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# Introduction

In view of a recent pronouncement that 'the production of a major summary of Scottish historical geography must lie a long way in the future' this book may well appear to constitute a dangerous and presumptuous literary adventure.1 The arguments for caution are well founded since much early documentary material has been lost, and with the sparsity of cartographic evidence of any kind before the great eighteenth-century military survey by General Roy there is a formidable contrast in the quality and availability of source material for the periods before and after c. 1750. Furthermore, the limited effort made by historical geographers working on Scottish topics has been made still less effective in terms of potential for a general synthesis by a tendency to concentrate on a rather limited range of issues. Studies of rural settlement evolution are certainly hampered by a lack of continuity, arising from the particularly radical changes made at the time of the improving movement, but there seems little justification for the strange neglect of urban, industrial and transport themes where promising early studies have not been developed.<sup>2</sup> The lack of diversification cannot be attributed entirely to the absence of data, because economic historians have made very substantial contributions in this neglected area over the last ten years.<sup>3</sup> The imbalance in Scottish historical geography is all the more unsatisfactory because there are very few general reviews. Back in 1913 W. R. Kermack wrote the first and, so far, the only Historical Geography of Scotland, but this publication is significant only in the use of the term 'historical geography' because it was written as a 'geography behind history' and has very little potential as a stimulus for a modern version.4

The inter-war period produced a number of substantial papers, and saw the appearance of the first major regional monograph, A. C. O'Dell's Historical geography of the Shetland Islands.<sup>5</sup> But it is perhaps indicative of prevailing views on the relevance of different branches of geography that Professor A. G. Ogilvie should envisage no substantial role for historical

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geography, where interest was apparently to be restricted largely to anthropology and the study of place names. Nevertheless, contemporary research did enable an important historical element to appear in modern text books on Scotland, most notably in the British Association handbooks for Aberdeen, Dundee and Glasgow. 7 But it should not be overlooked that in 1962 A. C. O'Dell and K. Walton published their Highlands and Islands of Scotland, which included a very strong historical dimension on what was in fact a review of the whole of northern Scotland, including the Grampian region as well as the Highlands proper.8 Many of the illustrations attempted to map for the first time some of the basic source materials for Scottish historical geography, and such maps generally covered the whole of Scotland. A descriptive landscape approach which characterised much of this work was extended to the whole of the country by R. Millman in 1975, in a belated attempt to involve Scotland in the type of research which W. G. Hoskins had long been advocating in England. Two further books subsequently appeared which provide a more analytical approach to urban and rural areas. I. H. Adams acknowledges inspiration from Hoskins, but gives considerable emphasis to processes of change in The making of Urban Scotland, while M. L. Parry and T. R. Slater, editors of The making of the Scottish countryside, claim no such descent although their authors are similarly concerned with the processes, both evolutionary and revolutionary, of landscape change. 10

This text represents a complementary effort to these two recent publications, although it had a longer gestation period. It is motivated by the belief that, despite the lack of any definitive appeal in this transitionary stage, it is educationally desirable to offer tentative overall assessment as a stimulus to both teaching and research. Urban and rural environments are covered, but there is no attempt to cover the whole time span of human settlement, and emphasis on the period since the union of 1707 should make the viability of the project rather less uncertain. Since 'there have been virtually no attempts to present a composite picture of the geography of a past period' the general examination of three periods, 1707–1821, 1821-1914, and 1914 to the present, in addition to a review of events leading up to 1707, involves some originality. 11 A further innovation arises through the presentation of three special studies for each of the major periods. These essays are meant to add depth where the accumulation of research makes an overall assessment particularly appropriate at this time. As far as possible these studies avoid the major topics of previous works, but they have been selected to provide the best overall balance and to reveal something of the spatial intricacies of Scotland's growth over the last two hundred and fifty years. Further, although the project is conceived fundamentally as an empirical study in regional development, with decision-making examined as far as possible in the context of individual



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behaviour and broader values or ideologies, some concluding assessments

are offered to integrate the work with concepts of modernisation and development in the social sciences. Some of the more relevant ideas are therefore summarised here.

The task of placing the empirical work in a context of general ideas is complicated by the impressionistic nature of most models concerned with change through space and time. Various concepts of heuristic value have been outlined, but few have been tied to specific criteria and quantitative indicators which allow for testing against empirical research. Broadly it may be claimed that this work deals with the modernisation of Scotland, involving the change from a traditional, largely subsistence economy to one that is highly integrated with a wider trading system. A key role in this process was played by a modernisation elite which advocated new organisational forms and implemented necessary measures through its political power, combined perhaps with some charisma and personality. 12 K. W. Deutsch has referred to 'social mobilisation' as the process by which the old society is broken down so that people become available for new patterns of activity. 13 However the criteria used to indicate the transition to modernity cannot evidently be laid down as a discrete set of factors against which all societies can be measured. The level of modernisation has been shown to vary according to the values selected and although the debate has been largely related to the relevance of western values in the Third World there is the possibility that certain apparently 'recalcitrant' areas within western countries may be considered backward because of distinctive features in their routes to modernisation.<sup>14</sup> A further issue involves the relationship between modernisation and development. If modernisation is simply the increasing integration of a region into the world capitalist economy then it may take place on a colonial basis with external control of resources, leading to an emphasis on primary activities without corresponding attention to the secondary and tertiary sectors and the urbanisation which growth of these activities normally implies. Real development then involves the systematic increase in the total economic resources of society so as to bring out fundamental improvements in material and social welfare. Once again the distinction seems most significant for developing countries with their background as 'modern colonial societies', but it may also be of some relevance in considering Scotland's adaptation to the stimulus of union, both as regards the country as a whole and its constituent regions. 15

One obvious source of stimulation is W. W. Rostow's model for the stages of economic growth, in the full context of political and social forces. 16 Traditional societies based on pre-Newtonian attitudes to the physical world (with men not disposed to believe that the world was systematically capable of manipulation) could not foster scientific research



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or take full advantage of progress in technology made elsewhere. Hence the preconditions for rapid economic development had to include a fundamental change in attitudes such as was evident in Western Europe in the late seventeenth century. Such a ferment of ideas, coupled with due attention to agriculture, education and public works (infrastructure or social overhead capital investment) may then be associated with a take-off where growth becomes the normal state of affairs. 'During the take-off new industries expand rapidly, yielding profits a large proportion of which are reinvested in new plant; and these new industries in turn stimulate through their rapidly expanding requirements for factory workers, the services to support them and for other manufactured goods.'17 The initial emphasis on a relatively narrow complex of industry and technology gives way to a diversified range of activities, and thereby in maturity the economy 'demonstrates the capacity to move beyond the original industries which powered its take-off and to absorb and apply efficiently over a very wide range of its resources . . . the most advanced fruits of modern technology'. 18 Finally comes the stage of high mass consumption with emphasis on consumer durables and services, and more resources diverted to social welfare as the extension of modern technology ceases to be the overriding objective. The Rostow formula has encountered some criticism, and it is clear that quantification is much more feasible through an aggregate view that is perhaps more appropriate to a mature economy than one undergoing take-off. It may also be unwise to envisage a clear sequential pattern of change and allow instead for considerable overlap, especially between the take-off and the preconditions for it. Yet the existence of propulsive industries can hardly be denied, and the significance of ideological backing for change (through various non-economic preconditions) to maximise what is technically and physically possible is well-established. 19 It is therefore useful to examine the eighteenth and nineteenth centuries in Scotland to see how the nation participated in the take-off which has been traced in Britain to the end of the eighteenth century when a mechanised factory-based textile industry emerged.<sup>20</sup>

The preoccupation with the state as a whole as the unit for the study of economic growth leaves aside the inevitable spatial restriction of rapid growth. It can by no means be assumed that Scotland's regional economy will show dynamic tendencies and stand as a microcosm of the United Kingdom's performance. It is evident that before the take-off England and Wales had reached a high level of integration. In this achievement E. A. Wrigley emphasises the invigorating role of towns through their services and transport links, which 'helped to liberate more fully the productive capacity of the countryside' and therefore to invalidate the notion of a parasitic town.<sup>21</sup> More specifically he underlines the importance of London as a 'potent engine' working for change between 1650 and 1750. The



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largest city in Europe in 1801, London created a demand for food and fuel which in itself brought about a modernisation of agriculture and mining as well as improvements in communications.<sup>22</sup> In addition, for example, London merchants dealing in meat, fruit and poultry took an increasing interest in the conditions of production and put both capital and expertise into production, thereby accelerating the transformation of English agriculture.<sup>23</sup> Scotland's leading city was much smaller. In 1755 the 64,800 people in the Edinburgh area constituted only 5.1 per cent of the total population of Scotland, and in 1821, when 162,000 were resident in the parishes which eventually made up the city of Glasgow, they accounted for only 7.8 per cent of Scotland's population. London's 900,000 in 1801 was equivalent to 10.8 per cent of the population of England. Thus there was a possibility that Scotland would react passively to union. English textiles might flood the northern market and English merchants might outclass their Scottish rivals on the Atlantic routes, leaving the principal benefits to Scottish farmers who would have assured entry to the London food market with their cattle. It must therefore be considered how far Scotland was able to respond actively to the union and contribute through her own propulsive industries to the take-off and maturity of the British economy.

However, a region is unlikely to respond uniformly to an external stimulus for growth, and a call has recently been made for a general theoretical context of regional development which would allow understanding of how the geography of a region evolves as development proceeds.<sup>24</sup> In an area which is being opened up to modernisation it is argued that there is an initial pre-industrial phase (covering the traditional and preconditional phases in Rostow's scheme) when the emphasis is placed on primary industry. The spatial pattern of the resource area will consist of dispersed farms and small nucleated service centres which are wholly dependent on the needs of the primary sector. Initially manufactures will be imported, but as the economy develops into the second industrial phase (covering Rostow's take-off and maturity) importreplacing manufacturing industries begin to grow in the main port where local and imported raw materials can most efficiently be assembled and from which all parts of the regional market can be reached. Some primary processing of farm products may also develop in the inland service centres. Eventually the growth of the regional market allows the manufacturing in the port city to take advantage of economies of scale to the point where it may begin to export some of its output. Increased trade will place greater demands on service industries which will also expand on account of the improvement in living standards associated with the growth of the economy. At the same time, the better-placed inland centres will have become towns and acquired a considerable importance for manufacturing, which now becomes a major element in the regional economy. The final



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post-industrial stage of high mass consumption sees further expansion of manufacturing and services and the perfection of the central place hierarchy which assures continuity between the small communities still engaged in primary production and the port city. If the organisation of the primary sector is continuously modified, by labour shedding and farm amalgamation, so that per capita incomes increase, then the people working in the resource sector will secure incomes comparable with those secured elsewhere. But if the process of adjustment in the once dominant primary industry is frustrated by a reluctance to migrate (which could in part be caused by poor information flows resulting from inadequate attention by government to transport and education), then serious 'problem area' situations are likely to arise. The new reality of resource area dependence on distant urban centres with mature economies based on manufacturing will induce a traumatic readjustment marked by heavy depopulation and a continuous run-down in local services.

This approach has been applied to South Wales where coal is the important primary activity.25 Particularly in the eastern part, a clear geographical distinction is seen between the resource areas of the coalfield and the service centre to the south, located off the coalfield. By 1913 the resource industries dominated the regional economy, but the southern service centres had acquired some industry as the ports engaged in flour milling and making confectionery for local markets. A decline in the demand for coal after the First World War meant a labour surplus that might have been absorbed by the growth of manufacturing industries serving local and extra-regional markets. But virtually no activity of this kind developed, so there was high unemployment and heavy outmigration. However, after the Second World War the growth of manufacturing did take place, encouraged by government regional policy. The trend towards manufacturing has increased to such an extent that this sector employs more than twice as many people as the basic industries of coal-mining, steel and tinplate production. Services are also becoming more important and employ over half the total labour force. And the change in structure has spatial implications because the manufacturing and services are most important in the southern centres, which have also benefited from rationalisation of public sector services. Thus the coalfield settlements are now faced with a difficult process of adjustment similar to the challenge that faced the whole region in the inter-war period.

The regional development model provides a framework for the analysis of change in a particular area and a useful vehicle for the integration of specific evolutionary themes such as central place structure, transport networks, industrial patterns and population distribution. It is also useful in reducing the five Rostow stages to three phases which should be easier to identify at the regional level. The discussion on Scotland will therefore



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look broadly at industrial progress in relation to the take-off and maturity which Rostow has recognised for the British economy as a whole, thereby avoiding the question of how far a region can experience an autonomous take-off. But there remains the problem of classification for resource industries like coal and iron. The application to South Wales seems questionable in the sense that the basically pre-industrial phase of primary production should be tied in with coal mining and iron production, as resource industries. Any form of manufacturing implies a degree of sophistication in the economy and it should be the significance for wage levels, urbanisation, education skills and technology that is decisive for classification rather than use of local materials. Moreover the significance of coal for manufacturing industry under nineteenth-century technology suggests a link with the second (industrial) stage rather than with the first. Assessment for Scotland will therefore follow from these assumptions.

For patterns within regions, the model and its elaboration in a region of the UK is helpful in emphasising the polarisation of growth on a port city which will tend to emerge whether or not there is active or passive adjustment. There will be the inevitable centre/periphery or core/fringe contrasts emerging, as 'backwash effects' draw population and investment resources to the central area of the region where secondary (manufacturing) and tertiary (service) functions can best be concentrated.<sup>26</sup> It is also useful in underlining the possibility that areas of primary industry may find adjustment difficult. Relations between centre and periphery may become so antagonistic as to produce a dual economy situation. 'Society must provide a socially and geographically fluid medium to accommodate ceaseless change in the relative worth of occupations and locations as the blend and amounts of goods and services required change through time.'27 In the western world sweeping migration and rapid occupational change have been characteristics of the last two centuries, but there may be resistance in certain areas where 'more viscous communities' create duality as 'a back country of traditionally organised subsistence farmers surrounds limited commercialised areas dependent on foreign trade for markets'.28 Such peripheries may not respond quickly to the diffusion of innovation from the centre, and government may be obliged to implement special programmes of economic assistance to improve living standards.

The socio-political aspects of centre-periphery relations are also worth considering. Centre formation can be regarded as a non-spatial concept, which refers to a central value system tending to find wide acceptance in a modern society. The values and beliefs of the centre gradually extend over the peripheral societies as an agreed basis for government, and the country becomes a fully integrated political unit.<sup>29</sup> However, these ideas may be transformed on to a spatial basis with the dominant social class related to a leading territory which then interacts with the periphery and seeks to



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Table 1.1. Population data 1801–1971

Region	Population	Percentage					
	1801	1851	1901	1951	1961	1971	change 1801–1971
Islands	68.5	98.5	103.0	76.2	69.2	64.3	-6.2
Highlands	250.0	318.2	274.3	234.3	230.6	241.1	-3.5
Grampian	211.9	339.2	448.4	451.1	440.4	438.6	107.0
Tayside	214.7	333.0	399.5	396.2	397.8	397.6	85.2
North	745.1	1,088.8	1,255.2	1,157.8	1,138.0	1,141.6	53.2
Borders	79.9	110.5	120.0	109.1	102.2	98.5	23.3
Dumfries & Galloway	106.7	164.6	144.6	148.0	146.4	143.2	34.2
South	186.6	275.1	264.7	257.1	248.7	241.7	29.5
Outer Regions	931.8	1,363.9	1,519.9	1,415.0	1,386.6	1,383.3	48.5
East-Central	335.3	589.7	983.9	1,230.5	1,275.5	1,335.8	298.4
West-Central	341.3	945.1	1,998.3	2,450.9	2,517.2	2,509.9	635.2
Central Belt	676.7	1,534.8	2,982.2	3,681.5	3,792.7	3,845.6	468.3
Scotland	1,608.4	2,898.7	4,502.1	5,096.4	5,179.3	5,229.0	225.1

Source: Census of Scotland

incorporate it within the prevailing value system. For the centre to survive territorially there must be an adequate degree of social and cultural homogeneity, otherwise regional centres may emerge as 'counter-centres' and invalidate the idea of a single political unit.30 A clash of values between rival centres may well provoke military conflict, particularly when the strategic implications are ominous. But modern institutions should develop as far as possible to absorb conflict with the periphery and 'insofar as the modernisation of the central political institutions takes place before that of the periphery, without at the same time blocking the incorporation of the periphery, the greater the propensity for sustained development'.31 The relevance of these issues to Scotland lies in the conflict between the Highlands and Lowlands which has sometimes made the unity of Scotland a purely nominal one. It may be anticipated that the values of the centre would encounter resistance in the peripheral areas, and that new political structures would be needed to assimilate the provinces and to introduce a pluralistic society. Any imposition of alien values, coupled with the emergence of a dual-economy (as described above), would constitute 'internal colonialism', an oppressive economic and political system with centre and periphery respectively displaying high levels of dominance and dependence.<sup>32</sup> So it is a fundamental assumption of this work that development will reveal core-periphery problems. The limited resources of the northern and southern extremities of Scotland, emphasised by the relative inaccessibility of the northwest mainland and islands, makes the anticipation of highly polarised growth in the Central Belt all the more justified.

Perception of broad regional variations arising from slow and uneven



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Table 1.2. Population of Burghs 1851-1971a

	1851 <sup>b</sup>		1901		1951°		1961°		1971°	
	Α	В	Α	В	A	В	Α	В	Α	В
Islands	10.8	11.0	14.6	14.2	16.3	21.4	16.9	24.4	17.5	27.2
Highlands	55.4	17.4	78.4	28.6	92.2	39.4	96.9	42.0	107.3	44.5
Grampian	140.5	41.2	249.9	55.6	288.7	63.9	291.8	66.2	293.2	66.7
Tayside	168.9	52.3	292.3	73.1	302.6	76.3	308.9	77.6	314.0	79.0
North	375.6	34.8	635.2	51.8	699.8	60.4	714.5	62.8	732.0	64.1
Borders	35.4	32.0	60.0	50.0	60.0	55.0	57.6	56.4	59.8	60.6
Dumfries & Galloway	46.4	28.2	54.4	37.6	65.3	44.1	67.0	45.8	70.3	49.1
South	81.8	29.7	114.4	43.2	125.3	48.7	124.6	50.1	130.1	53.8
Outer Regions	457.4	33.8	749.6	50.3	825.1	58.3	839.1	60.5	862.1	62.3
East-Central	361.4	61.3	713.3	72.5	900.9	73.2	933.6	73.2	967.3	72.4
West-Central	635.6	67.3	1,451.6	72.6	1,914.8	78.1	1,996.4	79.3	1,997.9	79.6
Central Belt	997.0	64.7	2,164.9	72.6	2,185.7	76.5	2,930.0	77.2	2.965.2	77.1
Scotland	1,454.4	50.2	2.914.5	65.2	3,640.8	71.4	3,769.1	72.9	3,827.3	73.2

A Total urban population (thousands)

Source: Census of Scotland

diffusion of innovations thus becomes all important and contrasts must be examined on a quantitative basis wherever possible. Therefore to complement the three periods of study a regional system is adopted to identify the core and periphery of Scotland (Central Belt and Outer Regions) and each component is divided into a group of sub-regions which provide a realistic base for discussion and data analysis (Tables 1.1 and 1.2). There is no suggestion that the regions proposed are entirely satisfactory: given the many different topics investigated and the changes in functional relationships through time. Ten were considered the maximum for convenience and the present official administrative regions were used as a base (Figure 1.1).<sup>33</sup>

Some problems arose where data are compiled by combining figures for groups of pre-1975 counties. The reckoning of the county of Bute with Highland, Moray with Grampian, Midlothian and Stirling with East Central does not create serious difficulty, but the allocation of the whole of Perthshire to Tayside introduces recognisable distortion. Furthermore the inclusion of the Outer Hebrides in the counties of Inverness and Ross & Cromarty makes it impossible to separate the island authorities in certain cases, and the Highland region is therefore enlarged in such instances. Except where there are no satisfactory alternatives to the old counties, as in the case of Ayrshire and Lanarkshire, the modern administrative regions

B Percentage of the total population

a Includes New Towns and former Counties of Cities

b Includes estimates for burghs created in the decade 1851-61. Also where there are boundary differences between different categories of burgh, e.g. Municipal, Parliamentary and Police, the one with the highest population is normally selected.

<sup>&</sup>lt;sup>c</sup> Adjustments are made in respect of boundary changes between 1951 and 1971



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