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Origin and Subject	1	2	3	4	5	6	7	8	9	10
Commonwealth	534	219	465	446	472	540	1534	228	1726	1132
Other 'Foreign'	741	358	1018	554	1385	1048	3054	314	3526	1829
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> 1. Medicine and Dentistry  2. Medicine Related  3. Biological Sciences  4. Veterinary and Agriculture  5. Physical Sciences </div> <div style="width: 50%;"> 6. Mathematics  7. Engineering and Technology  8. Architecture and Planning  9. Social Studies  10. Business Studies and Administration </div> </div>										

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- b) L. Cerych and S. Colton, 'Summarising Recent Student Flows', European Journal of Education, 15 : 1, (1980), pp. 15 - 34;
- c) K Roeloffs, 'International Mobility in Higher Education : Experiences of an Academic Exchange Agency in the Federal Republic of Germany', European Journal of Education, 17 : 1, (1982), pp. 37 - 48;
- d) European Journal of Education, 22 : 1, (1987) (Special Edition on 'Practice, Politics and Function of Foreign Study in Higher Education').

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  - a) C.T. Smith, op. cit.,
  - b) James Cox Russell, op. cit.
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205. Cedric Price, op. cit.
206. This of course ranges from children's literature to adult poetry and prose; for example:
  - a) Rudyard Kipling, Just So Stories, Macmillan, (1902);
  - b) Arthur Ransome, Swallows and Amazons, Penguin, (1932);
  - c) J.R.R. Tolkien, The Hobbit, Unwin, (1937);
  - d) E.B. White, Charlotte's Web, Penguin, (1952);
  - e) the innumerable Tintin stories by Herge, see: Michael Farr, 'The Global Lessons Tintin Taught Us', Geographical, LXIII : 2, (1991), pp. 6 - 11.
  - f) Brian J. Hudson, 'The Geographical Imagination of Arnold Bennett', Transactions of the Institute of British Geographers, 7 : 3 (1982), pp. 365 - 379.
  - g) E.W. Gilbert, 'The Idea of the Region', Geography, 45, (1960), pp. 157 - 175.
  - h) Douglas Pocock, Humanistic Geography and the Literature, Croom Helm, (1981).
  - i) Roy Hattersley, Goodbye to Yorkshire, Penguin, (1976).
207. Robert Sack, 'The Societal Conception of Space', in Doreen Massey and John Allen (Eds), Geography Matters: a Reader, Cambridge University Press, (1984), pp. 34 - 47.
208. Hong-Key Yoon, Maori Mind, Maori Land, Collection Eratosthene, (1986).
209. Robert Dodgshon, op. cit.
210. Robert Sack, op. cit., (1984), p. 38.
211. Spencer Thomas, op. cit.
212. Robert Sack, op. cit., p. 41.
213. Tony Becher, Academic Tribes and Territories, SRHE/Open University Press (1989).
214. Robert Sack, op. cit., p. 43.
215. Hong-Key Yoon, op. cit., p. 5.

216. Ibid., p. 45.
217. Robert Coles, Migrants, Sharecroppers, Mountaineers, Atlantic-Little, Brown, (1972), p. 67.
218. Jonathan D. Sime, op. cit.
219. Yi-Fu Tuan, op. cit.
220. See for example:
  - a) Fred J. Van Staden, 'Urban Early Adolescents, Crowding and the Neighbourhood Experience : a preliminary investigation', Journal of Environmental Psychology, 4 : 2, (1984), pp. 97 - 118;
  - b) Shirley Fisher, et al 'The Transition from Home to Boarding School : a Diary Style Analysis of the Problems and Worries of Boarding School Pupils', Journal of Environmental Psychology, 4 : 3, (1984), pp. 211 - 222.
  - c) Leanne G. Purlin and Carol S. Wemstein, 'Educational Issues, School Settings and Environmental Psychology', Journal of Environmental Psychology, 4 : 4, (1984), pp. 347 - 364.
  - d) Gary T. Moore, 'Effects of a Spatial Definition of Behaviour Settings on Children's Behaviour : a Quasi Experimental Field', Journal of Environmental Psychology, 6 : 3, (1986), pp. 205 - 222.
221. Hong-Key Yoon, op. cit., p. 45.
222. G.P. Chapman, 'The Folklore of the Perceived Environment of Bihar', Environment and Planning A, 15, (1983), pp. 945 - 968.
223. Ibid., p. 949.
224. Ibid., p. 950.
225. Ibid., p. 955.
226. Ibid., p. 955 - 6.
227. Micheal O'Kinneide, op. cit.
228. Paulo Orefice, op. cit.
229. MOTEP is the acronym for 'Un Modello Territoriale di Programmazione Educativa'.
230. See for example:
  - a) C.C. Gill, Education in a Changing Mexico, U.S. Govt. Printing Office, (1969).

- b) Charles N. Myers, Education and National Development in Mexico, Princeton University (1965)
- c) George F. Kneller, 'The Education of the Mexican Nation', Columbia University Press, (1951).

231. See for example:

- a) Paulo Friere and Macedo Donaldo, Literacy : Reading the Word and the World', Routledge and Kegan Paul (1987).
- b) Paulo Friere, Education for Critical Consciousness, Sheed and Ward (1974).

232. Paulo Orefice, Cultural Self-Awareness of a Local Community : An Experience in the South of Italy, mimeo, (1981), p. 8.

233. 'Plymouth v Bristol Title Fight', Times Higher Education Supplement, 2 December, 1988.

234. Peter Gould and Rodney White, op. cit.

235. Times Higher Education Supplement, 2 December, 1988, op. cit.

236. W.A. Reid, 'Applicants Images of Universities', Educational Review, 26 : 1, (1973), pp. 16 - 29.

237. Philip Larkin, Forward to : Douglas Dunn (Ed), A Rumoured City : New Poets from Hull, Bloodaxe Books, (1982).

238. Roy Hattersley, op. cit., p. 15.

239. Jacqueline Anne Burgess, The Meaning of Place : a Study of Geographical Imagery with Particular Reference to Kingston-upon-Hull, Unpublished PhD Thesis, University of Hull, (1976).

CHAPTER SIX  
RESTING THE CASE

6.1 SUMMING UP

It is evident that within the six component parts of human geography, represented by the sub-divisions of section 5.2 above, there resides a certain amount of literature that either implicitly or explicitly could contribute towards a geography of education. In selecting these examples care was taken not to repeat sources that had been described and discussed in the previous four chapters but could have been allocated to one of these six areas. Indeed the rationale of the thesis has been to look at the issue in question from different perspectives in each of the substantive chapters, and accumulate serially a stock of sources that in toto represents the raw material from which a geography of education might be fashioned. It does not in itself form such a sub-discipline, there having been no previous attempt known to the writer to effect the synthesis on this scale. There have, of course, been several exhortations duly mentioned and referenced in Chapter four, aimed at encouraging an interest in such a venture on the part of both geographers and educationists. Reasons for the lack of any organised response from either group have already been given, but may be briefly summarised here as:

- a) a naive assumption on the part of most geographers that because most countries have stated policies of educational provision, these are actually in operation and equally accessible to the relevant age groups of the population;



- b) a primitive perception of geography on the part of most educationists that bears no resemblance to the development of the discipline since the early 1960s.

It is for this reason that the first substantive chapter of the thesis attempted a comparison of the two disciplines, with a view to illustrating their essential compatibility as fields concerned inter alia with patterns of diffusion and distribution in spatial terms. So we are dealing not only with such matters as the location of schools and the flow of students to and from them, but also less visible spatial features such as flows of information and the ownership of knowledge.

The second part of the thesis sought to adopt a geographical perspective on selected aspects of the story of educational development. In so doing, some of the features and techniques of modern geography were introduced, such as the concepts of networks, nodes, diffusion and surfaces, in relation to the evolution of formal education from instrumental initiatives associated with the first urban revolution to space-adjusting and custodial functions in the modern nation state. Within this broad framework two fundamental characteristics of modern geography were repeatedly involved, namely:

- a) the significance of scale in geographical analysis;
- b) the essentially dynamic character of (human) geography as illustrated by the movement of people and ideas over space.

One of the objectives of this approach was to bring the non-geographical reader to the more technical part of the thesis with some feeling for the nature of modern geography in relation to educational development.

In the third part of the thesis we have been concerned to attempt to apply a number of interpretations of modern geography to the manifestations of education: formal, non-formal and informal. In addition to the models and characteristics of geography provided by the writer in the form of figures 1.1, 1.2 and 1.4, the typologies of geography formulated by Broek, Haggett and Walford were applied to education. In so doing it became evident that every facet of each of these models could be profitably applied to 'education the phenomenon' and thereby inform, and assist the development of 'education the discipline'. This in itself proves the undoubted potential of a geography of education, but unless there is an underlying scheme it has to remain potential rather than actual. The case may be strong, but an 'intellectual sponsor' would still be needed to provide cohesion. Following the application of the models of modern geography we come to the fifth chapter where the main components of human geography are searched for evidence of implicit or explicit elements that have to do with the geography of education. As with the models in Chapter four they each have clear examples to contribute, though the balance of power depends very much on the form of education involved in particular examples. Wherever formal education is the focus, the dominance of the political factor is evident, and this appears to confirm the selection by the educationist, Bereday, (1) of political

geography as one of three potential foster parents for his field, comparative education. This in turn brings up again the aforementioned attempt by Fletcher (2) to equate comparative education with the geography of education, which founders on the evidently inadequate perception of geography that is employed. However, in so far as there is a degree of comparability between these two fields - after all, comparative education is merely education writ large - it is more due to their mutual reliance on a similar range of contributing disciplines than to any more fundamental affinity. While comparative education includes an interest in locational and spatial analysis, as yet inadequately addressed, geography is entirely to do with this intellectual perspective. Clearly comparative education would be considerably enhanced by the emergence of a geography of education but would not, and indeed could not be taken over by it.

What this summary tells us is that while geography and education are undoubtedly comparable as disciplines, the geography of education cannot be relating in the same degree to both. Its genes are essentially geographical and its value lies in the application of distinctive perspectives and techniques to the analysis of the phenomenon of educational activity on the part of members of the animal kingdom, and mainly of course the human species.

If this is so, then a geography of education of any consequence is unlikely to emerge from the exhortations or even attempts of educationists, albeit some of them may be 'lapsed geographers'. We must look again at the models employed above and attempt to determine

whether they can provide the required intellectual basis, and if not, then seek or develop something more suitable on which to assemble the considerable stock of material that clearly exists.

## 6.2 INTERPRETING THE ESSENCE OF A GEOGRAPHY OF EDUCATION

### 6.2.1 Limitations of the Models of Modern Geography

A number of models have been employed to assist the prosecution of the thesis that the potential for a geography of education exists. This has not been unsuccessful, indeed the writer would suggest quite the opposite. But to realise that potential requires something more, and in any case the models employed were having different objectives as between themselves. Nonetheless, a brief résumé may assist in determining what is now required for a geography of education to acquire the necessary intellectual framework.

The models forming Figures 1.1 and 1.2 are wholly descriptive and illustrative in nature. They are accurate, and serve the function intended, but do not claim to effect any connection between geography and education. They are not dynamic, and while it would be possible to construct a third parallel model showing how a geography of education would comprise similar component repositories for sub-categories of its literature, this in itself would not be enough to tap the essence of the proposed new sub-discipline.

Figure 1.4 is an attempt to move a step in this direction by seeking to identify the essence of the parental disciplines. The outcome suggested is encouraging in that both are clearly dynamic operations concerned with dissemination and diffusion, but they are qualitatively quite different. While for education the spatial and locational dimension is a definite outcome of the process, it is not the driving force or prime focus. One could argue that it should be, but the virtual absence of a geography of education to date deprives the argument of its ammunition. For geography, the spatial and locational imperative is the driving force, and its distinctive concern with the interaction of space, place and time in respect of all the earth's surface phenomena, and the processes that produce them, provides a vast range of potential studies. However, the sheer scope of the discipline, and the attendant problems of time and resourcing, do not explain the lack of interest on the part of the majority of its practitioners in the phenomenon of education, which is a major user of space in a variety of ways.

Part of the problem may be the overbearing concern of 'education the discipline' with studies of its formal variant, at the expense of the non-formal and informal. Furthermore the study of education is almost confined to the clientele of the teaching profession as part of initial or in-service training. This very parochial and partial situation does not encourage interest from outside, and geographers along with many others may well regard the study of education as a professional preserve with all that that implies in terms of generating and maintaining a mystique.

The models of Broek, Haggett and Walford are all most instructive and helpful in terms of understanding the nature of modern geography, and in Chapter four their application to education as a legitimate focus was clearly generated. That is to say, every element of each of these models had a potential, and in some cases actual, use in increasing our understanding of 'education the phenomenon'. However, these models are different in their intent and cannot therefore be aggregated into a synthetic whole. While Broek deals with the characteristics of modern geography, Haggett is concerned with its structure and Walford with its dynamism. They are focussed on geography itself and can only be applied, albeit with some profit, to particular manifestations of educational activity in spatial terms. Figure 4.8 is an attempt to portray the location of the literature constituting a geography of education according to elements of all three models and the constituent sectors of educational activity. It is not a dynamic model except in its modest capacity to integrate its components. It has obvious structural limitations.

#### 6.2.2 Towards an Integrated and Holistic Model of the Geography of Education

The aforementioned limitations of models used in the accumulation of evidence to support the case for a geography of education do not render them useless. On the contrary they remain, and have been seen to be, essential vehicles for the prosecution of particular detailed studies within this new sub-discipline. Even in this modest review

they have contributed considerably to identifying the evidence on which the case can be made.

Ryba makes an important point in taking us further in our search for an integrated model, (3) in his threefold statement of relationships with which a geography of education would be concerned, namely:

- a) with geographical factors underlying educational phenomena;
- b) with spatial patterns exhibited by educational phenomena;
- c) with the role of education as informing geographical patterns of other social and cultural phenomena.

The third point is the important one here in that it implies that education can itself be a geographical factor in that it may create or influence additional spatial phenomena. The regional effect of establishing a new university would be a good example, (4) as would the local multiplier effect of such an institution. In its submission to the then University Grants Committee, against the cuts of 1981 imposed upon it, the University of Hull included the argument that:

"Assuming the 5400 students spend an average of only £300 each locally, there will be a further contribution of £1.62 million to the local economy; the average is likely to be higher ... The University employs 2200 staff of whom 1700 were recruited locally. It is the fourth or fifth largest employer in Hull and its purchasing power supports many more jobs." (5)

This university was not alone in invoking its role in terms of the economic geography of education, and some others would have had even more significance for their local economies. It would be instructive to undertake a detailed spatial analysis of the influence of such institutions. It is not merely the absolute scale of a university, but its significance relative to the scale of the settlement and region of which it forms part that is important. Mention has been made of the significance of the private secondary sector in English education. Many of its members are the dominant feature of the human geography of their respective locations.

Recognition of the interactive relationship between geographical and educational phenomena is crucial to the case for a geography of education, as is the issue of scale. If educational plant, goods, services and outputs are viewed through dynamic spatial analyses, a more realistic picture of these activities would be obtained. For example, in respect of the USA:

"Part of the information sector of a nation's space economy is neither product-oriented (like most industrial corporations) or service-oriented (like most governments). Instead its job is to produce new knowledge, new application of ideas, or to transmit formalised bodies of knowledge, and to train people in the knowledge business ...

In varying degrees all parts of the nation consume the output of colleges and universities which in a sense are localised knowledge factories. In the United States, scientists are usually trained in one place, then live and work in another ... in colleges and



universities as faculty members, or in industry and government at places where industrial and government research is located ... The spatial distribution of research funds creates an opportunity surface which fluctuates as scientists redistribute themselves within the nation's economy. Since scientists are suppliers as well as consumers of new information and ideas, and since they are also on the move from place to place, it is more difficult to describe the movements of ideas than of people or goods. Nevertheless, interaction principles for information flows ... remain the same as those describing population and commodity movements."(6)

A number of scales of educational activity overlap here, and although the mobility of this type of work may not be so highly developed in the UK as in the USA, it is moving in that direction and a similar pattern of relationships can be perceived. Government funding in respect of the location of its desired research does not result only in the differential concentration of its research in the universities, but also in the particular patterns of location and concentration of the Government's own research centres, leading to the geographers somewhat irreverent but none the less accurate perception of the 'West London Think Belt'. One interesting facet of this phenomenon, the establishment of a European Atomic Energy Research centre near Oxford has had the extra educational effect of an International School being located nearby in the former buildings of an axed teacher training college.

If a geography of education is to be meaningful it must operate within an expansive and integrative approach such as that followed in the

above quotation. This does not mean that smaller scale relatively self contained aspects of the sub-discipline cannot be accommodated, but rather that the parameters must not be set by the formal and institutionalised variant of educational provision.

In the preface to this thesis, mention is made of Nigel Thrift's article which seeks to identify a 'Geography of Knowledge'. (7) This is a rare excursion by a geographer into this realm and its broad theoretical intent is useful to our attempt here to construct a framework within which a geography of education could meaningfully operate. By concerning himself with knowledge rather than education, Thrift is able to escape from the constraints of 'education the discipline'. Such an approach is essential as the kind of scenario envisaged by Price (8) becomes more of a reality. Thrift is concerned with another reality, the availability of knowledge as opposed to its production, distribution and circulation. This immediately places education as a commodity, like any other, differentially available and with the social and economic implications that that implies. In such a situation intellectualised belief becomes less significant than the empirical selection of instrumental knowledge made by human beings in the context of their everyday life. This may well include formalised instruction within systems of education, even during the compulsory stage, but it recognizes even then that the outcome includes a high proportion of idiosyncratic knowledge. As the writer has commented elsewhere in his concern with education and scale:

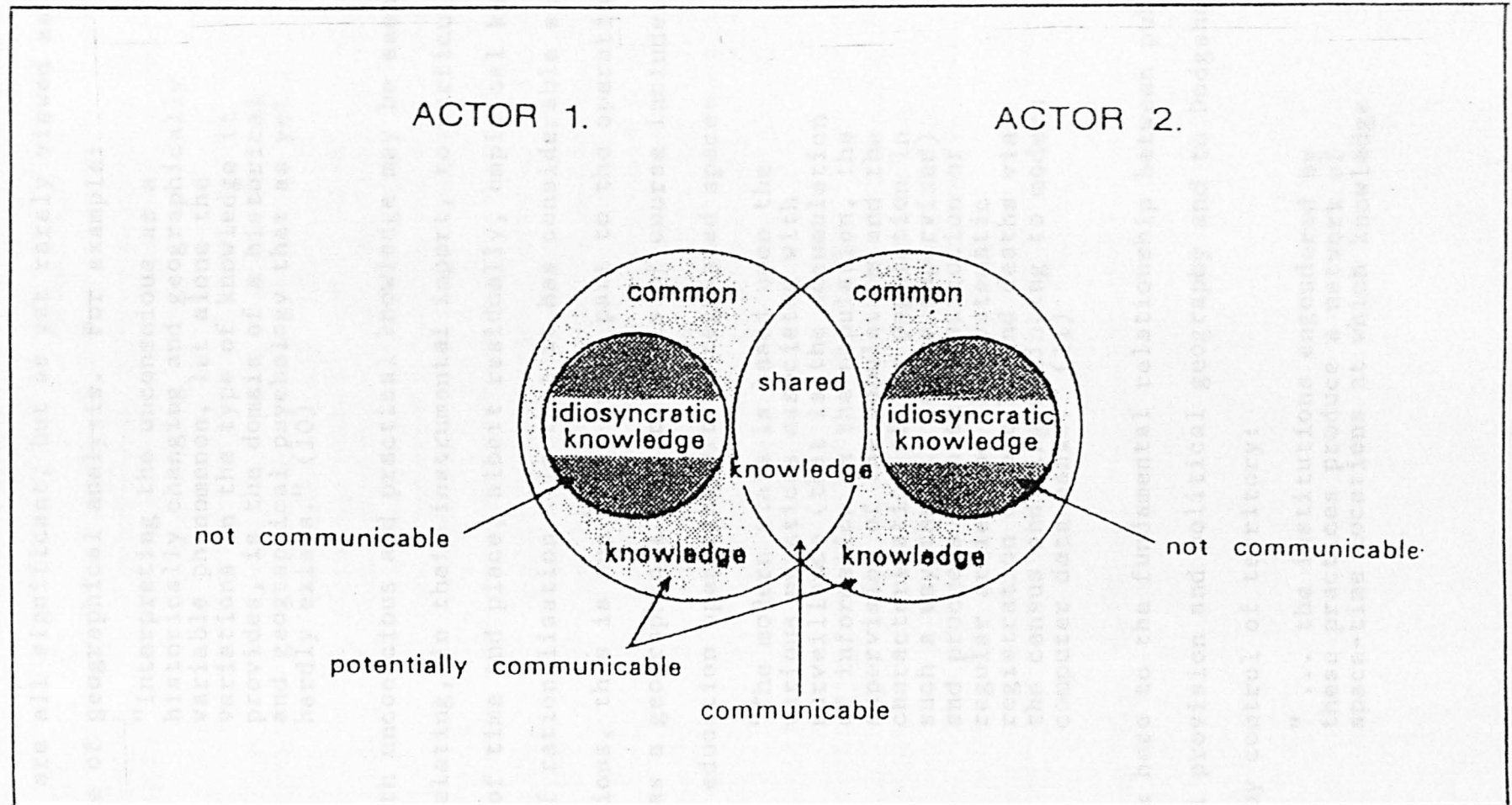
"... is not education in reality one of the most individual of human acquisitions? One which is ultimately effective only at the smallest scale, in

operational terms almost entirely client controlled. That is to say that the individual child, student and adult have a clear perception of their learning needs and a related level of motivation that may be positive or negative in expression. This is not to say that such individual perceptions are necessarily either accurate or in the best interests, however defined, either of the client or the various human groups, local national or international of which he or she forms a part." (9)

Thrift recognises not only the essentially individual nature of what he calls 'knowing', but also the collective variant 'social knowing' available to members of a group. Most people are of course members of many groups at the same time and this permits the communication of some knowledge, as illustrated in Figure 6.1. Numerous communications over time, including through formal education transactions, lead to a differential distribution of knowledge among social groups. Such groups may vary in scale from nations, with controlled provision of knowledge within regulated space, to biological groups, that is to say classified by such attributes as gender, age and race, and socio-economic groups such as classes, cities, states and nations. Furthermore, knowledge is not necessarily understood, due to lack of comprehension, discussion, democracy and accuracy, whether this condition arises from cultural barriers or political constraint or both. Consequently Thrift introduces a concept of 'unknowing'.

The resulting disparities in the quality and quantity of knowledge, including in what Abler et al refer to above as 'the knowledge business', have spatial dimensions in respect of all four components

FIGURE 6.1 THRIFT'S ADAPTATION OF KRECKEL'S MODEL OF KNOWLEDGE AND COMMUNICATION



Source: Nigel Thrift, 'Flies and Germs : A Geography of Knowledge', in : Derek Gregory and John Urry (Eds), Social Relations and Spatial Structures, Macmillan (1985), p.369.

of Thrift's typology of knowledge: unconscious; practical; empirical; and 'natural philosophy'. These are summarised in Figure 6.2. They are all significant, but as yet rarely viewed as being susceptible of geographical analysis. For example:

"Interpreting the unconscious as a historically changing and geographically variable phenomenon, let alone the variations in the type of knowledge it provides, is the domain of a historical and geographical psychology that as yet hardly exists." (10)

Whereas both unconscious and practical knowledge may be seen as directly relating, in their instrumental import, to particular qualities of time and place, albeit residually, empirical knowledge is a result of rationalisation. In that it has considerable spatial manifestations, this is due in no small part to the operation of education as a geographical factor. This of course includes organised systems of education operating within regulated space:

"The modern state is based upon the various practices associated with surveillance (that is the accumulation of information on the population, the supervision of the population and the characterisation of the population in such a way that it can be supervised) and proceeds from the institution of regular armies and the systematic registration of births and deaths via the census and fingerprinting to modern computer data banks." (11)

We are back here to the fundamental relationship between public educational provision and political geography and to Dodgshon's rule of people by control of territory:

"... the institutions engendered by these practices produce a network of space-time locations at which knowledge

FIGURE 6.2 A PORTRAYAL OF THRIFT'S TYPOLOGY OF KNOWLEDGE

TYPE	CHARACTERISTICS
1. UNCONSCIOUS KNOWLEDGE	Knowledge based on forgotten practices but recreated through the objective structures of human ecology.
2. PRACTICAL KNOWLEDGE	Informal but not unstructured knowledge acquired by watching and doing in highly particular contexts. This type of knowledge forms the massive central core of human thinking. It is : unarticulated; continuous and repetitive; highly localised and interactive in human terms; organic and metaphorical; based on the known world.
3. EMPIRICAL KNOWLEDGE	Built up from a rationalisation of knowledge based on the need to provide explanations and the need to organise systematically. It is exercised within a coordinated and controlled learning process operated over regulated territory and planned periods of time, but nonetheless removed in both time and space from the experiences and events it describes. Transmission is through institutions and technologies in codified form.
4. 'NATURAL PHILOSOPHY'	Knowledge that attempts to unify a number of bodies of knowledge into one whole as knowledge about knowledge. It is time consuming, reflective and derived from the other three types.

CB

Derived from: Nigel Thrift, op. cit., pp. 372 - 8.

is stored, received and transmitted.  
 The schooling system forms a  
 particularly crucial set of nodes within  
 this network". (12)

Thriffs fourth category, 'natural philosophy', that is to say  
 "knowledge about knowledge", while being of less immediate import is  
 necessarily partial and to some degree regulated.

All this goes to illustrate the fundamentally cultural character of  
 education in all its forms; 'culture' here meaning the way of life or,  
 as borrowed from Vidal de la Blache in Chapter one above: man's genre  
de vie. It also helps to identify another potential intellectual home  
 for the geography of education, 'cultural geography', to which point we  
 shall return.

First, however, the writer would wish to illustrate the interactive  
 nature of the geography/education relationship and the significance of  
 the cultural approach with reference to two examples, one historical  
 the other modern.

Leaving aside inevitable doctrinal preferences, the Lutheran  
 Reformation has to be seen inter alia as a key stage in the  
 development of European education. While being essentially  
 theological, the dissention of Luther from the established order of  
 Western Christian culture had many ramifications, among the more  
 significant being the differential influence of geographical context  
 and the operation of education, especially its formal mode, as a  
 geographical factor. On the contextual side the operation at that

time of three nested scales of political geography within the Holy Roman Empire needs to be highlighted. There were at once Imperial, state and municipal paradigms to be addressed, plus the broader geographical surface of Roman Catholic operation and the antipathy between its Italian and German components which carried intellectual and educational overtones.

Luther was himself a product of the spread of Renaissance humanism already popularised by the peculiar educational methodology of Erasmus which, to say the least, employed unconventional and non-formal methods of dissemination in pedagogical terms. This new culture had been enabled to develop through the patronage of municipal wealth, as well as of political leaders, and also through the harnessing of the new information technology of the day, the invention of printing in mechanical form. This in turn enabled mass distribution of information and ideas within a short space of time. We may select a few aspects of the geographical dimensions of the Lutheran Reformation, especially those with educational significance, for brief discussion.

Firstly, while being part of the Roman Catholic surface comprising most of Western Europe, with the obvious educational consequences of the use of Latin as medium, Luther was keenly aware of the need to employ the vernacular as a means of both spreading the gospel and popularising his viewpoint.(13) In so engaging the popular medium Luther and his colleagues were able to operate more effectively through non-formal adult education involving circulating dramas, music



and preaching as well as through the establishment of at least 100 school systems, mostly at municipal level. Secondly, this would not have been possible but for a strong political base at both provincial and city level, which was provided by the patronage of Frederick, The Elector of Saxony, who was like his counterparts in other states mindful of the significance of universities to both city and state. With respect to Frederick and his role, Mackinnon comments:

" ... it is not the least of his merits that in founding and fostering the University of Wittenberg, he provided Luther with the sphere in which he could develop and promote "the new theology" which was rising like another star in the east on the horizon of the academic youth. He had a keen interest and justifiable pride in the institution which was reflecting such renown in his principality and to which an increasing number of students was being attracted by Luther's rising fame and that of his colleagues, Carlstadt, Amsdorf and Melanchthon. Wittenberg became the focus of the new movement in theology and higher education. Its reputation was already dwarfing that of the other German schools of learning, and by multiplying Luther's disciplines, materially contributed to diffuse his teaching and his reforming influence."  
(14)

Nipperdey claims that the significance of German universities to their respective states also created a variety of mental as well as aerial territories and that the freedom of movement from one university to another contributed to a behavioural situation whereby: "pluralism itself kept the association of knowledge and conscience alive".(15)  
On the other hand, as Dickens points out, one of the advantages of both Nuremberg and Strassburg in coping with the upheaval of the Lutheran

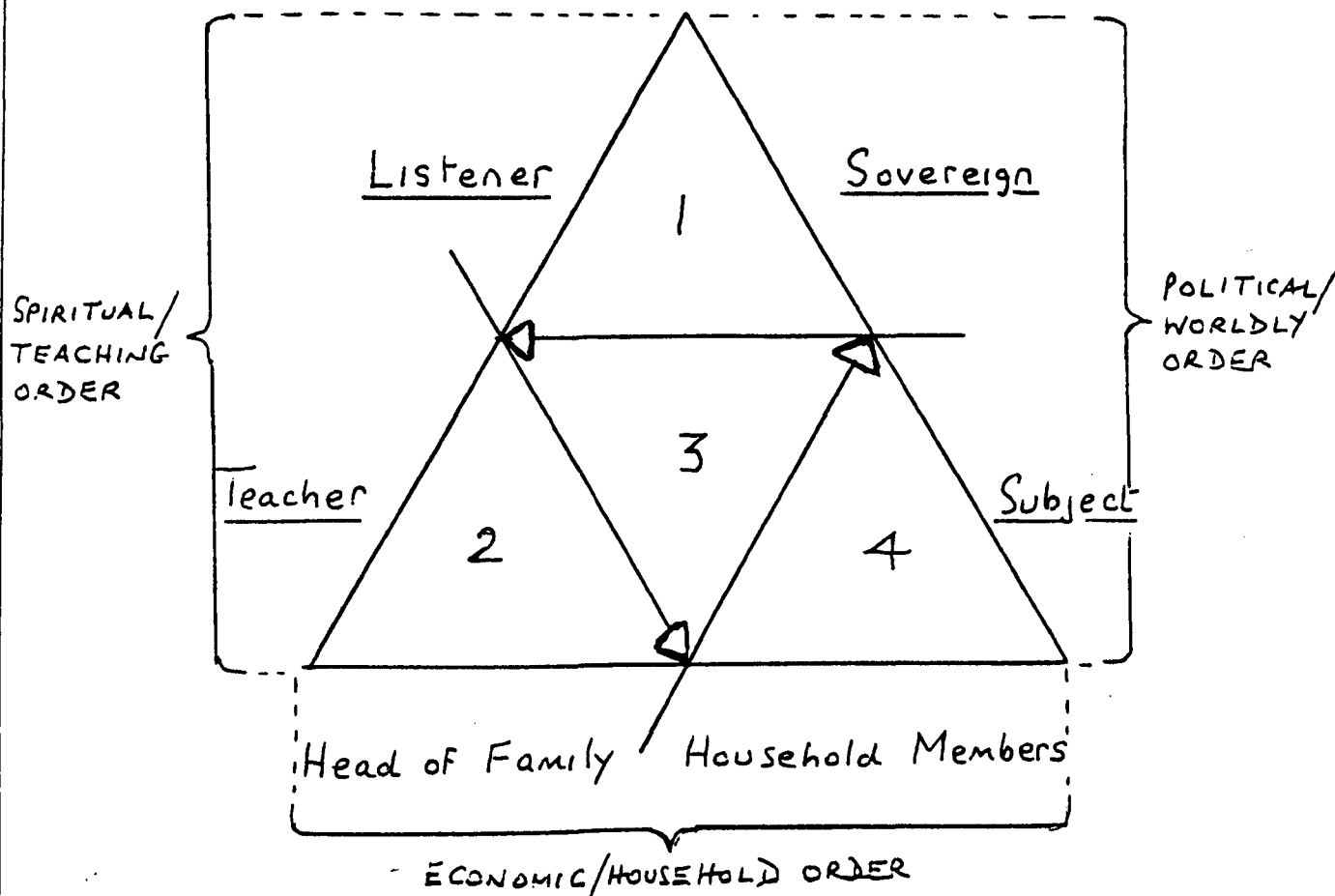
Reformation was that: "... they still lacked universities and were thus free from at least one important type of internal instability." (16) Nonetheless the political economy and related city culture operated differently as between these two cities and their policies in respect of the acceptance or rejection of Lutheranism. For whereas Nuremberg operated a vast international trading network, much of it in Imperial space, Strassburg was the centre of a more compact hinterland which lay in the "track of Erasmus", and was more secure. Consequently while Nuremberg was able to embrace Lutheranism and its educational implications only within the municipal space, Strassburg was able to do so within, as Meinig would put it, its wider cultural domain. By contrast the political economy of Augsburg and its ties with the Habsburg bankers automatically meant a rejection of the new ideas, and the political/economic situation of Cologne vis a vis its vital entrepot, Antwerp, likewise determined a reaffirmation of support for the Roman Catholic Church.

At a more local and rural level the significance of ecologically integrated information systems for the acquisition of literacy was appreciated by Luther and his followers, as exemplified by the role of the Hustavla in Swedish agrarian society from the early sixteenth century until the more formal application of primary schooling to this task from 1847. As portrayed and described by Johansson (17), the social order of the Hustavla is illustrated by Figure 6.3, while Fogelvik et al put it thus:

"... a strong movement arose among the clergy in favour of teaching the children to read, as one of Martin Luther's main ideas as that: 'one

FIGURE 6.3 THE SOCIAL ORDER OF THE HUSTAVLA AND THE ACQUISITION OF LITERACY IN LUTHERAN SWEDEN

The "hustavla", a religious plaque which was hung on a wall, was a supplement to Martin Luther's Little Catechism. It consisted of specific Bible verses arranged according to the traditional Lutheran doctrine of a three stage social hierarchy - - - ecclesia (the Church), politia (the State) and oeconomia (the home or household). These selections of Scripture outlined the Christian duties and obligations which each stage in the hierarchy owed to the other two - - - ie. priests/parishioners = teachers/rulers = rulers/subjects = heads of families/children and household servants.



Everybody lived, according to the code of the "Hustavla", in a three-dimensional system of social relations. The diagram can be made more concrete by means of the following examples:

1. The King was Sovereign in the political, listener in the spiritual and head of the family in the economic order.
2. The clergyman was correspondingly subject, teacher and head of the family.
3. The master was a subject in the country, listener in the congregation and head of the family in his home.
4. The rest were, generally speaking, subjects, listeners and household members.

Source: E. Johansson, 'The History of Literacy in Sweden', Educational Reports Umeå, 12 (1977).

should see with one's own eyes what the Lord said in the Bible' and therefore "to be able to read and understand the Holy Book". (18)

The application of this idea through the medium of human ecology was characteristic of the environmental and political perception of Lutheranism in effecting wherever possible a convergence between political and economic geography with a view to maximising educational impact. This of course relates back to Chapter three and adds a third strand of motivation to those identified by Siddle (in terms of economic and legal factors), and Fouret and Ozouf (in terms of formal education and the urban hierarchy), in respect of the acquisition of literacy.

Moving on to the modern example of the significance of a cultural ambiance for the formation and modification of 'education the phenomenon', we can link back again to Chapter three and the section thereof concerned with spatial aspects of the evolution of formal schooling in urban England. It is instructive to contrast the approach of Henry Morris, as exemplified in his serial address to the Development Corporations of post-war New Towns, and that of central government policy in 1992. Henry Morris was already notable for his achievement in creating the village colleges in inter-war Cambridgeshire. In so doing he exhibited an appreciation of the need for educational facilities to serve the whole community, as well as of the value of the of locational and spatial analysis being formulated at that time by Lösch and Christaller in planning an appropriate

network of such facilities. His address to the New Town Development Corporations in 1948 is reproduced in full as Appendix I below.

The approach of Henry Morris to his task is significant here in that he had the vision to see that the provision of formal education had to be part and parcel of the culture of a place for it to be taken up, yet at the same time assist the elevation of that culture. As can be seen in Harry Rée's introduction to the paper, Morris appreciated that "civilised values and civic virtues stemmed from the 'civis', the city itself". In the text of the memorandum as Morris calls it, is exhibited his characteristic eye for detail and care for the clienteles in the estimation and calculation of need, with accessibility being of prime importance. In this his perceptive remarks on the plight of young parents, and especially working class mothers, are indicators of the awareness of what we have encountered above in the literature, namely the significance of the immediate and residential environment for the enhancement of educational activity. At the same time Morris had a sense of Redfield and Singers' 'sacred centre' of a pioneer town or city (20) when he describes the role of the college of further education and its location as "an important and significant part of the central square or squares" ... so as to "associate education with ordinary life and both with the practice of the Arts and with civic administration". His concern for integration is also reflected in the grouping of educational, cultural and medical facilities in 'campus sites' in the suburban zones, as well as in his sensitivity to the potential divisiveness of tripartite secondary education. He recommended that "... the grammar school will not be

isolated, and the three types of secondary school will be placed in identical physical context", and that "... the three schools might have the same coat of arms with a slight deviation ..." so as to symbolise their interrelationship and common civic belonging. What is particularly important is that Morris' conception of culture was of the genre de vie as well as of the creative and performing arts. As a result of this appreciation of the behavioural dimension in environmental perception, he sought to create an applied geography of education that would, in its operation, support and enhance the quality of life in general. Indeed, one could apply all six of the sub-categories of Chapter five, above, to his work in both rural and urban contexts with some profit.

The contrast between the approach of Morris to the spatial implications of educational policy and that of the post GERBIL era in England is already stark at the time of writing in 1992. In the space of those four years, though with some formative influences during the 1980s, public education has moved from a perception of contributing to individual and collective cultural well being to one of providing a commodity (certification) that can be traded for money (employment). In order to illustrate this contrast, the writer has selected a cluster of articles published in Education Guardian on 12 May 1992. (21) Rather than seeking a closer civic and community association, the discussion is of 'opting out', whether on an individual school basis or in groups. The latter is seen by some who are concerned to preserve links with their local communities as a way of doing just that. One report is as follows:

"Tonight the governors of Biddenham Upper School, a comprehensive on the leafy outskirts of Bedford, will debate a suggestion from the head teacher that the school should consider whether to go for grant maintained status. As the summer progresses all 19 upper schools still in local authority control in the county will do the same ... Councillor Grugeon, who is a governor of Biddenham Upper, said: 'The alternative is wholesale destabilisation of education in this country. The knock on effect of individual schools opting out would lead to diminished standards of education for very large numbers of children. There would be council schools or sink schools and schools that would have the cachet of independent status. (22)

This type of discussion and resultant decisions go to illustrate how well Burdett perceived the potential effects of GERBIL on the geography of maintained schooling in England, and whose predictions were discussed in some detail above. (23) What was not apparently perceived by that writer, or others in the field was the effective opting out of an entire local authority so as to effect a totally selective system throughout the age range of compulsory education. This is a profoundly geographical policy in that it could only be achieved in a large densely populated urban area where there are numerous, spatially small but demographically buoyant local authorities. Such a situation was created in London by the abolition of the Inner London Education Authority and the sudden acquisition of educational functions by the Inner London Boroughs. One of these, it is reported, sees the opportunity to recreate a selective system by a total opt out of its schools and the operation of selective mechanisms of entry, with the primary sector being a preparatory stage for a

prestigious secondary sector. All those who fail to gain places through these selective procedures would have to attend schools in neighbouring authorities. Under such an approach we would have not only sink schools but sink boroughs. Curiously this would have been achieved by the local authority in question, Wandsworth, denying to its schools the right to opt out under the policy of the central government with which it is politically aligned. At the time of writing the outcome of this confrontation between different scales of the political geography of education is not known, but the purpose of its selection for discussion here is to illustrate both the profoundly geographical character of the distribution of educational facilities, and the tension between the cultural and political dimensions of that geography. Consider by contrast the concern of Henry Morris for these two components to be more positively related in part through the informal education of their spatial proximity as well as through the school curriculum itself.

The geography of education is not just an intellectual construct, it is as Whitehead reminds us, a two way process. (24) Writing in 1988 on the environmental problems associated with the development of 'London's high-class residential fringe', and the need to exercise restraint, he concludes that mechanistic approaches to planning cannot succeed without a primarily educational improvement in the perception of the problem:

"This entails a switch of emphasis from an overriding concern with specific day to day practical issues of restraining development to fundamental questions of townscape management. The notion of a theory of townscape management is



apparently almost unheard of among practising planners. Education in this matter is likely to be more beneficial than any direct changes in planning policy." (25)

This is a matter of educating for the cultural landscape and illustrates the concern of the writer to promote the idea of an holistic and integrated approach to the geography of education as a potential sub-discipline. Mere mapping or analysing of the spatial attributes of formal educational provision, while a necessary detail, is not enough in itself.

### 6.2.3 Cultural Geography and the Geography of Education

The selection of geographical aspects of the Lutheran Reformation, and of near contemporary examples of the geography of education in urban England, to illustrate the interactive relationship between geography and education served to illustrate the range of temporal and spatial scales with which we are concerned. These examples also assist the argument for a holistic and integrated approach as does the typology of knowledge offered by Thrift. All these are rooted and interconnected in the concept of culture, broadly defined as genre de vie which in turn has essential temporal and spatial qualities. Inevitably this means that there must be a 'Cultural Geography', though it does not figure in the constellation comprising Figure 1.2 or in the fields of geography discussed in section 5.2 above. The problem is that cultural geography, by the all-embracing definition employed here, subsumes the other components. Furthermore,

it has not enjoyed a great deal of visibility in the specialist literature of geographers, except to some degree in the U.S.A. In fact in terms of the models devised by the writer for consideration at various points in this thesis, cultural geography could well provide the 'core' of Figure 1.2, the 'essence' of Figure 1.4, and the 'essential complex' of Figure 4.8. It could well be that the marginalisation of cultural geography is partly to blame for the neglect of a geography of education. Its emergence and significance in the U.S.A. has already been employed in this thesis with respect to the work of Meinig, Muinzer, Norton and Powell, and we will now turn to perhaps the doyen of American cultural geography, Wilbur Zelinsky, for some support in locating and legitimising a geography of education. (26)

Writing with reference to the U.S.A., Zelinsky is at once concerned with five dynamic strands of its cultural geography:

- a) the importation of selected individuals and their 'cultural baggage';
- b) the long distance transfer of people within emergent American space;
- c) cultural borrowing from the Amerindian population;
- d) the local evolution of American culture;
- e) continuing interchange with other parts of the world.

At once we can see the inevitable range of scale from the intensely local and environmental, as discussed by McPartland, (27) to the

global, in respect of which Brunn and Leinbach have made a recent and instructive contribution. (28)

The Lutheran expansion with its non formal and formal educational dimensions contributed to the cultural mosaic of the U.S.A., and Zelinsky has a chapter on 'Religion and Education', in which the latter is for the most part subsumed in the former, thus recognising the strong contribution of religion to the nature and diffusion of the European educational model. He comments in respect of the diversity of religion in the U.S.A. that it: "... is not only doctrinal but also spatial and behavioural". (29) Perhaps, he feels, because of the intensively local control of public education there, with its resultant parochialism, the geography of education has been neglected, though the fragmentation of innumerable school districts is a most interesting and significant example of the centrality of political geography whenever formal education is involved. Nonetheless he states:

"Little work has been done on the geography of education in the United States, and none apparently on the historical geography of higher education. An analysis of the Colleges, especially the liberal arts colleges might yield important insights into the cultural geography of the nation." (30)

In explaining the spatial aspects of cultural change, Zelinsky comments on a number of processes which have, though he does not comment on them, differential educational attributes. These processes include the selection of immigrants; interaction within and between

their groups; their differential mobility and linkage with the diffusion of ideas and innovations.

The structural outcome of all this he sees in the identification of three different types of region: traditional, voluntary and spurious/synthetic. Of these he selects the voluntary variant as being a new type of cultural space in which the old discrete pattern of parcels of contiguous place is replaced by a 'multi-layered hyperspace' in which "numerous strata of variable thickness tend to span the entire country". Consequently:

"... with minimal physical effort one may experience the variety by shifting vertically, so to speak, in cultural space, from one layer of the sandwich to another - or by hobnobbing vicariously with different subcultures by means of telecommunications, which have brought about truly revolutionary changes in the social and mental mobility of individuals". (31)

A 'voluntary region' occurs when a subcultural layer of the strata thickens to such a degree as to dominate a locality, or to use more conventional jargon, to create a geographical 'surface' such as has been described above. Zelinsky identifies two main types of voluntary sub-region as having emerged significantly in the U.S.A.: a) the 'pleasuring places' such as retirement zones, 'heliotropic regions', and 'amphibious regions' comprising resorts coasts and islands; and b) the 'educational places'.

In respect of educational sub-regions he comments, with a slight allusion to the previous section on military sub-regions:

"The close connection of many widely scattered points is even more obvious when one observes our hundreds of colleges and universities with their faculties, students and hangers-on, including a growing cohort of the retired . . . . . If many of our burgeoning institutions of higher learning have acquired and staunchly cling to their own idiosyncratic personalities, the similarities among these places and their people are far closer than those with traditional regions or with other spatially discontinuous, national sub-cultures."  
(32)

While the recognition by Zelinsky of sufficiently strong localised surfaces of educational geography is important and welcome, we should not forget the contribution of the educational dimension to the cultural geography of almost any place. The identification of intensity of educational occurrence, or clustering, has been noted at various points in the preceding discussion from the peripheral monastic outposts of the north-east of England to the planned campus clusters of Henry Morris' new towns, and the operational clusters of Sri Lankan schools. Nonetheless, Zelinsky's vision is a rare contribution to the geography of education and has the three dimensional quality of perception needed to cope with the interactive relationship between the two. Furthermore his statement of 1973 that: "The social and cultural geography of college populations is still almost totally terra incognita" is as true in 1992, not only of this particular feature of the geography of education but of the sub-discipline as a whole - hence this thesis.

### 6.3 JUDGEMENT

The reviews of the various literatures, implicit and explicit, pertaining to the geography of education that have been included above, together with the analysis of both education and geography as disciplines, and their potential for interaction, comprise, in the view of the writer, sufficient evidence for certain conclusions to be reached. In the first instance, these may be related to the three hypotheses introduced in the preface above.

The issue raised in the first hypothesis is that of the intellectual location of a geography of education. It was contended that there is 'intellectual scope' for a geography of education. As Spate (33) reminded us long since, the 'compass of geography' is comprised of infinite variety. Had Mr McBorrowdale been a post-Madingly man he would most likely not have selected a negative geographical image from the physical landscape to characterise, as he saw it, the intellectual aridity of his third, and worst bore, 'education'. (34) As noted above, the Madingly phenomenon in the history of British geography owed not a little to its precursor in the U.S.A. where, among other fields of the modern discipline, cultural geography had already made some progress. It is to be regretted that it has hardly developed in the UK, especially as one of our leading geographers advocated it during the first decade of this century! Having discussed three components of what he termed 'Human or Anthro-Geo-geography' (these were racial, economic and political geography respectively), Unstead goes on to say:

"The last aspect of the human geography is the study of men's thought as it expresses itself in their religions, arts and literatures. These are matters which are usually mentioned in a consideration of a region, but they should of course be considered purely from the geographical standpoint. No term in common use can be suitably applied to this aspect of the work and one is compelled to suggest a new term - Culture Geography." (35)

The important phrase here is 'purely from the geographical standpoint', and it is making the point raised by the writer above that the genes of a geography of education reside in geography, or to pursue the biological analogy still further, the parentage of a geography of education could be seen in gender terms as being the union of a geographical father and an educational mother. Be that as it may, it is clear to the writer and already asserted above that if a geography of education of any consequence is to develop then it must come from the geographical side. This would ensure the fundamental involvement of the concept of scale, as well as the various spatial and locational approaches discussed above. In this way, routine mapping of patterns of educational provision, performance and development can proceed within a broad framework of cultural geography that recognises the "relatively untheoretical 'ways of life' of whole social groups". (36) This will help to elucidate the realities of the ecological and environmental interaction between geography and education that we have seen above in respect of the efforts of, say, Robson and Chapman to prevail over Abercrombie's reasonable concern that: "an excessive interest in intellectual and intellectualised belief is a weakness of the conventional sociology of knowledge." (37)

So in respect of the first hypothesis, the writer contends that the intellectual scope for a geography of education exists, and resides within the field conventionally known as cultural geography. This means to some degree that progress with the geography of education will be dependent on an enhanced interest in cultural geography. It does not mean that Bereday was mistaken in perceiving political geography as a potential foster parent for comparative education; he was indeed enlightened in that choice. The distinction serves again to illustrate that comparative education and the geography of education are not the same thing.

The second hypothesis was that while elements of a geography of education exist, these have not been brought together. The writer would contend that the various approaches to surveying the literature, explicit and implicit, actual and potential, of the geography of education that comprise the central chapters of this thesis have identified a considerable information bank on which to draw. It has also been shown that while smaller surveys, exhortations and working parties have existed at various times they have not attempted to develop a coherent framework for the new sub-discipline, important though their efforts were in keeping interest in it alive. The task of bringing it together, as the response to the first hypothesis suggests, should be undertaken within the framework of cultural geography but with the cooperation of suitably qualified educationists. This does not only mean "lapsed geographers" but also, for example sociologists of education, comparative educationists and environmental psychologists. The task is interdisciplinary, but under



the guidance of geography. Part of the problem of bringing such a field together is the doctrinal nature of epistemology and Becher's aforementioned academic tribes and territories.

The third hypothesis contended that the geography of education has instrumental potential, that is to say, is of practical significance. The writer would suggest that this has also been illustrated above, for example in respect of educational planning, which would do well to take greater account on the geography of education and in so doing, as Thomas-Hope has shown, (38) be able to accommodate better the relationships between social process and spatial structure. Furthermore, if this obvious instrumental potential is utilised by those with political power in assisting the formulation of educational policy, and this would bring the possibility of significant research funding, the interest in this sub-discipline on the part of both geographers and educationists would be significantly enhanced. The potentially enormous upheaval in the spatial patterns of schooling in England as a result of the 1988 Education Reform Act is an obvious opportunity for a piece of longitudinal research, in which the writer has already attempted to interest the ESRC.

In making this case for a geography of education, one is arguing for a "situated or contextual epistemology, which acknowledges that people are historical, geographical and social beings". (39) For:

"We know very little about what people know and do not know. From the many indirect studies, we can expect there to be systematic variations in the knowledge available to and taken up by various social groups set in different

regions and times. Yet what is systematically known about these variations is restricted to a few desultory studies." (40)

Thrift is being a little hard on his fellow geographers here, for as the writer has shown in this thesis there is in fact a considerable body of knowledge accumulated in various literatures upon which to build and from which to effect the intellectual recognition of a geography of education. The perceptiveness of behavioural geographers such as Thrift, Sack, Yi-Fu Tuan and Mabogunje needs to be brought together with the particular and localised empirical work of such interested parties as Bradford, Rawstron and Kirby. The judgement of the writer is that the case is made, but the task still lies ahead.

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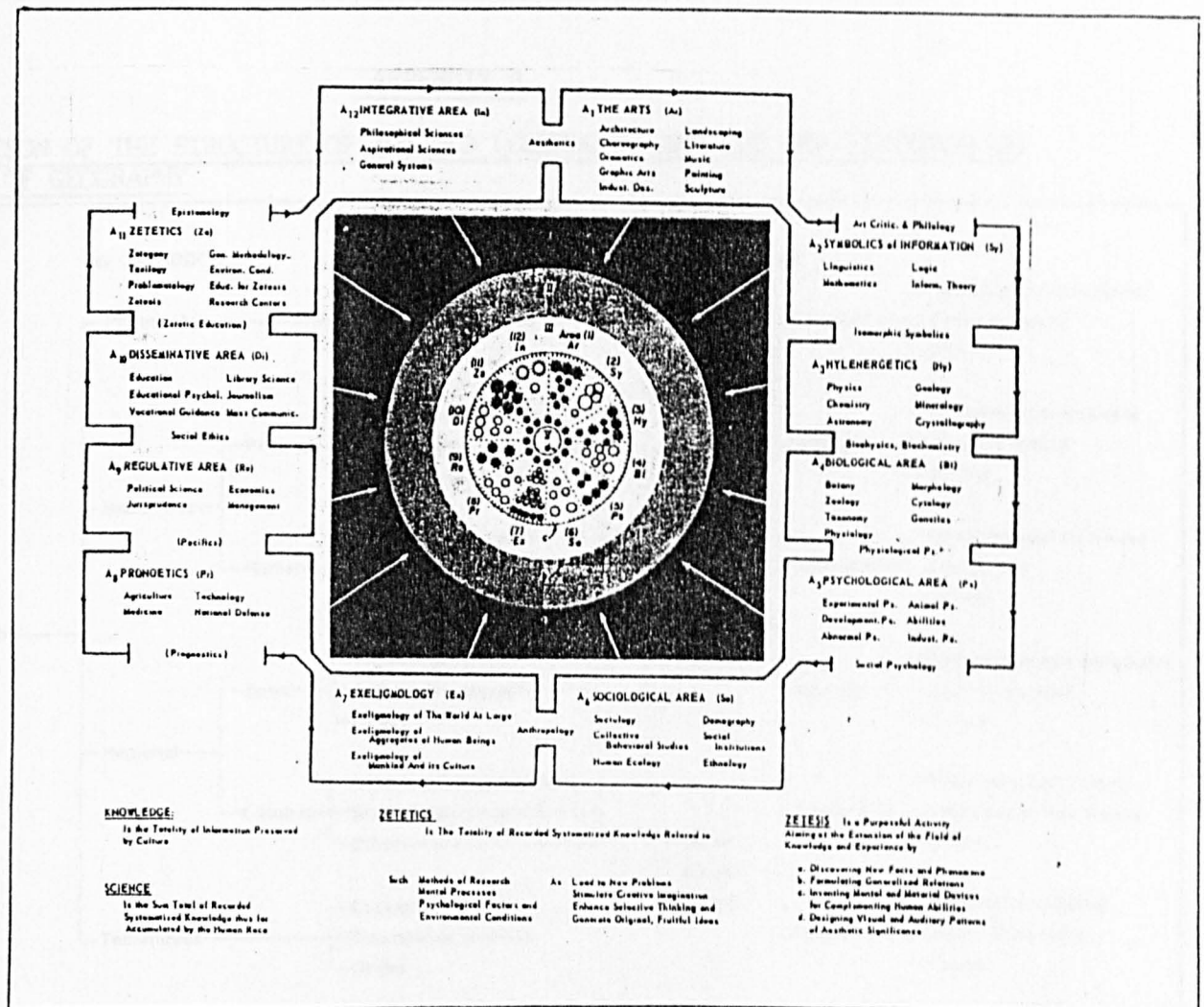
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39. Nigel Thrift, *op. cit.*, p. 397.
40. *Ibid.*

APPENDICES

- A. Education in the Zetetic Systems of Knowledge.
- B. A Comparison of the Structure of the Old and the New Versions of Geography.
- C. Bamford's Table and Maps in Relation to the Institutional and Locational Status of 95 English Public Schools : 1800 - 1950.
- D. Geographical Origins of Makerere College Students (1922 - 1953).
- E. Maps of three Case Locations from Johnson's Study of the Geography of Christian Missions in Africa.
- F. Examples from the Francophone Literature Pertaining to the Geography of Education.
- G. The Publications of Peter Meusbürger in the Field of the Geography of Education.
- H. Context and Alternative Solutions to the High School Location Problem, Chicago District 18.
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## APPENDIX A

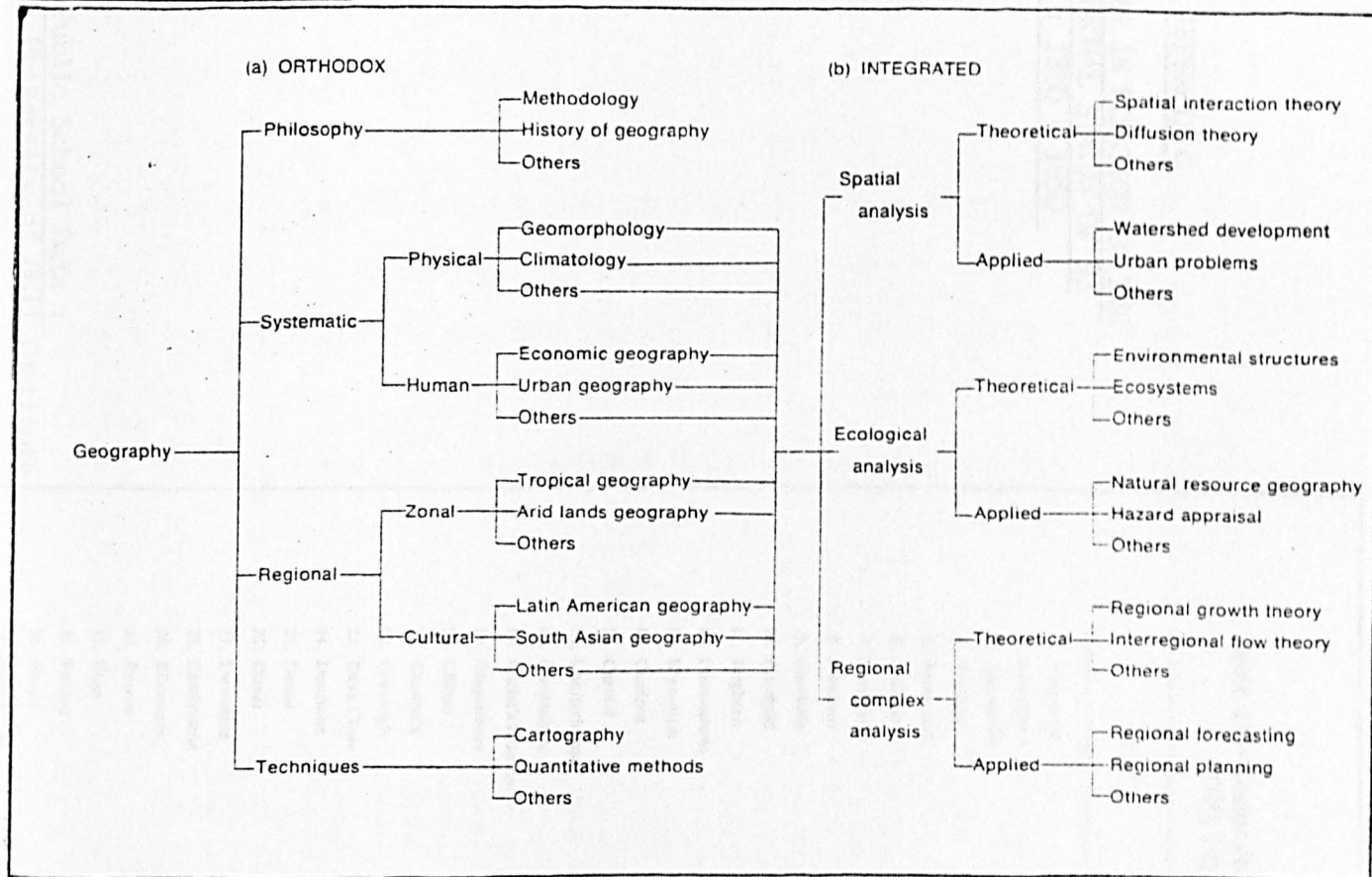
## EDUCATION IN THE ZETETIC SYSTEM OF KNOWLEDGE



Source: Joseph T. Tykociner, 'Zetetics and Areas of Knowledge', in Phi Delta Kappa, Education and the Structure of Knowledge, Rand McNally, (1964), pp. 120 - 147.

## APPENDIX B

## A COMPARISON OF THE STRUCTURE OF THE OLD (ORTHODOX) AND THE NEW (INTEGRATED) VERSIONS OF GEOGRAPHY



Source : Peter Hagget, Geography : a Modern Synthesis, Harper Row, (1972), p. 453.



## APPENDIX C

BAMFORD'S TABLE AND MAPS IN RELATION TO THE  
 INSTITUTIONAL AND LOCATIONAL STATUS OF 95  
 ENGLISH PUBLIC SCHOOLS : 1800 - 1950

Source: T.W. Bamford, Public School Data :  
 Aids to Research No. 2, University of Hull Institute  
 of Education, (1974).

Table 15.—Status and Movement in 95 Public Schools, 1800, 1850, 1900, 1950.

School	1800	1850	1900	1950 and Summary of Movements
1. Aldenham	○	○	○	●
2. Allhallows	○	○	○	○—●
3. Ampleforth	Nil	○—	○	●—
4. Ardingly	Nil	Nil	○—○	●—○
5. Beaumont	Nil	Nil	○	●
6. Bedford	○	○	⊙	⊙
7. Bembridge	Nil	Nil	Nil	●
8. Bloxham	Nil	Nil	○	●
9. Blundells	○	○	○ <sub>m</sub>	⊙
10. Bradfield	Nil	○	●	●
11. Brighton	Nil	○	○	●
12. Bromsgrove	○	○	○	●
13. Bryanston	Nil	Nil	Nil	●
14. Canford	Nil	Nil	Nil	●
15. Carmel	Nil	Nil	Nil	○
16. Charterhouse	●	●	●—●	●—●
17. Cheltenham	Nil	●	●	●
18. Christ's Hospital	○	○	○	○—○
19. Clayesmore	Nil	Nil	○	○—○—○—●
20. Clifton	Nil	Nil	●	●
21. Colston's	○	○	○	○
22. Cranleigh	Nil	Nil	●	●
23. Dean Close	Nil	Nil	○	●
24. Denstone	Nil	Nil	○	●
25. Douai	Nil	Nil	Nil	●—
26. Dover	Nil	Nil	●	●
27. Downside	○—	○—○	○	●—○—
28. Eastbourne	Nil	Nil	○	●
29. Ellesmere	Nil	Nil	○	●
30. Epsom	Nil	Nil	●	●
31. Eton	●	●	●	●
32. Felsted	○	○	●	●
33. Forest	Nil	○	○	○
34. Giggleswick	○	○	○	○

Table 15.—continued

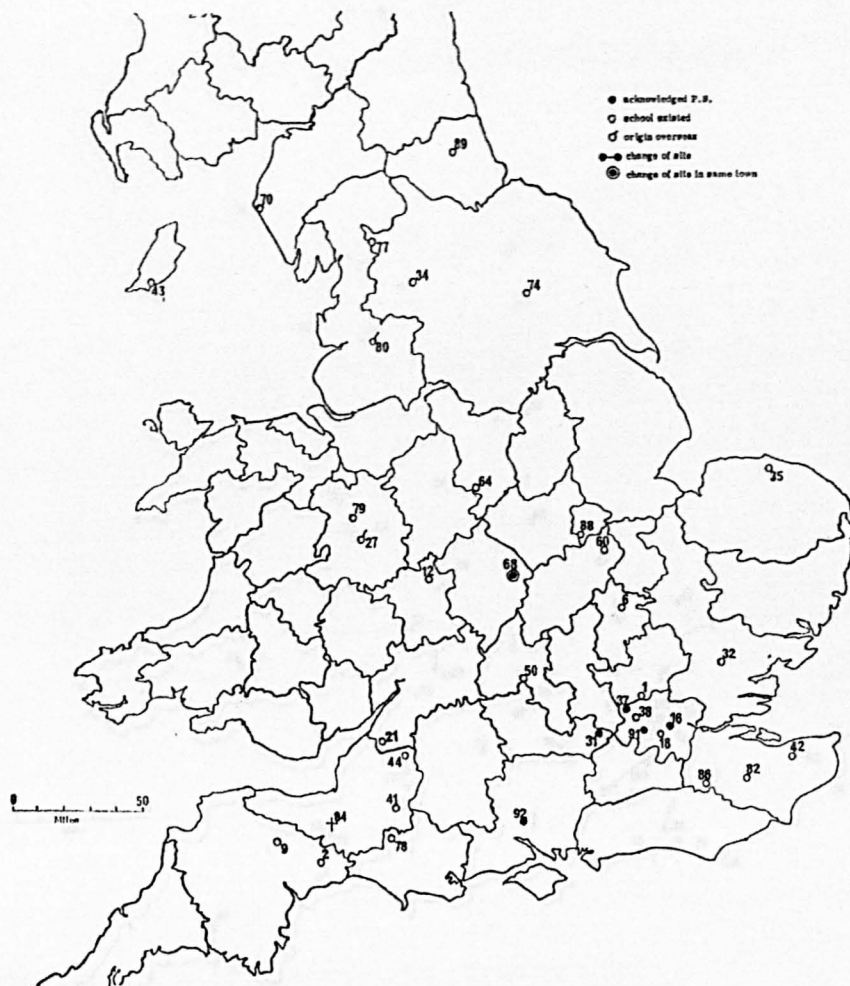
School	1800	1850	1900	1950 and Summary of Movements
35. Gresham	○	○	○	●
36. Haileybury	Nil	Nil	●	●
37. Harrow	●	●	●	●
38. Highgate	○	○	○	○
39. Hurstpierpoint	Nil	○	○	●
40. Kelly	Nil	Nil	○	●
41. King's Bruton	○	○	○	●
42. King's Canterbury	○	○	○	●
43. King Williams	○	○	○	●
44. Kingswood	○	○	○	●
45. Lancing	Nil	○	○	●
46. Leighton Park	Nil	Nil	○	●
47. Leys	Nil	Nil	●	●
48. Llandovery	Nil	○	○	○
49. Lord Wandsworth	Nil	Nil	Nil	○
50. Magdalen	○	○	○	○
51. Malvern	Nil	Nil	●	●
52. Marlborough	Nil	●	●	●
53. Millfield	Nil	Nil	Nil	●
54. Mill Hill	Nil	○	●	●
55. Milton Abbey	Nil	Nil	Nil	Nil
56. Monkton Combe	Nil	Nil	○	●
57. Mt. St. Mary's	Nil	○	○	●
58. Nautical	Nil	Nil	Nil	○
59. Oratory	Nil	Nil	○	○—○—○
60. Oundle	○	○	●	●
61. Rndley	Nil	○	●	●
62. Ratcliffe	Nil	○	○	●
63. Reeds	Nil	○—○	○—○	○—○—○—○
64. Repton	○	○	●	●
65. Rossall	Nil	○	●	●
66. Royal Masonic	Nil	Nil	○	○—○
67. Royal Wanstead	Nil	○	○	○
68. Rugby	⊙	⊙	●	⊙
69. Rydal	Nil	Nil	○	●
70. St. Bee's	○	○	○	●

Table 15.—continued

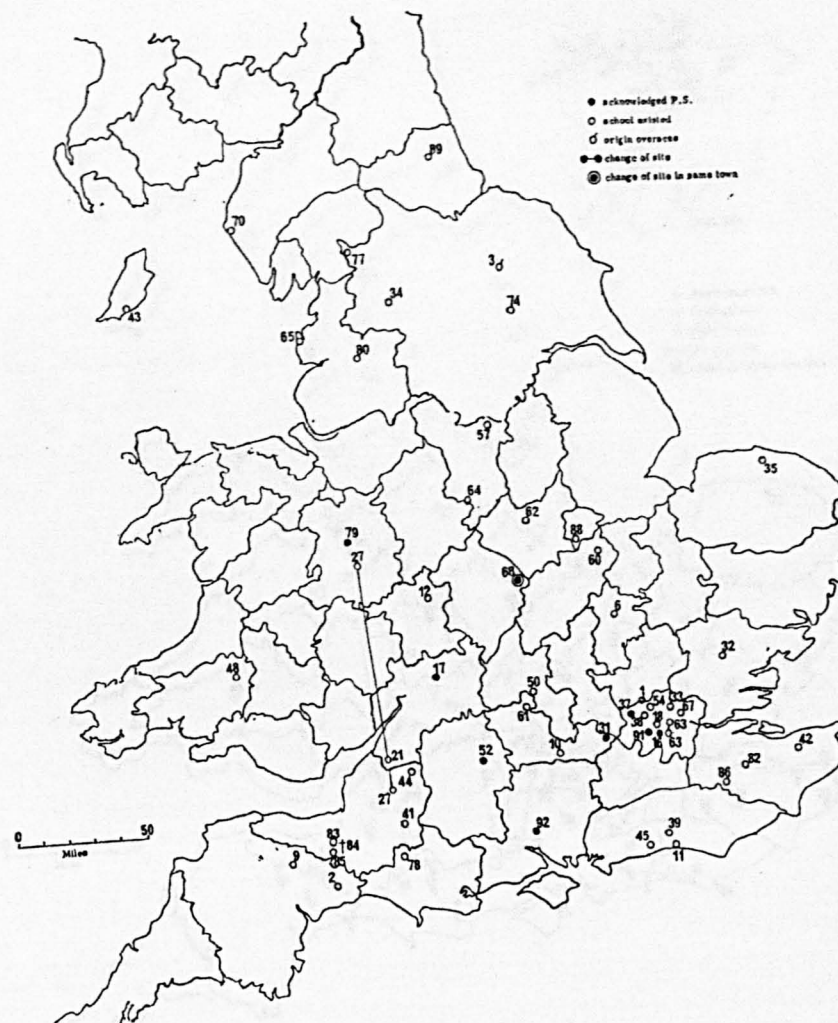
School	1800	1850	1900	1950 and Summary of Movements
71. St. Edward's	Nil	Nil	○	●
72. St. John's	Nil	Nil	○	○
73. St. Lawrence	Nil	Nil	○	●
74. St. Peter's	○	○	○	●
75. Scarborough	Nil	Nil	Nil	○
76. Seaford	Nil	Nil	○	○—●
77. Sedbergh	○	○	●	●
78. Sherborne	○	○	●	●
79. Shrewsbury	○	●	⊙	⊙
80. Stonyhurst	○—	○	●	●
81. Stowe	Nil	Nil	Nil	●
82. Sutton Valence	○	○	○	●
83. Taunton School	Nil	○	○	●
84. Taunton King's	†	†	●	●
85. Taunton Queen's	Nil	○	○	○
86. Tonbridge	○	○	●	●
87. Trent	Nil	Nil	○	●
88. Uppingham	○	○	●	●
89. Ushaw	○	○	○	○
90. Wellington	Nil	Nil	●	●
91. Westminster	●	●	●	●
92. Winchester	●	●	●	●
93. Workson	Nil	Nil	○	●
94. Wrekin	Nil	Nil	○	●
95. Wycliffe	Nil	Nil	○	●

Eastbourne is included here but not in Table I.

- acknowledged P.S.
- school existed
- origin overseas
- change of site
- ⊙ change of site in same town (acknowledged public school)
- ⊙m change of site in same town (other schools)
- † closed school taken over by Woodard in 1879, opened 1880. The old school changed site in 1869.

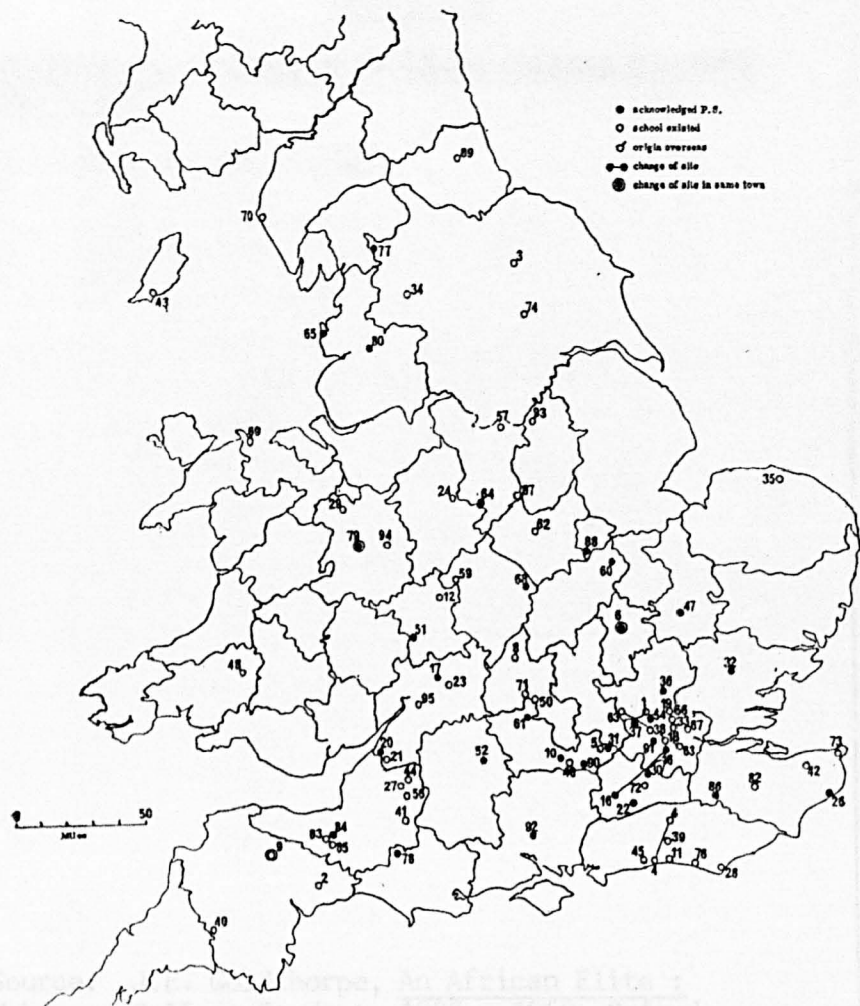


MAP 1. Public Schools in 1800 and site changes to 1800.  
See Table 15 for key to numbers.

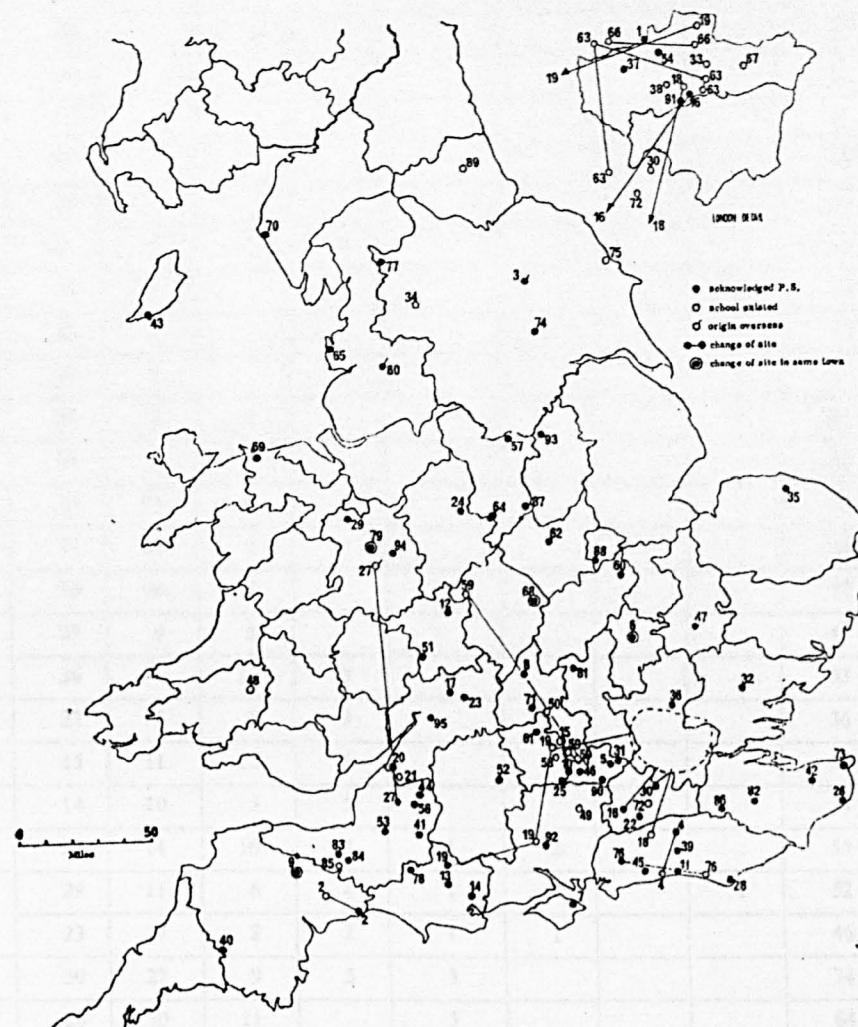


MAP 2. Public Schools in 1850 and site changes 1801-1850.  
See Table 15 for key to numbers.





MAP 3. Public Schools in 1900 and site changes 1851-1900.  
See Table 15 for key to numbers.



MAP 4. Public Schools in 1950 with a summary of movements.  
See Table 15 for key to numbers.

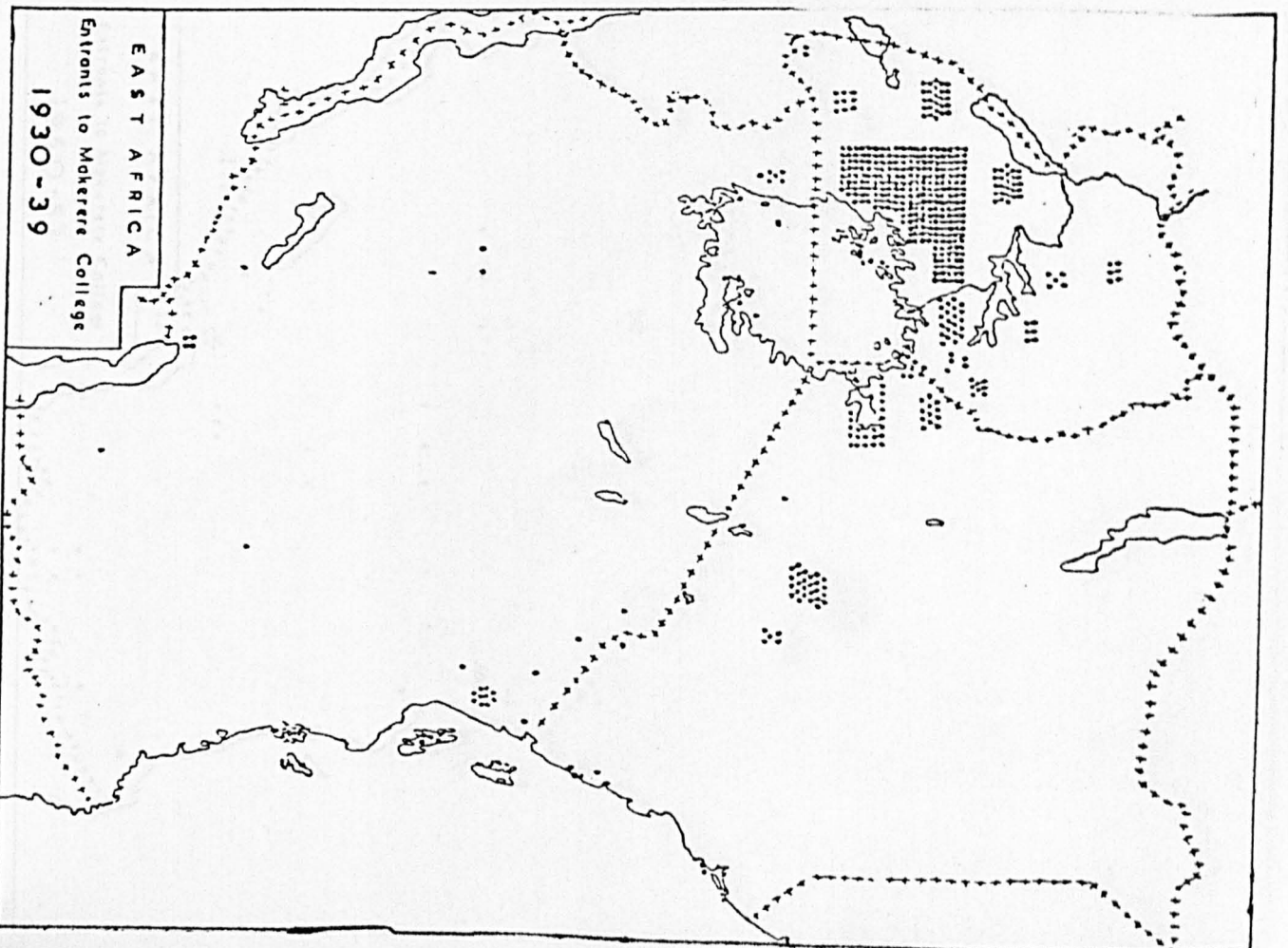
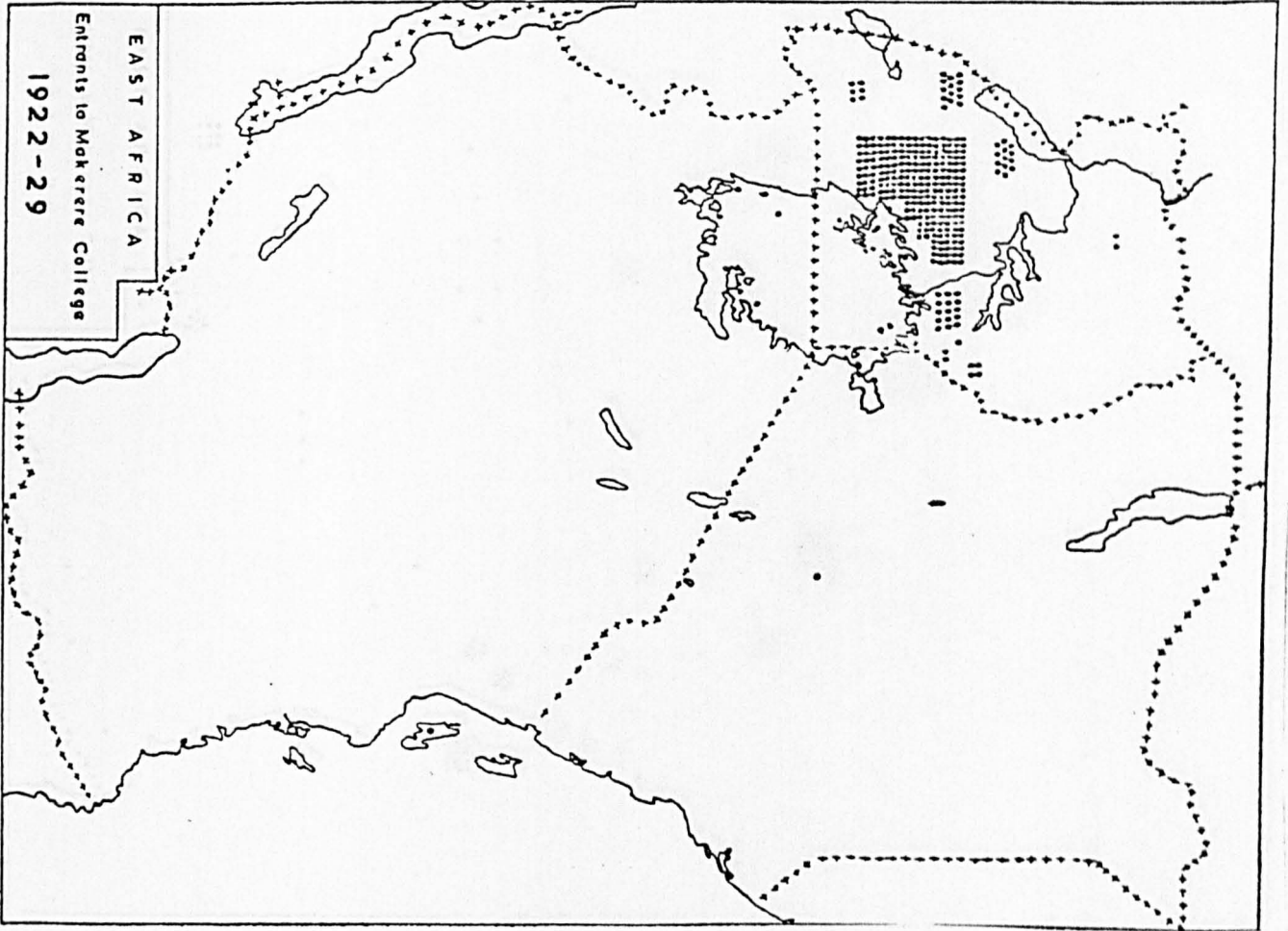
## APPENDIX D

GEOGRAPHICAL ORIGINS OF MAKERERE COLLEGE STUDENTS  
1922 - 1953

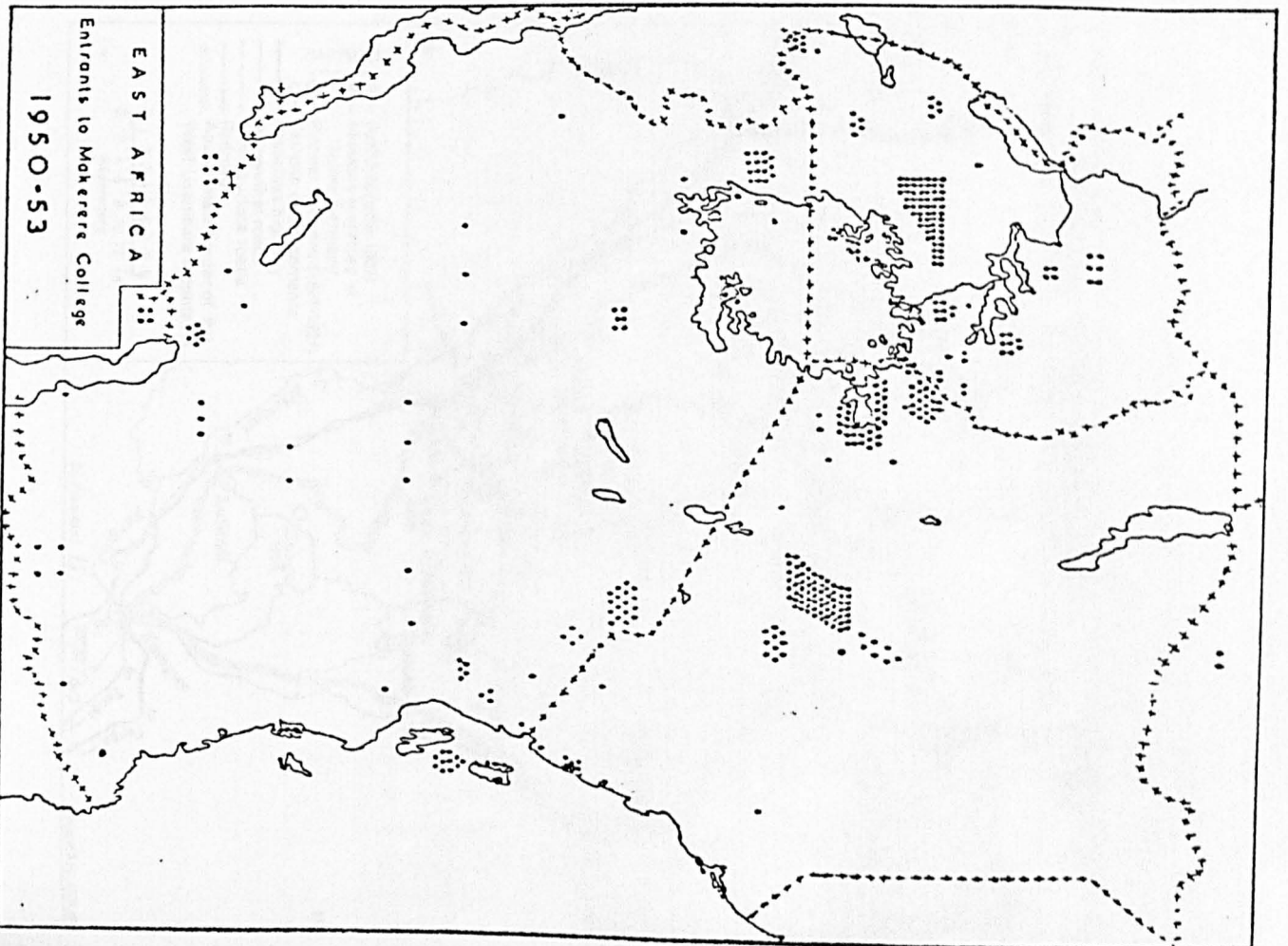
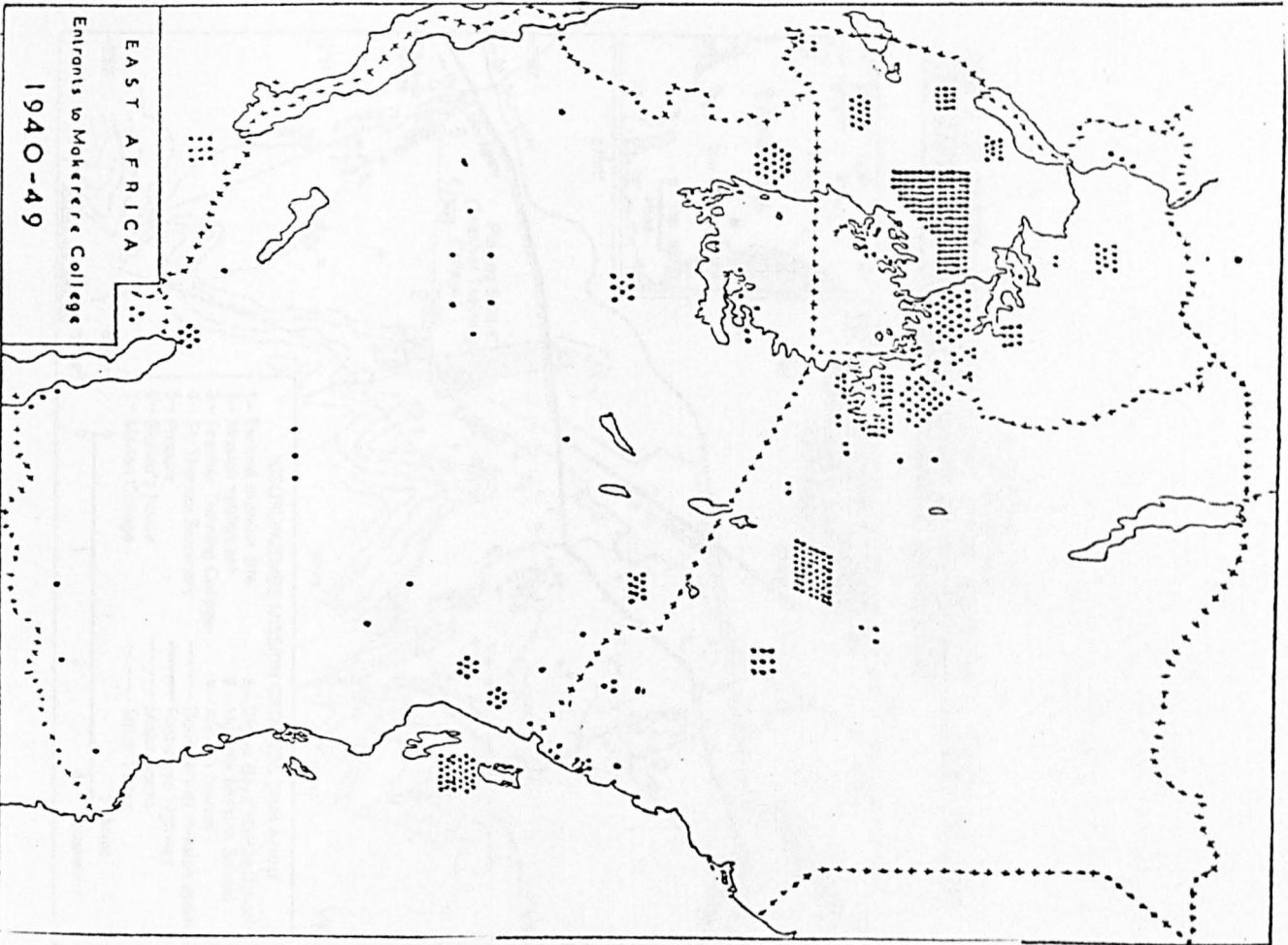
(including second entries)

Source: J.E. Goldthorpe, An African Elite :  
Makerere College Students 1922 - 1960, Oxford  
University Press/East African Institute of Social  
Research, (196 ).

Year	Uganda	Kenya	Tanga- nyika	Zanzi- bar	Northern Rhodesia	Nyasa- land	Ethiopia	Sudan	Total
1922	14								14
23	31								31
24	22								22
25	55								55
26	49								49
27	30								30
28	27	1							28
29	58			1					59
1930	41	1		1					43
31	35	1							36
32	42	1							43
33	53	3							56
34	56	6	1						63
35	31	7	7						45
36	35	13	6	2					56
37	37	20	6	2					65
38	30	19	8						57
39	29	9	5						43
1940	36	—	12	5					53
41	22	5	6	3					36
42	15	11	12	1					39
43	14	10	5	5					34
44	25	14	10	3	1	2.			55
45	29	11	6	4	1			1	52
46	23	17	2	2	1	1			46
47	30	27	9	5	3				74
48	20	30	11		3				64
49	28	22	12	5					67
1950	27	35	18	2	1				83
51	21	25	13	5	1	3	2		70
52	26	41	24		4	1			96
53	45	54	34	4					137
Total entries	1,036	383	207	50	15	7	2	1	1,701

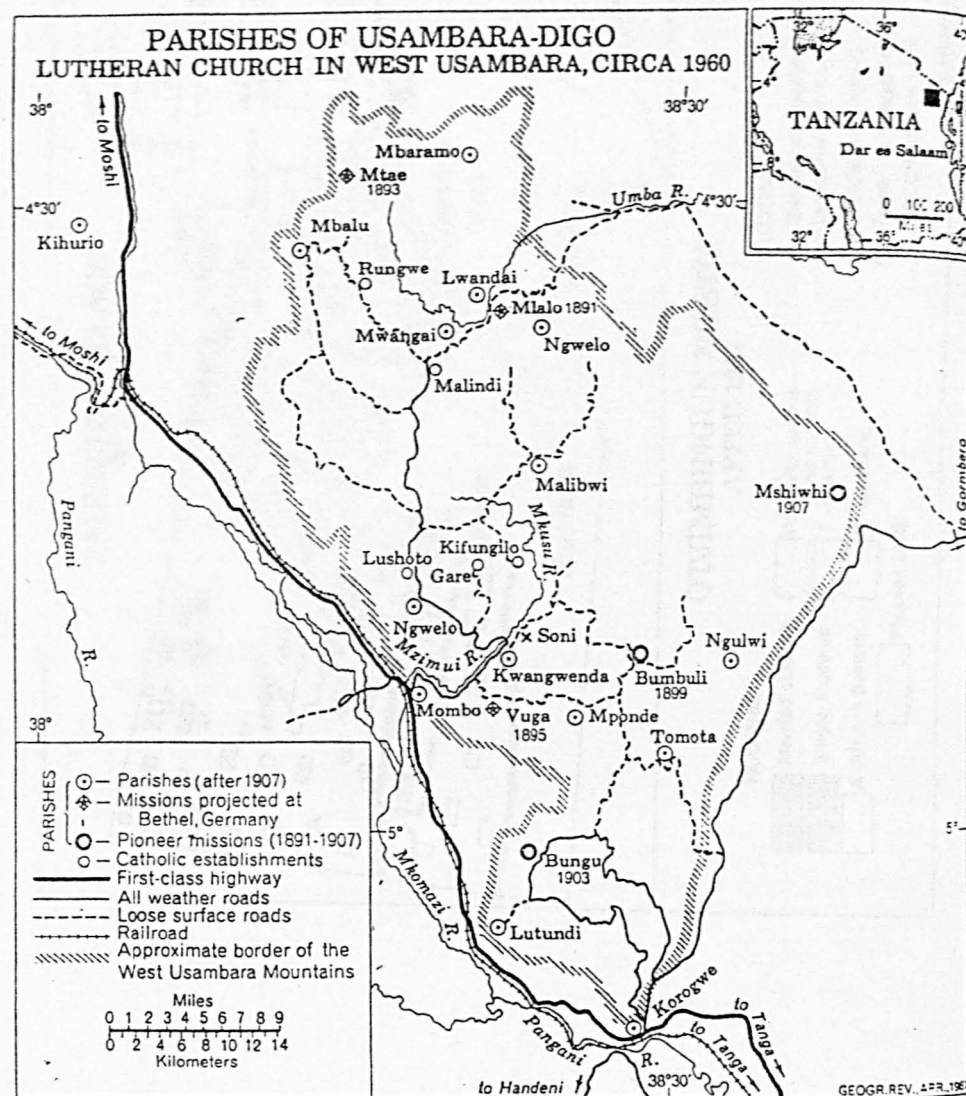
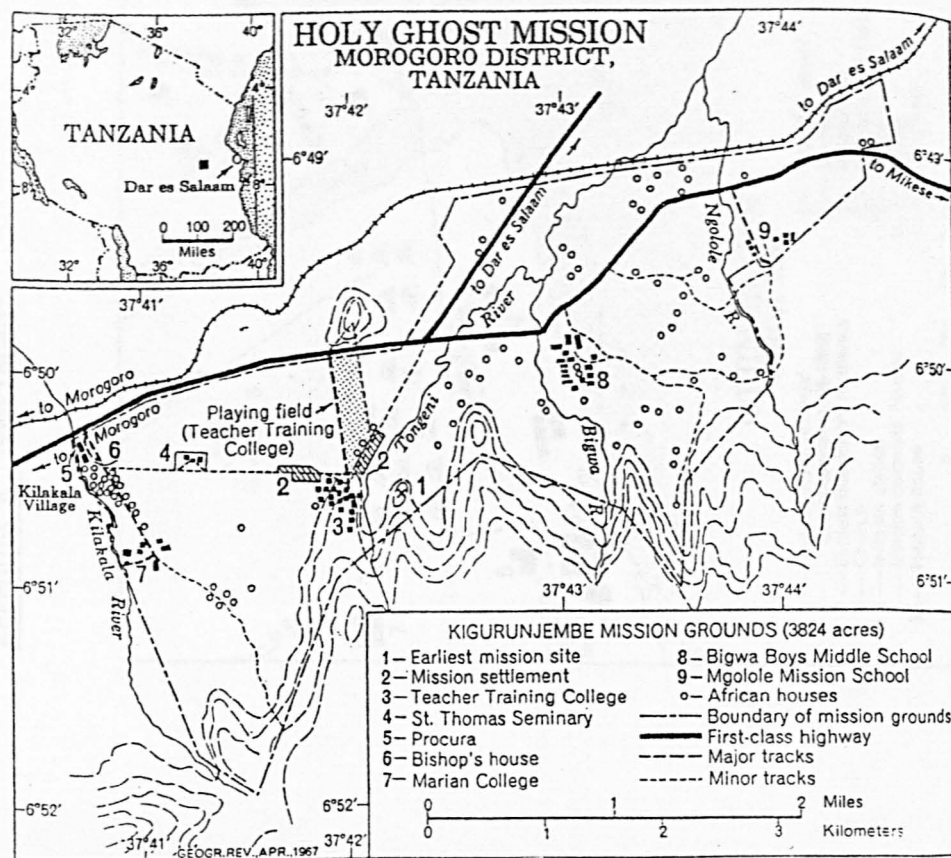






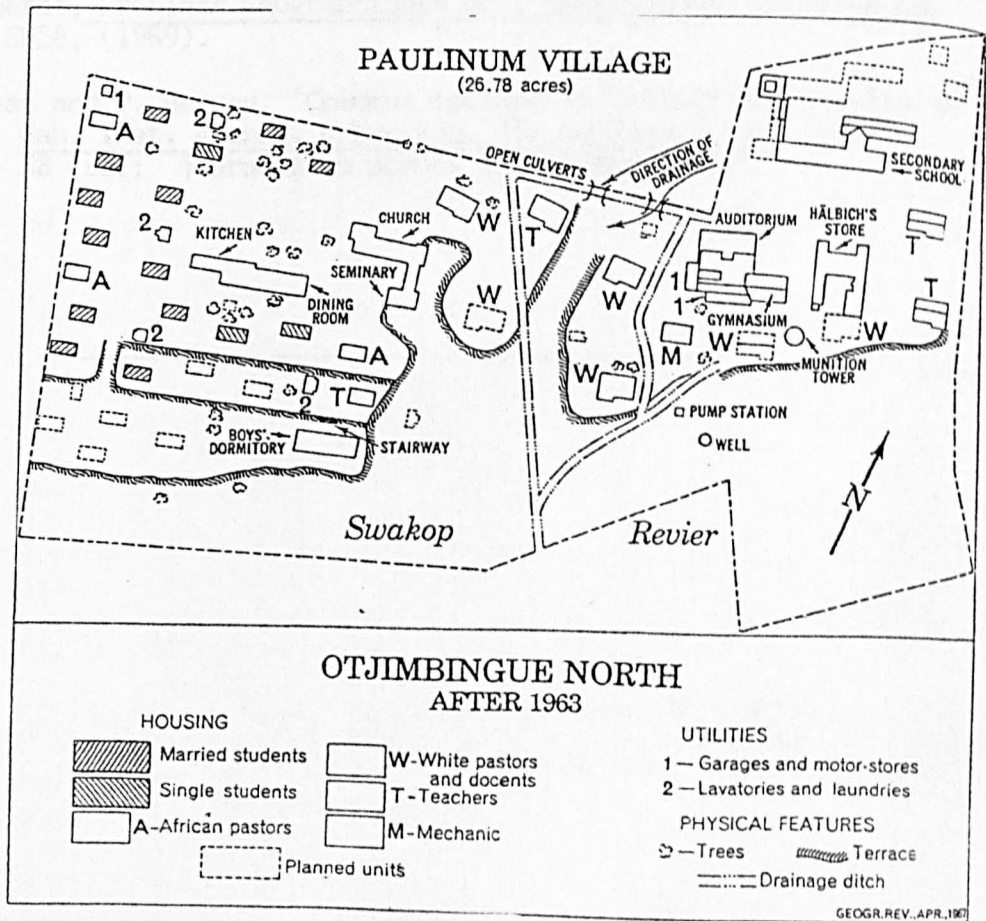
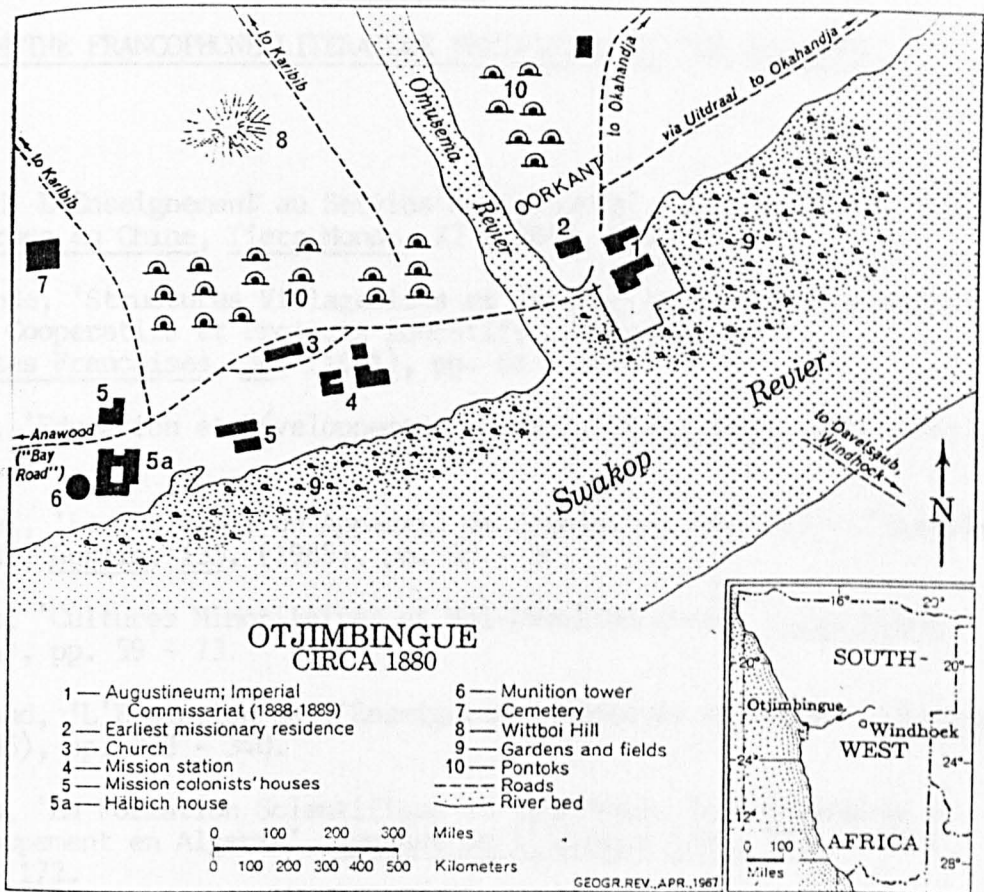
## APPENDIX E

MAPS OF THREE CASE LOCATIONS FROM JOHNSON'S STUDY OF THE  
GEOGRAPHY OF CHRISTIAN MISSIONS IN AFRICA





## APPENDIX E (continued)



APPENDIX F

EXAMPLES FROM THE FRANCOPHONE LITERATURE PERTAINING TO THE GEOGRAPHY OF EDUCATION

1. M. Bastid, 'L'Enseignement au Service du Economie', in: C. Aubert (Ed), Les Réformes en Chine, Tiers Monde, 27 (1986), pp. 843 - 886.
  2. G. Bellonde, 'Structures Villageoises et Strategies de Développement. Projects Cooperatifs et Projects Educatifs en Afrique Noire, Communautes Francaises, 56, (1981), pp. 61 - 107.
  3. J. Casas, 'Education et Développement a Cuba', Tiers Monde, 22, (1981), pp. 99 - 119.
  4. M. Chesnel, 'Le College : un Appareil de Regulation Sociale? L'Exemple Rochelais', Norois, 135, (1985), pp. 35 - 50.
  5. P. Furter, 'Cultures Minoritaires et Mal-Développement', Tiers Monde, 25, (1984), pp. 59 - 73.
  6. M. Guilbaud, 'L'Evolution de l'Enseignement Agricole en Vendée', Norois, 126, (1985), pp. 333 - 340.
  7. M. Haddab, 'La Formation Scientifique et Technique, la Paysannerie et le Développement en Algerie', Annuaire de l'Afrique Nord, XIX, (1980), pp. 155 - 172.
  8. Y. Marguerat, Problems Géographiques de l'Enseignement au Cameroun, ORSTOM, SH58, (1969).
  9. J.J.Rousac and P. Berney, 'Comment Lycéens et Collegiens Vont-Ils en Classe? Cah. Inst. Amenag. Urban Reg. Ile de France, 67, (1983), pp. 33 - 38 (ref: journeys to school in Greater Paris).
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# APPENDIX G

## THE PUBLICATIONS OF PETER MEUSBURGER IN THE FIELD OF THE GEOGRAPHY OF EDUCATION

- Meusbürger, P. und K. Grohmann (1973): Schulplanung und Schülerverlaufsstatistik in Vorarlberg. Schriftenreihe des Bundesministeriums f. Unterricht und Kunst, Bd. 11, Wien, 76 S.
- Meusbürger, P. (1974): Landes-Schulentwicklungsplan von Vorarlberg. Bildungsplanung in Österreich, Bd. 3, Wien, 141 S.
- Meusbürger, P. (1974): Die österreichische Schülerverlaufsstatistik als bildungs- und regionalplanerische Entscheidungshilfe. In: Raumforschung und Raumordnung, 32. Jg., S. 172-175.
- Meusbürger, P. (1975): Zum Ausbildungsniveau der Tiroler Bevölkerung. In: Geographische Rundschau, 27. Jg., S. 233-238.
- Meusbürger, P. (1976): Entwicklung, Stellung und Aufgaben einer Geographie des Bildungswesens. Eine Zwischenbilanz. In: Mitteilungen der Österreichischen Geographischen Gesellschaft, Bd. 118, S. 9-54.
- Meusbürger, P. (1978): Bildungsgeographische Probleme der österreichischen Berggebiete. In: Machold, M., Posch, P. und J. Thonhauser (Hrsg.): Österreichische Beiträge zur Bildungsforschung. Wien, S. 131-151.
- Meusbürger, P. (1978): Regionale Unterschiede des Ausbildungsniveaus der Arbeitsbevölkerung. Zur regionalen Konzentration der Arbeitsplätze für Höherqualifizierte. In: Forschungs- und Sitzungsberichte der Akademie für Raumforschung und Landesplanung, Bd. 127, Hannover, S. 49-73.
- Meusbürger, P. (1979): Ausbildungsniveau und schulische Situation der Slowenen in Kärnten von 1848 bis 1978. In: Innsbrucker Geographische Studien, Bd. 5 (Festschrift f. A. Leidlmair), Innsbruck, S. 229-264.
- Meusbürger, P. (1979): Die regionale Verbreitung von Arbeitsplätzen für weibliche und männliche Berufstätige nach dem Ausbildungsniveau. Schriftenreihe zur sozialen und beruflichen Stellung der Frau, 1979/10, Wien, 47 S., 28 Karten im Anhang.

\* Meusburger, P. (1980): Beiträge zur Geographie des Bildungs- und Qualifikationswesens. Regionale und soziale Unterschiede des Ausbildungsniveaus der österreichischen Bevölkerung. Innsbrucker Geographische Studien, Bd. 7, Innsbruck, 229 S. plus Kartenband mit 37 Karten.

Höfle, K. und P. Meusburger (1983): Jüngere Strukturveränderungen des Pflichtschulwesens in Nord- und Südtirol. In: Begleittexte zum Tirol Atlas VIII, Innsbruck, S. 25-32; ebenfalls abgedruckt in: Tiroler Heimat, Jahrbuch für Geschichte und Volkskunde, Bd. 46/47, 1984, S. 245-252.

Meusburger, P. (1983): Die schulische Situation in Tirol um die Mitte des 19. Jahrhunderts. In: Begleittexte zum Tirol Atlas VIII, Innsbruck, S. 33-42; ebenfalls abgedruckt in: Tiroler Heimat, Jahrbuch für Geschichte und Volkskunde, Bd. 46/47, 1984, S. 253-262.

Höfle, K. und P. Meusburger (1983): Allgemeine Pflichtschulen im Schuljahr 1980/81. In: Begleittexte zum Tirol Atlas VIII, Innsbruck, S. 49-51; ebenfalls abgedruckt in: Tiroler Heimat, Jahrbuch für Geschichte und Volkskunde, Bd. 46/47, 1984, S. 269-271.

Meusburger, P. (1983): Das Volksschulwesen im Jahre 1865. In: Begleittexte zum Tirol Atlas VIII, Innsbruck, S. 52-55; ebenfalls abgedruckt in: Tiroler Heimat, Jahrbuch für Geschichte und Volkskunde, Bd. 46/47, 1984, S. 272-275.

Höfle, K. und P. Meusburger (1983): Kindergärten und weiterführende Schulen. In: Begleittexte zum Tirol Atlas VIII, Innsbruck, S. 56-59; ebenfalls abgedruckt in: Tiroler Heimat, Jahrbuch für Geschichte und Volkskunde, Bd. 46/47, 1984, S. 276-279.

Höfle, K. und P. Meusburger (1983): Allgemeine Pflichtschulen im Jahre 1980/81. Tirol Atlas, 7. Lieferung, Innsbruck, Karte Q 1.

Meusburger, P. (1983): Das Volksschulwesen im Jahre 1865. Tirol Atlas, 7. Lieferung, Innsbruck, Karte Q 2.

Höfle, K. und P. Meusburger (1983): Die Kindergärten im Jahre 1980/81. Tirol Atlas, 7. Lieferung, Innsbruck 1983, Karte Q 3.

Höfle, K. und P. Meusburger (1983): Berufsbildende Pflichtschulen und mittlere Schulen im Schuljahr 1980/81. Tirol Atlas, 7. Lieferung, Innsbruck 1983, Karte Q 4.

Höfle, K. und P. Meusburger (1983): Weiterführende Schulen im Schuljahr 1910/11. Tirol Atlas, 7. Lieferung, Innsbruck 1983, Karte Q 5.

Höfle, K. und P. Meusburger (1983): Höhere Schulen im Schuljahr 1980/81. Tirol Atlas, 7. Lieferung, Innsbruck 1983, Karte Q 6.



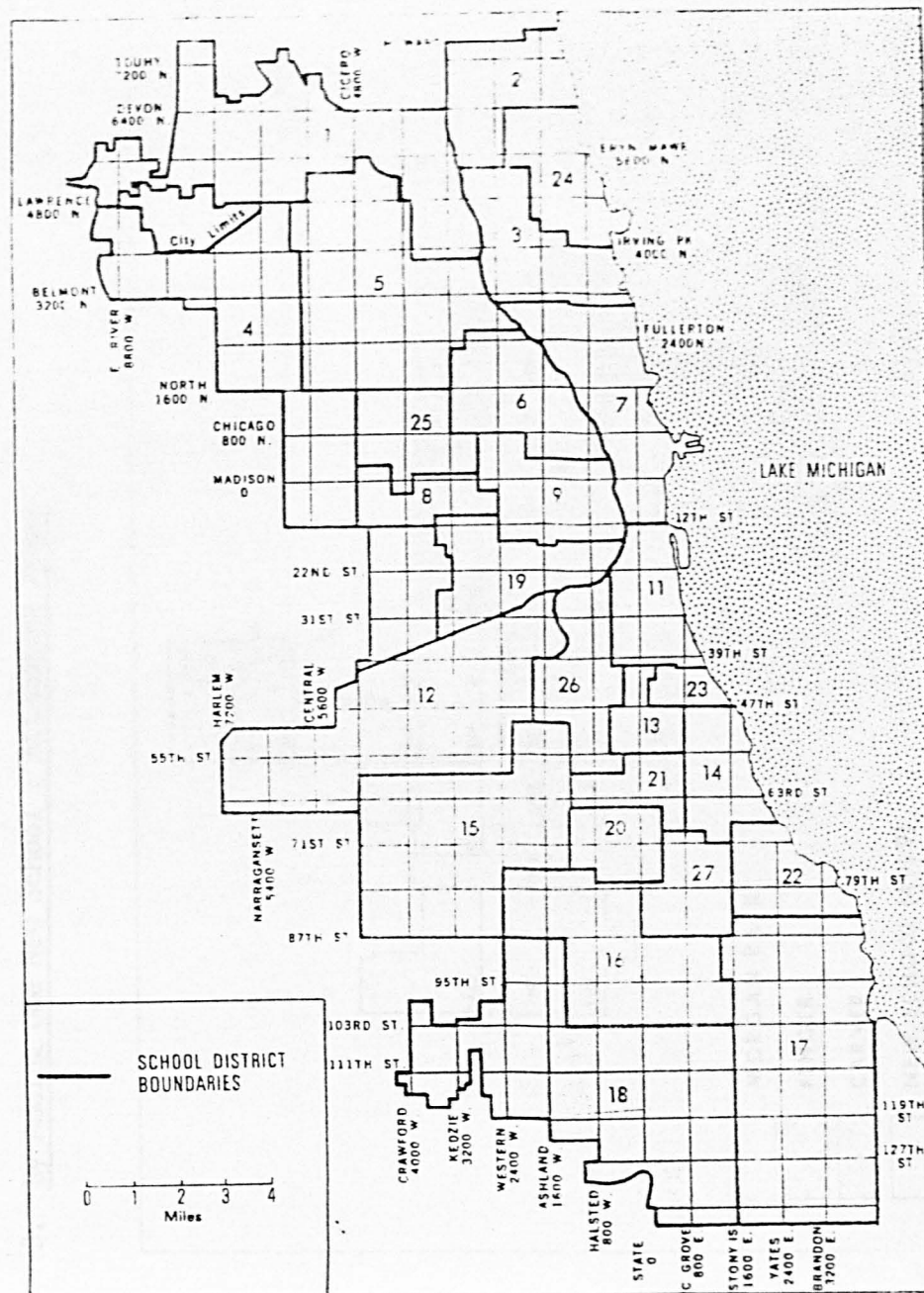
- \* Höfle, K. und P. Meusburger (1984): Regional variations of education and differences according to qualifications between "Centre" and "Periphery" in Austria. Some results of the "geography of education". In: Österreichische Beiträge zur Geographie der Ostalpen, IGU-Congress 1984. Wiener Geographische Schriften 59/60, S. 73-93.
- Meusburger, P. (1986): Zur Entwicklung des Ausbildungsniveaus in Vorarlberg. In: Bundesgymnasium Bregenz. Jahresbericht Schuljahr 1985/86, Bregenz 1986, S. 5-10.
- Meusburger, P. (1986): Die Heidelberger Professoren im Jahre 1984 mit besonderer Berücksichtigung ihrer regionalen und sozialen Herkunft. In: Beiträge zur Hochschulforschung 1/2-1986, München, S. 63-106.
- Meusburger, P. (1986): Die Qualifikationsstruktur des Arbeitsplatzangebotes nach der Einwohnerzahl des Arbeitsortes. In: Heidelberger Geowissenschaftliche Abhandlungen Bd. 6, 1986, S. 337-352.
- Meusburger, P. (1987): Wirtschaft im Wandel. Zum Ausbildungsniveau der Vorarlberger Bevölkerung. In: Thema Vorarlberg, Hrsg. v. E. Ruß Verlag, Bregenz 1987, S. 69-73.
- Meusburger, P. (1987): Die regionale Herkunft der heutigen Heidelberger Professoren. In: Ruperto Carola. Heidelberger Universitätshefte, 39. Jg., Heft 76, S. 74-95.
- Meusburger, P. (1988): Die regionale Herkunft der Heidelberger Professoren. Ein Beitrag zur Aufhellung der Personalstruktur. In: Mitteilungen des Hochschulverbandes, 36. Jg., S. 21-25.
- Meusburger, P. (1988): Das Ausbildungsniveau der österreichischen Arbeitsbevölkerung im Jahre 1981 nach der Gemeindegröße des Arbeitsortes. Ein organisationstheoretischer Erklärungsansatz. In: Österreich in Geschichte und Literatur mit Geographie, 32. Jg., S. 31-54.
- \* Meusburger, P. (1988): Das Ausbildungsniveau der Arbeitsbevölkerung auf den verschiedenen hierarchischen Ebenen des Siedlungssystems. In: 46. Deutscher Geographentag, Verhandlungs- und Sitzungsberichte, Wiesbaden, S. 354-360.
- Meusburger, P. (1988): Bildungsgeographie. In: 46. Deutscher Geographentag, Verhandlungs- und Sitzungsberichte, Wiesbaden, S. 608-610.
- Meusburger, P. (1989): Die Effekte des Geburtenrückgangs: Prognosen und Modellrechnungen zur Entwicklung des österreichischen Volksschulwesens bis 2011. In: Lichtenberger, E. (Hrsg.): Österreich zu Beginn des 3. Jahrtausends. = Beiträge zur Stadt und Regionalforschung, Bd. 9, Wien, S. 101-118.
- Meusburger, P. (1989): The educational level of the labour force in relation to the size of the communes where the jobs are located. Congrès "Regions et Formations - Europe 1992" Marseille - 7 et 8 décembre 1989, Marseille 1989, 20 p.

- \* Meusburger, P. (1990): Einleitung - Bildungsgeographie in Baden-Württemberg. In: Meusburger, P. und J. Schmude (Hrsg.): Bildungsgeographische Arbeiten über Baden-Württemberg. Heidelberger Geographische Arbeiten, Heft 88, S. 1 - 14.
- \* Meusburger, P. (1990): Die regionale und soziale Herkunft der Heidelberger Professoren zwischen 1850 und 1932. In: Meusburger, P. und J. Schmude (Hrsg.): Bildungsgeographische Arbeiten über Baden-Württemberg. Heidelberger Geographische Arbeiten, Heft 88, S. 187 - 239.
- Meusburger, P. (1990): Kyouiku-Chirigaku no Kadai to Kenkyu Ryouiki (Aufgaben und Forschungsschwerpunkte der Geographie des Bildungs- und Qualifikationswesens; translated into Japanese by M. Yamamoto). In: Tsukuba Studies in Human Geography XIV, p. 257 - 277.
- \* Meusburger, P. und J. Schmude (1991): The relationship between community size, female employment rates and the educational level of the female labour force. In: Monographs of the IGU working group "gender and geography".
- \* Meusburger, P. und J. Schmude (1991): Regionale Disparitäten in der Feminisierung des Lehrberufes an Grundschulen (Volksschulen). In: Geographische Zeitschrift.
- \* Meusburger, P. (1991 in print): Qualifikation und wirtschaftliche Disparitäten. Neuere Forschungstrends in der Geographie des Bildungs- und Qualifikationswesens. In: Geographische Rundschau.
- Meusburger, P. (1991 in print): Karrieremuster und Mobilität der zwischen 1850 und 1932 an der Heidelberger Universität tätigen Professoren. In: Ruperto Carola.
- Meusburger, P. und C. Kramer (1991 in print): Die Entwicklung des Vorarlberger Volksschulwesens zwischen 1948 und 1987 - im Vergleich zum gesamtösterreichischen Trend. In: Österreich in Geschichte und Literatur mit Geographie, 1991, Heft 3.
- Meusburger, P. (1991 in print): Die frühe Alphabetisierung als Einflußfaktor für die Industrialisierung Vorarlbergs. In: Jahrbuch des Vorarlberger Landesmuseumsvereins (Festschrift f. E. Vonbank).

## APPENDIX H

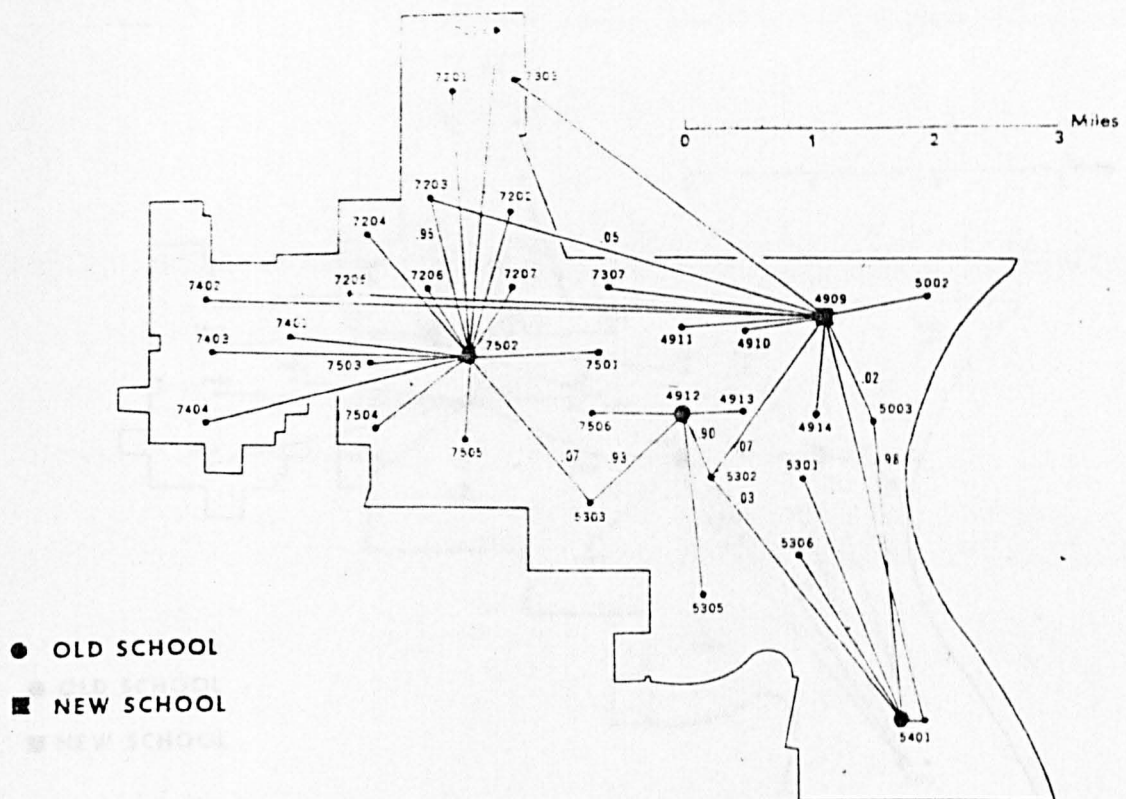
### CONTEXT AND ALTERNATIVE SOLUTIONS TO THE HIGH SCHOOL LOCATION PROBLEM, CHICAGO DISTRICT 18.

#### 1. The School Districts of Chicago

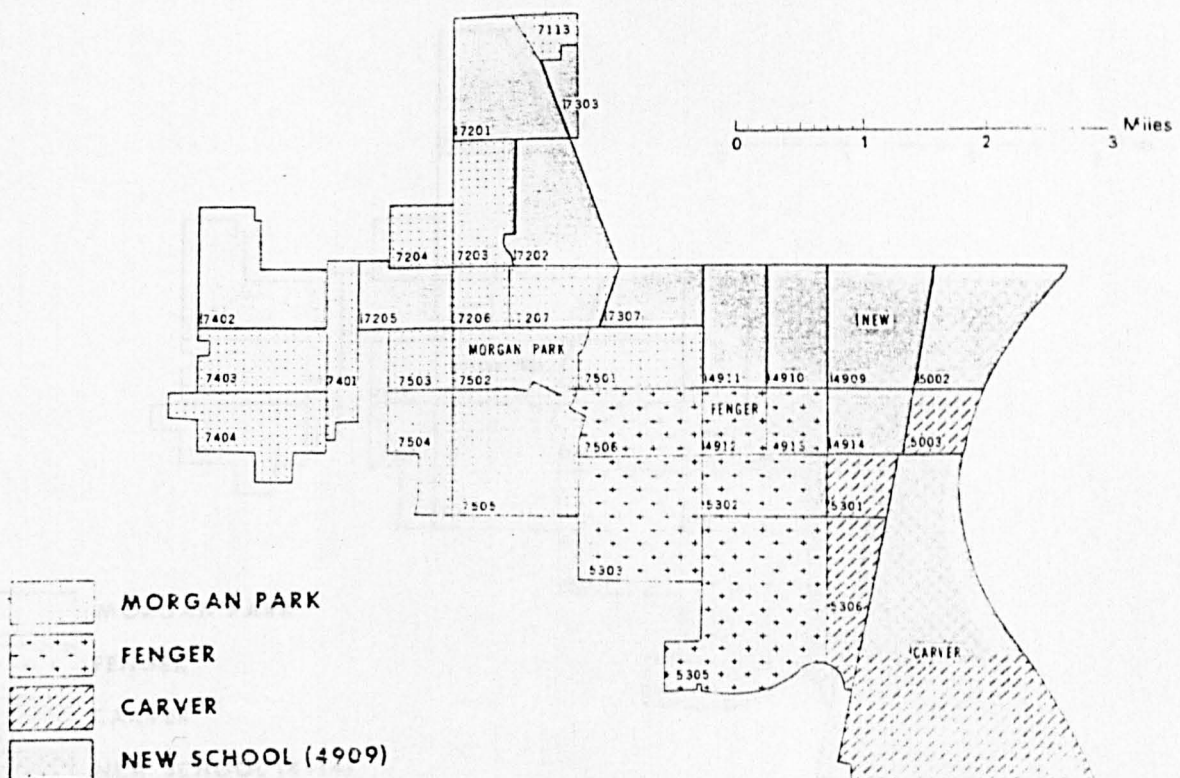


Source: Fred L. Hall, Location Criteria for High Schools: Student Transportation and Racial Integration, University of Chicago Department of Geography Research Paper No. (1973).



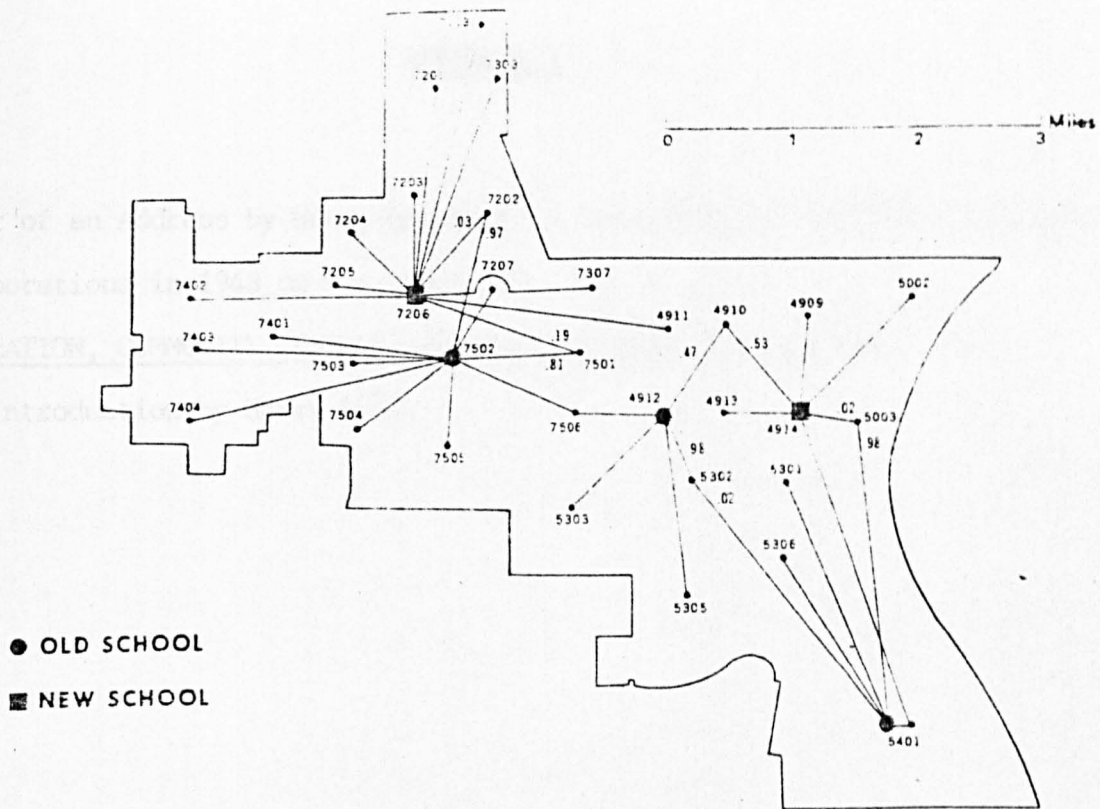


### 3. By Adding One New School : Attendance Areas

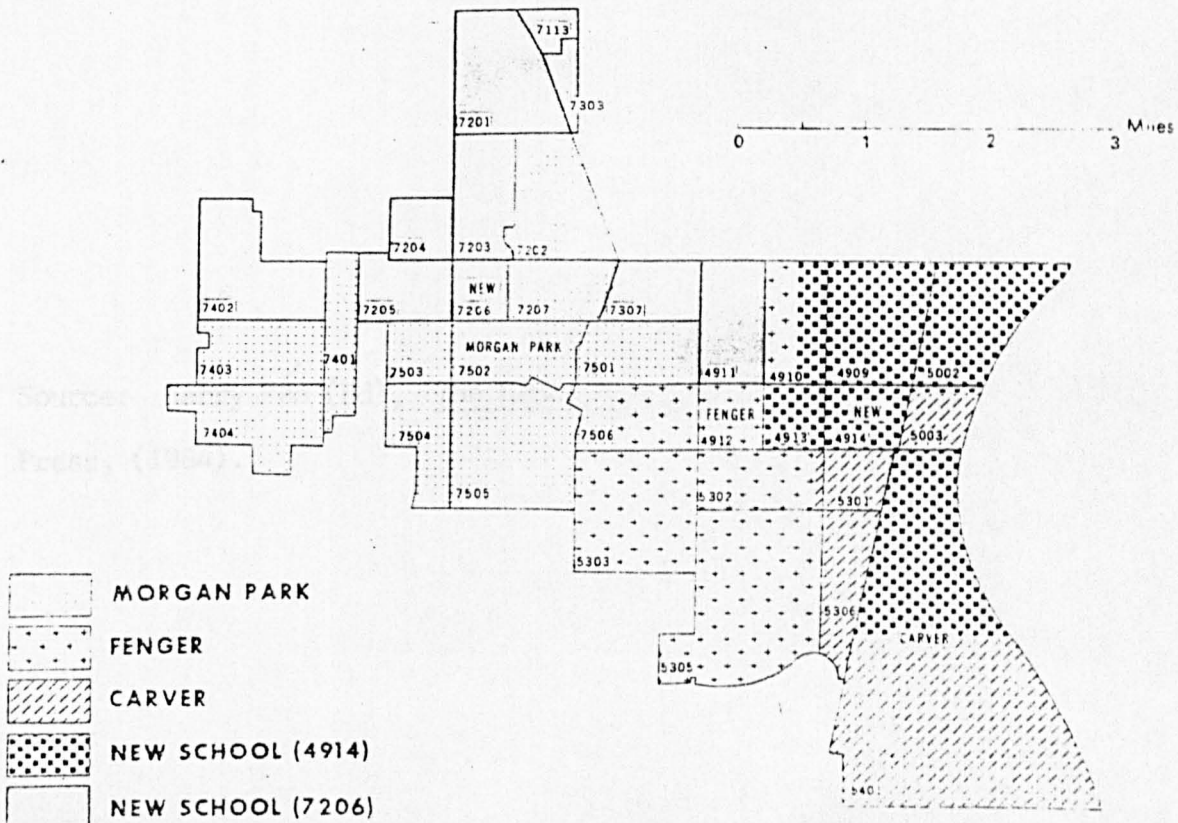




#### 4. By Maximum 30 Minute Travel Time : Nodal Assignments



#### 5. By Maximum 30 Minute Travel Time : Attendance Areas



APPENDIX I

Text of an Address by Henry Morris to a Succession of New Town Development Corporations in 1948 on the theme of:

EDUCATION, COMMUNITY CENTRES AND OTHER CULTURAL INSTITUTIONS, (with an Introduction by Harry Rée).

Source: Harry Rée (Ed), The Henry Morris Collection, Cambridge University Press, (1984).

## Education, Community Centres and other cultural institutions

### Introduction

#### Location and grouping of sites

In 1947 Henry Morris started working two days a week as adviser on new towns in the Ministry of Town and Country Planning. This is a paper prepared for meetings with the various Development Corporations of the new towns, nine of which were being planned and built, under the aegis of the ministry. It is dated from the Ministry of Town and Country Planning 5 March 1948.

'It cannot be said that Henry's advocacy of what was needed in the new towns fell on very fertile ground.' Norman Fisher (1965). This was an understatement. The blank space in the title would be filled in with the name of any new town whose Development Corporation was prepared to listen to him (many were not). But the paper, even though at the time largely disregarded, has a message for planners today.

Some of his critics at the time suggested that Morris may have provided rural Cambridgeshire with village colleges, but he did not appreciate the demands of an urban environment. In spite of his deep attachment to the countryside he had always recognised however that civilised values and civic virtues stemmed from the 'civis', the city itself. True he detested and criticised the contemporary industrial cities, 'squalid and chaotic dormitories sicklied o'er with commercialised amusement', but he was confident that this could be changed, especially in the new towns, by wise planning and inspired architecture. This was why, at first, he looked forward so eagerly to his work as adviser to the minister.

Little remains as written evidence of the work he did, other than notes of meetings he held with the managers of the new towns, and with the education officers of the localities where these were being built. Sometimes these notes give away more than intended as to the negative or even hostile reaction which he met, and which, to be truthful, he sometimes engendered through his manner.

The paper which follows shows his vision and also his style. His approach was, as ever, meticulous but his prescriptions have about them an inflexibility resulting from his conviction that he was right; this must explain in part his lack of success. However the vision remains, along with a typical expression of sensitivity. This is shown in the concern he expresses for the young mother transported from her familiar city street to a new neighbourhood in the new town, lonely and housebound. He noted that 'she practically disappeared from the social scene'. All too little was done at the time for such people, often

### *Education, Community Centres and other cultural institutions*

single parents. But it is worth noting that today, in many different areas of Britain where community education is well developed, crèches are provided and activities organised for these too often forgotten members of the community.

And as for the vision, who but he could have put forward the suggestion that St Mark's Square in Venice might well be a model for the city centre of the new town of Stevenage, Hemel Hempstead or Peterlee. For here, as in St Mark's, a collection of fine buildings would bring together education and administration, the arts and the law in a harmonious architectural and cultural symmetry. Translated into contemporary terms he was only pleading for the association of education with ordinary life, and for both to be closely concerned with the arts and with civic government.

## Education, Community Centres and other cultural institutions

Paper prepared for the... Development Corporation, 5 March 1948

I This preliminary memorandum deals with the size, location and, wherever necessary, the grouping of sites for education (primary, secondary, further, community centres) and other cultural institutions, such as the town library, the art gallery, the theatre and the concert hall. It is intended amongst other things to assist the corporation in settling these matters with the local education authority in so far as they are concerned. It is remembered that the L.E.A. is the statutory provider of educational services, subject to the approval of the Minister of Education, each being concerned financially with capital and maintenance expenditure on approximately a fifty-fifty basis. At the same time, it is essential that the corporation, in negotiating with the local education authority on the one hand and on the other in its relation to the Ministry of Education, either by way of informal approach or by formal appeal, should have a thought out policy, and that it should not be merely dependent on the local education authority and the Ministry of Education.

II The location and, wherever necessary, the grouping of educational buildings and buildings for allied cultural or social services is of major importance if one of the major objectives of the new town is to be

cultural. Such groupings provide one of the few available opportunities of giving the modern town a significant form and atmosphere. The chance for architectural composition, not only at the centre but at other points in the town, is obvious. Other important advantages that accrue from grouping will be noted in subsequent paragraphs of the memorandum.

### III The types of education provided for are as follows:

- nursery schools (2-5 years)
- infant schools (5-7 years)
- junior schools (7-11 years)
- Secondary schools:
  - modern schools (11-16 years)
  - technical schools (11-18 years)
  - grammar schools (11-18 years)
- county colleges (15-18 years)
- further education (includes community centres)
- special schools for handicapped children (5-16 years).

IV A table follows (Schedule A) giving details of school provision from 2 to 18 years for a town of 60,000. The estimates are based on an allowance of 16 school children in each year for each 1,000 of the population. This figure has been arrived at after a recent consultation with officers of the Ministry of Education.

The acreage required for the services listed in Schedule A is given in Schedule B.

### V Nursery schools (2-5 years)

The total number of children to be accommodated in each nursery unit is 40. These units should be scattered throughout the town, and in any case not more than three units of 40 children each should be placed on the same site. Not less than half an acre is required for each nursery unit. The number of children in a town of 60,000 who may be expected to attend a nursery school is 50 per cent of the age group (i.e.  $2,880 \div 2 = 1,440$ ). It should be borne in mind, however, that such a service, especially if the units are well distributed and easily accessible to homes, will become very popular and that the number of children of 2-5 years who will ultimately attend will be more than 50 per cent of the age group.

Careful attention should be given to the possibility of grouping maternity and child welfare services with the nursery school units. If this is done some extension of the site would have to be considered.

*The young parent.* Thought should be given to one great need of the

young parent, particularly the young mother, which is now practically never met. It is found by those who are connected with education and other social services that the young mother, especially the working-class mother, bringing up a young family practically disappears from the social scene. She is tied to the home and generally can only leave it if she takes her young child or children with her. The young parents can seldom go out and do things together. This predicament is becoming common to parents at many social levels. If the young mother and the young married couple are to get their proper cultural and social opportunities in the new towns, then provision must be made for a service of 'watchers' and of day and evening nurseries. Such nurseries might best be grouped with the nursery school and the infant welfare centre.

### Infant schools (5-7 years)

For the purposes of location and size of site the number of children that may go to private schools may be ignored and need only be considered when the plans for actual building are under preparation. The Ministry of Education's pamphlet, *The Nation's Schools*, says of infant schools: 'A total of 200 is quite large enough for normal work and 300 should seldom if ever be exceeded'. For an infant school of not less than 200, the size of the site for buildings only is two acres, with extra ground, at the discretion of the local education authority, for small gardens and other activities requiring a grass surface.

It is recommended that an appropriate number of nursery units (say three) should be related to a more or less centrally situated infant school to which they will be contributory.

### Junior schools (7-11 years)

If the schools are to be very easily accessible to the homes and not too large, then the solution is to have approximately twelve schools.

Careful consideration should be given to the grouping of each infant school with a junior school on the same site. The individuality of each school would be preserved. Apart from administrative advantages (e.g. servicing) they would provide an architectural grouping which would have some significance for the surrounding neighbourhood.

## VI Secondary and further education and allied cultural and social services

### (1) Grouping at the town's centre

A college of further education for students of all ages from 18 years and upwards will be provided for the town as a whole. Such a college

## Schedule A

Town of 60,000

1,000 population produces 16 children in each school year. Number of children in each school year in a town of 60,000  
population:  $60 \times 16 = 960$

Type of school	Age range	Percentage attending	Yearly intake	Total no. of pupils	Size of schools	Form entry	Number of schools
Nursery	2-5 (3 years' course)	50%	480	1,440	40	—	36
Infants	5-7 (2 years' course with margin for 4+)	100%	960	2,160	180-200	2 form + (40 per form)	12
Juniors	7-11 (4 years' course)	100%	960	3,840	320	2 form (40 per form)	12
Secondary Modern	11-16 (5 years' course)	70%	672	3,360	600	4 form (30 per form)	6
Technical	11-18 (7 years' course)	10%	96	672	630	3 form (30 per form)	1
Grammar	11-18 (7 years' course)	20%	192	1,344	630	3 form (30 per form)	2
County Colleges	15-18 (3 years' course) or 16-18 (2 years' course)	70%	672	2,016	135 per day	—	3
		70%	672	1,344	90 per day	—	3

Note: It should be noted that the actual number and sizes of the infant and junior schools will have to be settled in relation to the population of the area served; the total number of school places will not be affected.

## Schedule B

Town of 60,000

Type of school	Size of school	Acreage for buildings and playground	Acreage for playing fields	Acreage for other purposes	Total acreage per school	Number of schools	Total acreage
Nursery (2-5)	40	$\frac{1}{2}$	—	—	$\frac{1}{2}$	36	18
Infants (5-7)	180 (2 form entry +)	2	—	—	2	12	24
Juniors (7-11)	320 (2 form entry)	2	$3\frac{1}{4}$	1 (garden)	$6\frac{1}{4}$	12	75
Secondary Modern (11-16)	600 (4 form entry)	$3\frac{1}{2}$	18	4 (garden) (boys' school only)	$25\frac{1}{2}$	3 (boys) 3 (girls)	141
Technical (11-18)	630 (3 form entry)	$3\frac{1}{4}$	18	—	$21\frac{1}{4}$	1	$21\frac{1}{4}$
Grammar (11-18)	630 (3 form entry)	$3\frac{1}{4}$	18	—	$21\frac{1}{4}$	2	$43\frac{1}{2}$
County College	135 per day	2	—	—	2	3	6
Community Centre	—	2	8	—	10	3	30



will doubtless also feed some of the rural region around the town, since technical and art education tends to be a *regional* service. The scope of the college will include science and technical education and the humanities (art, literature and drama, music). It will make provision for the corporate life through common-rooms and dining rooms, and for physical recreation through playing courts, playing fields and swimming pool. The courses for Science and the Arts will be both full-time and part-time and will be of a systematic character.

The college of further education ought to be an important and significant part of the central square or squares, where the administrative and the cultural should, so to speak, be blended. Thus there should be a close association between the college of further education, and the art gallery, the concert hall and the town's main library, all three of which will be conceived on livelier and more imaginative lines than in the past. These buildings should have some relation to the town's administrative centre, so that in the result education will not be separated from the active appreciation and practice of the Arts and all of them will not be entirely divorced from civic administration. One example of what might be aimed at is to be found in St Mark's Square at Venice with the Doge's palace, the cathedral, the courts of justice, the library, municipal offices, etc., surrounding perhaps the most potent and moving space in Europe. The theatre has also to be remembered. There is no need to be dogmatic about the actual form of the location of these public buildings in addition to the law court and other administrative buildings. It is possible for them to be placed in very significant relationship even if they are placed in two communicating squares or spaces. The important thing that has been said is to associate education with ordinary life and both with the practice of the Arts and with civic administration.

The question of the size of the site for the building arises. There is no regulation laid down by the ministry and the area will depend on whether the college will have a regional function or not. It is provisionally recommended that approximately four acres should be reserved for the college building. This would allow for some accommodation for fives, racquets, etc. The playing fields would not be at the town centre, but placed at some reasonably accessible spot and should be not less than 14 acres.

(2) *Grouping of secondary education, county college, community centre, etc.* It is strongly recommended that consideration should be given to the grouping of secondary schools, the county college, further education, including the community centre, the branch library and perhaps the

health centre. Three campuses are suggested, each placed at a selected point between the centre and the periphery of the town and each serving approximately a third of the population. Such centres would be very accessible to the users and would lend very great significance, both cultural and architectural, to the body of the town. For the purposes of ready reference, the three campuses may be lettered A, B and C.

For a town of 60,000 there might be three *selective* secondary schools (one three-form entry grammar school for some 630 boys, one three-form entry grammar school for some 630 girls, and one three-form entry technical high school for some 630 boys and girls. These schools would not be placed in isolation in various points near the centre of the town. The boys' grammar school would be on A campus, the girls' grammar school would be on B campus and the technical high school would be on C campus.

At each campus, A, B and C, there would be placed two modern schools, one for boys and one for girls, each to serve approximately a third of the town area.<sup>1</sup>

The location and the curriculum of the county college are problems about which no clear lead has been given by the Ministry of Education and in the country generally there is difference of opinion. The truth is that there is more than one answer to both problems and that there is room for experiment. The number of boys and girls of 15-18 in a town of 60,000 who will attend the county college on one day a week will be about 2,000 (400 pupils a day).

Apart from day work, the county college is intended to provide club life for young people in the evenings and at weekends. Clearly, there are serious objections to providing for the whole group of 2,000 in one centre, either in isolation (since the county college ought to be in a context that looks towards maturity) or on the same site as the college of further education. An evening concourse of 500 to 1,000 young people would be a mob rather than a club; and the clubs should be an intimate and human unit in which the young man or young woman can feel that they are really known and matter. It is therefore suggested that the county college should be divided into three units, one to be

<sup>1</sup> This memorandum has in mind the allocation of sites from a long-term point of view. Therefore the suggestions for the modern school assume a school leaving age of 16 (not 15) and a school leaving age of 18 for everybody attending the selective grammar and technical high schools. The three year age range (15-18) for the county college is assumed because it is anticipated that the county colleges will be established before very long. Development plans for further education are now being prepared by all local education authorities. When the school leaving age is raised to 16 the age range will be reduced by one year, but it is not thought that the county college building accommodation will then prove excessive.

placed on each of the three campuses where its association with the community centre would provide a context looking towards maturity. Each unit would provide for between six and seven hundred young people. Here would be provided a training on one day a week for each boy and girl in continued education and practical activities, as set out in paragraph 105 'The aims of the County College' of the Ministry of Education's pamphlet *Youth's Opportunity: Further Education in County Colleges*. There would be some vocational training both in the day time and in the evening, but specific vocational education of a systematic and advanced character would be provided at the college of further education to which selected boys and girls from trades and callings (e.g. printing, building, dress-design) could be sent. While accommodation, including club rooms, would be specially set apart for the county college group at each campus, there would be certain facilities which could be shared in common, e.g. gymnasia, playing fields, tennis, fives and squash courts, etc.).

### (3) *The community centre*

This would have some buildings of its own (e.g. branch library, adult lecture rooms, common-rooms, games rooms and a committee room are essential), but as it would be placed near the secondary school many of the rooms belonging to the latter, e.g. workshops, domestic science rooms, laboratories, etc., would be available for use by adults in the evenings. The community centre would provide for young people and adults of all ages a balanced programme of classes and courses at a less systematic level than at the town's college of further education. There would be provision for crafts and hobbies, for instrumental music and singing, and for drama.

The drama will not take its proper place in education, both in the secondary schools and in further education, unless a theatre is available. The customary school hall with a stage at the end has long been obsolete. It should be replaced by a theatre or auditorium with sloping floor and a properly equipped stage. Such an auditorium could be used for drama, music, the film, assemblies, prize days, meetings. It would be used by the secondary schools, the county college and the grown-ups and would make the drama, the opera and orchestral music a reality in public education. The dining rooms will provide for those activities that require a flat floor.

Consideration should be given to the possibility of placing a Health Centre under the Ministry of Health on each campus site and of associating the School Medical Service in the same building with the Health Centre.

### (4) *The advantages of grouping*

Reference has already been made to the advantage from the point of view of significance and architectural design of grouping the further education facilities on three campus sites. Another important consideration should be emphasised. The multilateral school is still a very controversial issue. The course recommended in this memorandum is to give the modern schools and the grammar schools and the technical high school the same standard of buildings and amenities and to put them in association on the same campus. Thus the grammar school will not be isolated, and the three types of secondary school will be placed in an identical physical context. They would have many contacts as, for example, in meeting each other on the football field, in debate and perhaps in choruses, opera, drama and orchestra. The three schools might have the same coat of arms with a slight deviation for the modern school, the grammar school and the technical high school. It is suggested that serious consideration should be given to the provision of a fine chapel at each campus, to be used jointly by all the secondary schools. As is well known, morning assembly and religious teaching are now compulsory in all publicly maintained schools.

There are certain administrative advantages in the grouping of secondary education on the campus. There are possible capital economies at the beginning in such things as drainage, and economies in maintenance administration such as caretaking and heating, and the servicing of playing fields and grounds.

### **Size of campus sites**

The total acreage required for the educational services set out in Schedule B amounts to 81 acres [sic]. This is a provisional estimate.

If a health centre were added there will have to be a comparatively small addition. There is no need to make any specific provision for the branch library building. It should be noted that provision is made for an 8-acre recreation ground for the adults attending the community centre. This should be borne in mind in considering what provision should be made in the plan for the public recreation grounds.

### *Sites for special schools*

Provision in the plan should be made for the following schools for handicapped children:

- (1) A special school for delicate and physically handicapped children (5 acres);
- (2) A special school for educationally sub-normal children (5 acres).

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