The decline of fertility in Scotland

Donald J. Morse

Ph.D.

University of Edinburgh

1987

Abstract

The primary concern of the thesis is to describe the onset of fertility decline in Scotland at the level of the lowest unit of aggregation for which data are published, the civil parish. The purpose behind this concern is two-fold: to establish a clearer picture of the course of fertility decline in this country than has been done hitherto; and to create a database as a 'springboard' for further research, in an effort to seek explanations for the occurrence of a Scottish 'demographic transition'.

The variant of the civil parish demographic data set used is given in Appendix Tables A1.1 - A1.4, in terms of the levels of I_m (nuptiality), I_g (marital fertility), I_h (extra-marital fertility), and I_f (overall fertility), over 856 Scottish civil parishes for 1881, 1891, and 1901. These data are used in chapters 3 to 5 to describe the onset of fertility decline at the civil parish, or 'local', level, over the whole of Scotland. Against the background of overall fertility decline, most apparent is the high degree of local heterogeneity of demographic behaviour which characterised the 'transition' in this country. This is something that studies conducted at higher levels of aggregation can only gloss over. Thus, it is argued, a clearer understanding of why the 'demographc transiton' occurred is likely only to be gained through detailed study of a large number of small areas.

The main task of the present study is description, but explanations for the decline of fertility in this country are also sought. The published data available on non-demographic variables (such as those for occupation and church membership used here) are, however, meagre at the level of the civil parish, and do not match the 'sensitivity' of the indices of fertility and nuptiality around which the database is built. Consequently, few firm answers are found. This highlights the need for further research at the small area level.

Finally, in order to demonstrate that local studies are more likely to contribute to a clearer understanding of the decline of fertility in Scotland than summary analyses, a fairly detailed investigation of the 'rural' county of East Lothian is done. Here, it is evident that county level indicators of fertility can be very misleading. Although the county of East Lothian limited its marital fertility fairly early on, at the civil parish level a much more complex mosaic of experience pertained.

Overall then, the thesis argues that more locally focussed, detailed research, is likely to be the most valuable, if not the only route, by which clear answers to the 'why' of fertility decline in Scotland are likely to be obtained. The data base created in preparation for the thesis is a contribution to that end.

I hereby declare that this thesis has been composed by myself, and that the work is my own.

(Donald J. Morse)

Acknowledgements

I am indebted, and offer my thanks to friends, fellow-students, and colleagues, who have given me advice, encouragement, and support, during the time it has taken to research and write this thesis. In particular, thank you, to Rowy Mitchison, James P. Smyth, Rory Paddock, John L. Banasik, and Isabel Roberts.

A special debt is owed to Michael Anderson, my supervisor, whose enthusiasm and perspicacity have kept a light shining, even when the end of the tunnel seemed obscured to me - thanks!

Thanks also to the late Neil R. F. Charlesworth, who started me on the research road.

To Shona Mairi and Catriona Mhairi, thank you for making everything worth while.

Contents

Because I know that time is always time
And place is always and only place
And what is actual is actual only for one time
And only for one place

T. S. Eliot
Ash Wednesday (1930)

Chapter One

Background

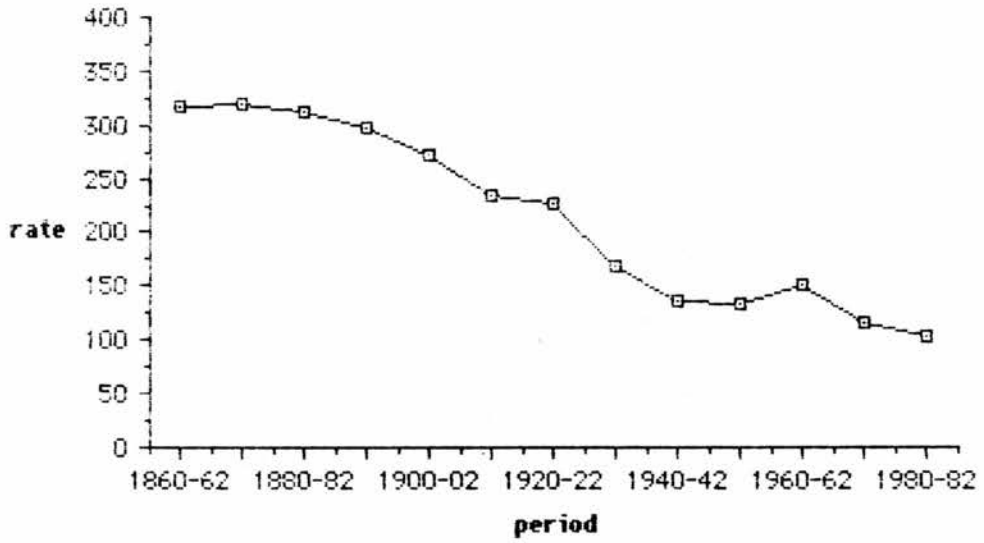
Introduction

In comparison with present-day European standards, marital fertility in Scotland in 1881 was high. By 1901, however, the fertility of married women in this country had fallen considerably (Figure 1); indeed, as early as 1891 Scottish marital fertility had entered a decline which has not been halted, except fleetingly in the 1960s, up to the present. This fertility decline is a phenomenon remarkable not only for the rapidity of its initial achievement and because it has been sustained, but also for the fact that it occurred more or less contemporaneously throughout Europe, as a vital part of that process which has become known as the 'demographic transition'.

Figure 1.1

Marital Fertility rate (15-44)*

Scotland, 1860/62-1980/82



*2-year average number of births per 1,000 married women aged 15-44.
Source: Detailed Annual Reports, Registrar-General for Scotland.

There have been many attempts made, from various viewpoints, to explain the European 'demographic transition' in terms of other demographic, and of social, economic, and cultural characteristics. Consequently, just what constitutes 'demographic transition' theory[1] is not easy to pin down. As Woods has stated, "specifications of the theory's causal elements have become so wide that there is now no one demographic theory."[2]

This present study is more empirical than theoretical, and is primarily concerned with describing the onset of fertility decline throughout Scotland, at a very low level of aggregation. It is thus more concerned with the series of 'facts' which describe the Scottish 'transition', rather than the multitude of possible explanations of these facts.[3] But,

where the availability of published data on economic, social, and cultural variables permits, some of the explanatory hypotheses specified in the different forms of transition theory will be tested. In order to provide an overall theoretical background to the analyses presented in later chapters, therefore, it is pertinent here to give an outline of the most persistent form of 'demographic transition' theory.

Intrinsically, 'demographic transition', according to what is now the classical form of the theory, occurs under the umbrella of 'modernisation' - where 'modernisation' is taken to equate to the totality of the "variations and changes in the degree of industrialization, urbanization, secularization and mortality decline"[4]. Thus, "the demographic transition is but one of a series of revolutions in the material, social, political, and technical spheres of human society which has occurred during the last 200 years".[5]

Demographic transition theory was first mooted by Thompson in 1929, followed by Davis, and Notestein in the 1940s.[6] It is Notestein who provides the clearest exposition of the theory, the main thrust of which is that there are generally three 'stages' in the process of demographic transition. Firstly, the demography of 'traditional', pre-transition societies typically is characterised by a regime of high mortality, high fertility. The second stage is one of low(ering) mortality coupled with maintained (or increasing) fertility, and thus often population 'explosion'. In the third stage both mortality and fertility are maintained at a low level - perhaps below replacement level in the short-term.

It is explicit in 'demographic transition' theory that the fall in mortality which occurs during the second stage of transition is brought about by an improvement in the standard of living, which in turn has been promoted by increasing urban/industrial growth and development.[7] As Notestein argued: "In short, under the impact of urban life, the social aim of perpetuating the family gave way progressively to that of promoting the health, education, and material welfare of the individual child; family limitation became widespread; and the end of the period of [population] growth came in sight."[8]

It is certainly true that, in present-day Europe, mortality and fertility are maintained at a low level. But empirical evidence produced since the 1950s has shown clearly that it was fertility and not infant mortality that tended to fall first in Europe. Amongst others, Demeny, Lesthaeghe, Smith, F. van de Walle, and E. van de Walle and Knodel,[9] have all concluded that, to a greater or lesser degree, "infant mortality rates that are very high by modern standards even for the less developed countries.....are quite consistent with drastic and increasing limitation of marital fertility".[10]

Equally, the expected strong causal relationship between industrialisation and transition has not been upheld. The prime example of this is France, which appears to have undergone its marital fertility decline well in advance of the other countries of Europe, and this happened prior to industrialisation.[11] In England and Wales and Scotland, on the other hand, the home of the 'first industrial revolution', fertility transition did not get under way until the last quarter of the nineteenth century. Moreover, most nations have proved to contain very diverse

regional experiences, often made manifest along cultural boundaries defined by, for example, language or religion.[12]

Most of the empirical evidence which has revealed these significant weaknesses in the classical formulation of 'demographic transition' theory has been produced by the Princeton University European Fertility Project, under the directorship of Ansley J. Coale.[13] The overall conclusion in the Princeton summary volume is that, while the expectation of classical theory that "the leaders in fertility transition would be in provinces in which few infants died and in which many adults were literate, worked in industrial occupations, and lived in cities", were, in general, "upheld", "the statistical relations were usually weak". Thus, even "after two decades, eleven volumes, hundreds of tables, figures and maps, and thousands of words", the Princeton Project has come up with few firm answers.[14]

A lack of firm answers notwithstanding, the monographs produced by the Princeton Project have advanced significantly our knowledge and understanding of the decline of human fertility in Europe. But the lowest level they have done so at is the département, or arrondissement, or county. What studies there are at the small-area level, and which use the Coale indices or similar techniques, have usually been concerned with isolated or ill-defined groups where relationships to regional and national experience are not clear.[15] Consequently, despite much theorising, it is difficult to be sure when, let alone why, marital fertility decline was instigated at the level of the small community without falling foul of ecological fallacy. Clearly, what can be said to be true of a nation cannot be so strongly asserted as typical of the

experience of individual counties. Likewise, county-level behaviour is not likely to be an accurate estimate of small-area behaviour.

The Princeton monograph which includes coverage of the demographic transition in Scotland, is Teitelbaum's study of "The British Fertility Decline".[16] Analysis is, of course, conducted only at the level of the county. The singular advantage of working at the county level is that demographic, occupational, social, and some cultural data[17] are available in the published censuses and reports of the Registrars-General. Thus, by use of recorded births by legitimacy and Census data on females by marital status, Teitelbaum was able to compute the various Coale indices.[18] These show clearly that increasing restriction of the number of births within marriage was indeed a key factor in the 'demographic transition' in Scotland. Equally, Teitelbaum's data point to the occurrence of marked between-county differentials in the decline of fertility in Scotland: "no counties reached an I_g[19] of .600 by 1890, and only eight of the 33 counties comprising less than 22 per cent of the 1891 population did so before the end of the century.[20]

But it is not clear to what extent this summary of county-level behaviour reflects marital fertility experience below the level of the county. For, as Teitelbaum himself points out, "since ecological correlations are not equivalent to those at the individual level, no clear inferences may be drawn from.....[such] analyses concerning the behavior of individual-level relationships."[21] Implicitly, therefore, Teitelbaum is calling for what Woods and Smith have described as "a need for more empirical studies at the micro-level and concerned with collective

biographies rather than aggregate analyses via ecological correlations."[22]

The present study is not a micro-level approach, nor is it concerned with collective biographies. Indeed, the 'civil parish'[23] data base upon which the research presented here is based, is, strictly speaking, every bit as much an ecological construct as those of Teitelbaum and his fellow Princeton authors. The essential difference between the two is in the level of aggregation at which analysis is conducted. Teitelbaum's Scottish data covers the thirty-three counties, and spans eight censuses - 1861 to 1931. The number of cases in the civil parish data set used in this study is 856, over three censuses - 1881, 1891, and 1901. As is demonstrated in the main body of this thesis, these three census years cover the period during which the 'onset' of 'fertility transition' occurred in Scotland. Further, it is demonstrated that the county figures disguise a very large amount of heterogeneity of fertility (and nuptiality) experience. Conversely, the civil parish data indicate only a small degree of regional differentiation in the onset of decline, and even here it is the North-east which lags behind, as opposed to the pattern described by the county-level data, which show the Highlands as being consistently behind. It remains, however, that it is the very high level of within-county heterogeneity which is the most significant finding in the analysis of the fertility decline in Scotland at the level of the civil parish. This demonstrates what the county-level analysis can only gloss over, that the pattern of fertility behaviour in local areas was set by locally operating variables, whether demographic, economic, social, and/or cultural.

The within-county demographic heterogeneity found is thus significant with regard to the socio-economic and cultural backcloth against which it must be viewed. Scotland, throughout its 'demographic transition', and despite sustained structural economic and social change, continued to exhibit a large degree of cultural, social, and economic heterogeneity. In the south of the country the Lallans/English-speaking border counties were predominantly rural and agricultural in character, with the development of high agriculture having typified the decades between 1830 and 1870.[24] Also important, however, were towns such as Hawick (hosiery) and Galashiels (tweed), which were dominant in the Scottish woollen textiles industry.[25] In sharp contrast, the Far North, and the largely Gaelic-speaking north-western Highlands and Islands, although also predominantly rural, were largely given over to crofting, fishing, and 'sporting' and sheep-farming estates. Between these two 'poles' a growing majority of the population was concentrated in the English-speaking, highly urbanised 'central belt', which was itself dominated by the industrial sprawl of Glasgow, and the numerous mining and iron and steel towns of central Lanarkshire. Secondary population and industrial centres were Edinburgh - the capital of Scotland, and increasingly the main focus of commerce and banking - Perth, Falkirk, Stirling, Paisley, etc. While further east, Dundee and the Angus textile towns linked to Dundee specialised in the Scottish jute trade.[26] In the North-east on the other hand, Aberdeen, surrounded by mainly livestock farming areas, was the foremost white-fish port in Scotland.[27]

With regard to religion also, Scotland displayed a remarkable range of faiths for a small country. For although the protestant Church of Scotland remained the established church throughout, it was in many

areas severely challenged for supremacy, and in places usurped. In the Highlands for instance, the Free Church was particularly strong, while in other parts of the country the United Presbyterian Church presented a continuing threat to the hegemony of the 'Auld' Kirk.[28] Apart from this rivalry, it is arguable that all the churches, "except the Roman Catholic shared the same problem, namely that of being..... largely middle class". As such they were unable to "make real contact with the churchless millions, represented by Glasgow's Gallowgate, the lower part of Edinburgh's Leith Walk, or Dundee's Dock Street"[29]

Also, although the role of the churches, in partnership with the state, did extend deeply into the secular education of the mass of the population, it is probable that the level of education remained lower in urban-industrial areas than in rural areas. In fact, in non-industrial, rural communities, "schooling was practically universal between the ages of seven and eleven". In the non-industrial towns outside Glasgow "the record of attendance was hardly inferior". In Glasgow itself, and in the western industrial counties "briefer periods of school attendance and a lower overall level [of education]" were experienced.[30]

Under such conditions of extreme regional variation, it is perhaps to be expected that the summary impact of cultural, social, and economic factors on fertility and limitation would be highly differentiated at the county level. For, as Teitelbaum concludes: "the greater diversity of fertility decline experience[d] in Scotland than in England and Wales.....is consistent with the.....interpretation [that].....Scotland was more diverse than was England in economic, cultural, religious, and linguistic attributes".[31] But what the county summaries cannot pick up is the

extent to which fertility behaviour is set by locally operating variables - demographic, economic, social, cultural, or some combination of these. In the 'rural' county of Haddington (East Lothian), for example, marital fertility fell between 1881 and 1901 in the agricultural and holiday-resort civil parish of North Berwick by nearly half, from significantly above the level where marital fertility is reckoned to be 'uncontrolled', to significantly below the level at which it is reckoned it is being 'definitely limited'.[32] At the same time, and in the same county, marital fertility in the mining parish of Ormiston rose, from about the same initial level, by eleven per cent. In both places over the same period population increased, by some 36 per cent in North Berwick, and by 16 per cent in Ormiston.

It is the purpose of this thesis then, to describe and explore the onset of fertility decline at the civil parish, or 'local', level, over the whole of Scotland. To this end, following the description in the next chapter of the methodology used in constructing the civil parish data base, chapter three looks at the role of marriage; chapter four examines the decline of marital fertility; chapter five is concerned with the decline of extra-marital fertility; chapter six examines the part played in fertility decline by urban-rural differentials; chapter seven analyses the relationship between fertility decline, and occupation and church membership in the Scottish burghs; in chapter eight a detailed analysis of fertility decline in relation to occupation and church membership is undertaken for the 'rural' county of East Lothian; chapter nine is a summary of the whole.

Chapter 2

Methodology

Introduction

In this chapter, certain methodological issues relevant to the research design of the study are discussed, and a detailed presentation of the manner in which the census and civil registration data have been matched and used is given.

This thesis has undertaken to study the onset of fertility decline in Scotland at the end of the nineteenth century, using the most sensitive measures of fertility and nuptiality possible for the type of data available, and in doing so to cover the whole country at a very low level of aggregation. It was hoped at the outset to include a number of reconstitution studies of civil parishes selected on the basis of their 'interesting' parish-level indices, and, indeed, the families of 1876 to 1881 marriage cohort of one town, Haddington, were reconstituted. But the twin constraints of lack of time and material resources available rendered the continuation of this approach impracticable, at least for the time being. Consequently, the thesis is primarily concerned with fertility behaviour at the small-area level. Two sets of civil parish-level non-demographic variables not included in the original proposal have also been constructed - on farm size, and church membership.

The Coale indices

The basic demographic measures used in this study are the Coale indices of fertility and nuptiality: I_m (nuptiality); I_g (marital fertility); I_h (extra-marital fertility); and I_f (overall fertility). These indices have now been in existence for over twenty years.[33] Their use is widespread, and, particularly through the work of the Princeton European Fertility Project, which Coale directs, the uses to which they may be put, and what meaning can be derived from them are well known. But in any case, the individual indices are explained the relevant chapters. There is, therefore, no need to any more than describe them briefly here, in order to provide a framework in which the 'raw' data used to compute the indices can be described.

Briefly then, the values for the indices were computed from the following expressions:

Where: Fm_z = the total number married of women in the five-year age-group, z;

Fu_z = the total number of unmarried women in the five-year age-group, z;

Hf_z = the standard age-specific fertility schedule, (that for Hutterites, given below);[34]

B_l = legitimate live births;

B_i = illegitimate live births;

B_t = all live births

Table 2.1

Age-specific fertility of married Hutterite women, 1921-30 (Hf_z)

Age-groups		Age-specific fertility rates
15-19	1	0.300*
20-24	2	0.550
25-29	3	0.502
30-34	4	0.447
35-39	5	0.406
40-44	6	0.222
45-49	7	0.061

*This figure is an arbitrary substitution for the rate of over 0.700 experienced by teen-age married Hutterite women, because the very high fertility observed among the few Hutterite women married before the age of 20 could scarcely be representative of a whole population aged 15-19, since adolescents have a reproductive capacity well below that of women 20-29.[35]

Based on: Woods (1979)

$$I_m = \frac{\Sigma\, Fm_z\, F_z}{\Sigma\, Fw_z\, Hf_z}$$

$$I_g = \frac{B_1}{\Sigma\, Fm_z\, Hf_z}$$

$$I_h = \frac{B_1}{\Sigma\, Fu_z\, Hf_z}$$

$$I_f = \frac{B_1}{\Sigma\, F_z\, Hf_z}$$

Although not computed or used in this way in the present study, it is useful to bear in mind that the four indices can be related in a simple way:

$$I_f = I_g \cdot I_m + I_h(1-I_m)$$

Data sources

The 'primary' data used in the construction of the civil parish database, that covering fertility and nuptiality, are taken from two sources: the Scottish Censuses of Population for 1881, 1891, and 1901; and the Detailed Annual Reports of the Registrar-General for Scotland for 1876-1885, 1890-1891, and 1896-1905.[36] The censuses gave information on the female population by age and marital status, and the Detailed Annual Reports (DARs) provided the number of births by legitimacy.

The lowest unit of aggregation used in the 1881 census is the registration district, and this corresponds to the registration districts on which the DARs are based. But the boundaries of some registration districts were altered over the years. Consequently, in order to use the births which occurred in the ten years surrounding the census, it was necessary to combine certain registration districts in order to arrive at areas with exactly corresponding populations. The DARs for each of the ten years surrounding the 1881 census, i.e. 1876 - 1885 give the registration district populations for two censuses, and it was noticed that each time a boundary change had been made, the population reported had been recalculated to accomodate this. The DARs from 1875 to 1878

report the populations for 1861 and 1871, and the DARs for 1879 to 1885 report the 1871 and 1881 populations. The common link is, therefore, 1871, for which populations are reported on both the new and old basis. Thus, the boundary changes in the ten-year period 1876 to 1885 were 'ironed out' by cross-matching the populations given each year, to the year with the smallest number of districts.

Once all the populations which had not altered were eliminated, the remainder were then 'combined' until new, matching, areas, in each case the smallest possible, had been formed. These areas were continually checked as 'true' by reference to a map of the Scottish civil parishes and two gazeteers.[37] When the DARs had all been combined as one ten-year file of births, the 1881 populations of the registration districts were then matched to the populations given in the 1881 census, and, where necessary, new 'combinations' were made. Completion of this stage then allowed the demographic indices to be calculated from the 'at risk' females given in the census, and the births given in the DARs. In effect, the number of 'registration districts' was reduced from 1,036 (the number in 1885), to 973.

The lowest unit of aggregation used in the 1891 and 1901 censuses is the civil parish, but the DARs continued throughout to be published in terms of registration districts. In most cases the boundaries of the civil parishes were conterminous with one, in some cases two or more, registration districts. In a very few cases two civil parishes were contained within one registration district. Nevertheless, the overall closeness of the 'fit' between the two types of unit meant that it was

possible to use the same procedure for 'matching' births to females in the 1891 and 1901 sources as was used for 1881.

For 1891, only a two-year average (1890 - 1891) of births was used. This was because, following on from the Boundary Commission of 1889, a large number of changes were made to civil parish boundaries in the early 1890s.[38] In the great majority of cases these changes involved only one or two houses or farms, etc., being 'moved'. But there were so many of these flits that, if the ten-year average of births sought had been persisted with, the large number of combinations which it would have been necessary to make would have left only about five hundred 'civil parishes' with which to work. As it was, using only a two-year average of births produced indices for just 668 'civil parishes' for 1891, considerably fewer than that for 1881.

The number of civil parish and registration district boundary changes instituted between 1896 and 1905 was much less than during the previous decade. Thus, for 1901, as for 1881, a ten-year (1896 - 1905) average of births was used. As a result, it was possible to produce the indices for 773 'civil parishes', a figure much closer to that of 1881.

The next step was to produce a 'uniform' number of areas for each year, to ameliorate statistical analysis over time, and to allow the data to be analysed 'visually' by mapping it on computer. The map frame prepared was based on one already available on the mainframe, in the mapping program CamapGB1, but this was 'transferred'[39] to Gimms in order to make use of that program's wider range of user-programmable facilities. Because the number of map units is 871,[40] and represents

civil parishes, it was necessary to rework the data for 1881 into civil parish units, using the combinations involved in preparing the 1891 and 1901 units as a guide. Because it was necessary to accomodate different boundaries, the number eventually arrived at was 854. Thus, on each of the 1881 maps presented in this thesis there are seventeen 'duplicates' (i.e., seventeen parishes which are members of 'combinations' were re-instituted as individual places and given their 'combination' values). Two of the 'duplicates' Stennes, and the Glasgow portion of Cathcart, were also entered in the data base to be used for statistical analysis. This was because it was possible to compute individual indices for them in 1901. Thus, the basic number of civil parish units was 856. As described above, the 1891 and 1901 data were already in civil parish units, respectively, 668, and 773. So in order to map the data for these years it was necessary to 'duplicate' the data for already combined parishes.

The 856 individual units available for the base year, 1881, were then used as the foundation on which the data set used for statistical analyis was built. As with the preparation of the Gimms data files, in order to create rectangular files for analysis in the various statistical packages available, it was necessary to 'duplicate' the data for 'combined' parishes. For 1891 there are of course a relatively large number of duplicates (188), but for 1901 only 83. For 1891, the largest single block of duplicates is in central Perthshire, where 30 civil parishes have a 'combined' set of indices. There is a group of 17 duplicates centred on Edinburgh; fifteen are grouped around Selkirk and Galashiels; there is a cluster of 12 around Aberdeen; and a group of 9 connected to Ayr. In practically all other cases the 'duplicates' are two's and three's.

In 1901 the great majority of duplicates are in two's: the only group of more than ten is that centred on Aberdour in Aberdeen-shire. Apart from these there are three groups of six, two of five, and two of four civil parishes in various parts of the country.

The 1891 church membership data used here give details of the number of members in all the Scottish Protestant churches, and the number of catholic baptisms for 1891, by registration district.[41] Thus the procedure adopted for 1881 was able to be used. Because these data are only for one year they naturally did not 'fall foul' of the same number of boundary changes as did the births data for 1890 and 1891. Consequently, the final number of 'civil parishes' arrived at was high - 834 - and so, many fewer 'duplicates' were required to be used.

A farm-size data set was also prepared,[42] but it was found to be of little use on a number of counts. The only statistics available on farm sizes at the civil parish level[43] before the end of the period studied are for 1870. Initially, it was thought that these could be used something after the manner in which Lesthaeghe and Wilson (subsequently) have distinguished between different 'dominant' modes of production.[44] Even taking into account the likliehood of consolidation of holdings in some areas during the 'agricultural depression' which occurred during the last quarter of the nineteenth century, it was mooted that the basic distinction between dominant modes of production in 'crofting' and 'high farming' areas would show in differential fertility behaviour. This did not prove to be the case. But the inferences which could confidently have been drawn from this situation were anyway extremely limited. Given the mismatch in 'timing' between the farm-size and demographic

data, coupled with the fact that farm-size, as a measure of space, can only in a very roundabout way be logically directly linked to 'point in time' measures of fertility behaviour, these data revealed nothing which added to, or subtracted from, the arguments put in this study. Consequently, they have not been used in the summary analyses which follow. Some use of the farm-size data is, however, made in the East Lothian case study

The variant of the demographic database used in this study, that based on the 856 civil parish units, is given in Appendix Tables A.1 to A.4. The 'duplicates' used to 'make up the numbers' both to 856, for statistical analysis, and to 871 for mapping, are given in Appendix Tables A.5 (1881), A.6 (1891), and A.7 (1901).[45] Further points regarding the data set, its construction, and use, are discussed in the analytical chapters which follow. Most of the analysis, of course, centres on the Coale demographic indicators, and comparison between the different levels of these during the 1881 to 1901 period. All these demographic data are used, but given the relative 'weakness' of some of the 1891 indices, and the strength of those for 1881 and 1901, most analytical weight is put on differentials which occurred over the period as a whole. Where necessary, this point will be alluded to at the time of analysis.

Methodology - Appendix

Data quality

The censuses provided information on population by sex, age, and marital status. The first census used here, that of 1881, was the ninth decennial census undertaken in this country, the first being in 1801. Thus, although responsibility for taking the census did not pass to the General Register Office until 1841, and it was not until 1861 that the Census of Scotland was conducted separately, these data are the product of some ninety years experience in collecting, collating, and publishing censuses of population.

The raw figures for births by legitimacy were taken from the Detailed Annual Reports of the Registrar-General. The first of these was published for 1855, following the introduction of The Registration of Births, Deaths, and Marriages (Scotland) Act, 1854, which came into effect on January 1st, 1855. Unlike the situation in England and Wales, while it was incumbent upon a registrar in Scotland to "inform himself carefully of every birth and death which shall happen within his parish or district",[1] the onus to register a Scottish birth was, from the start, 'personally' on the parent(s), "the person in charge of such child, or the occupier of the house or tenement in which to his or her knowledge the child was born, or the nurse present at the birth of such child" - under "a penalty not exceeding twenty shillings in case of failure."[2] In England and Wales, the onus for registration from its

---

1 The Registration of Births, Deaths, and Marriages (Scotland) Act, 1854, XXV

2 ibid., XXVII

introduction in 1834 until 1870, when practice was brought into line with Scotland, was on the registrar. Unfortunately, stillbirths were not required to be registered in Scotland during the period under study.

Although most types of error residing in the published census data are stochastic in nature, two types of errors which often occur with regard to age are generally more systematic. The first of these is age shifting, where reported ages are over- or under-stated. This is particularly common among the elderly, among which there is often a tendency to overstate actual age. It is not likely to have had any effect on the analyses conducted here. But where age shifting causes women in the 15-19 year age band, especially those with children, to be allocated to older age groups, would affect the calculation of the Coale indices. The second systematic error, age-rounding, where ages are given to the nearest five or ten, can also be problematical in the calculation of statistics such as the Coale indices, which involve the use of five-year age-bands: rounding is likely to give an illusion of a population being older than it actually is - if an equal number of 28 and 32 year-olds report their ages as 30, then, although the single-year distribution will not shift, the quinquennial distribution will shift upward.

The existence of errors in age distributions is a problem common to all studies of transition that are based on aggregate data, but it is something that little can be done about, at least in the case of Scotland.[1] Even so, it should be borne in mind that, especially when dealing with a whole country, as the present study does, it is likely that errors in the published data,

[1] Some work on mis-reported ages has been done for England and Wales, by Tillot (1972), and Anderson (1972), but their methods involve the use of enumerators' manuals and are not a practible option for the present study.

themselves a product of incorrect information supplied by householders, incorrect enumeration or processing by the Registrar-General's Office, are incorporated into the statistics used and computed here.

Another source of possible error which has a direct bearing on the calculation of the Coale indices is the under-registration of births. Although the 1854 Act enshrined a net of 'personal' responsibility which was potentially cast very wide, it is of course likely that many births, especially unwanted ones, went unregistered. But it is difficult to conceive how a *significant* proportion could have been 'lost'. In rural areas especially, it would be enormously difficult to conceal a pregnancy, and even more difficult to dispose of an infant without attracting some attention. In urban areas, it would perhaps be less difficult to conceal and dispose of an unwanted birth. But even here, whether the number of unregistered births would be large enough to constitute a significant proportion of the total number born is doubtful.

Some work has been done on the under-registration of births in England and Wales by Glass (1951), and Teitelbaum (1974). In his county-level study of the decline of fertility in Britain, Teitelbaum[1] estimated the number of births in a given decade by reverse projection at the end of the decade, tempered by the use of survival rates of the population aged nought to nine, and adjusted for the rate of increase of births over the decade and net migration. Comparison of the estimated number of births and the number registered was then used to provide an estimate of under-registration in each decade.

---

1 Teitelbaum (1984)

Teitelbaum's reason for employing this technique for England and Wales was the assumption that "the census is more accurate than the vital registration, an assumption that is reasonable for the nineteenth century."[1] The choice of appropriate life-tables was, as he admits, open to criticism; this, and the fact that one set of tables was applied throughout the country, must throw doubt on the applicability of his estimates. However, the point does not apply to Scotland, for although his tables for l_f, l_g, and l_h, (respectively, 4.6b, 6.4b, and 6.10b) state that the Scottish indices are "adjusted", they are not.[2]

But whatever the difficulties which attach to the choice of life-tables for England and Wales, the problem would be compounded in Scotland because it is not conceivable that one set of tables could apply to this country. The sheer diversity of living conditions, in the Far North and the western Highlands, the North-east, the central belt, and the Borders, preclude such an approach, while the absence of civil parish-level infant mortality statistics precludes a more rigorous approach. In any case, given that the onus for the notification of a birth in Scotland was, from the introduction of registration, not on the registrar but on parent(s), neighbours, or midwife, puts the Scottish birth figures in a different light to those of England and Wales.

---

1 Teitelbaum (1984), pp. 57-58.

2 It is also worth noting that Teitelbaum, in calculating his county indices, used birth figure for registration counties, and population figures for civil counties. In most cases these two types of county are identical, in some, such as Kincardine, or Inverness, they are not. But given the high level of aggregation with at which his analysis is conducted, the magnitude of error is very small.

Unfortunately, there is no way of knowing for certain how accurate the birth figures are, and, given no data it is not possible to conceive of a satisfactory method for incorporating a weight into the indices to compensate for any anomalies. Consequently, the data on births have been taken from the Detailed Annual Reports 'as read', and any errors have necessarily been assumed to be stochastic. Because there is no data on stillbirths, they could not be taken into account.

Given the possible deficiencies in the raw data available for the computation of the Coale indices for the Scottish civil parishes, it is of course possible that there are some unaccounted for errors in the database. Even so, the Scottish nineteenth century census and vital statistics are among the best in Europe; with due diligence, and bearing in mind the stochastic nature of any likely errors, the indices computed from the Scottish demographic data can be compared to those from any other place with as near complete confidence as is possible.

Choice of Period

The primary aim of the present study is to describe the onset of fertility decline in Scotland at the lowest possible level of aggregation. Previous higher level aggregate studies of the decline of Scottish fertility, namely, Flinn, et als' 'Scottish Population History', and Teitelbaum's 'The British Fertility Decline' indicated that the process of decline did not begin until some time after 1870.

With this in mind, it was hoped that the present study could use the 1871, or even the 1861 census as its starting point. Unfortunately, the published censuses previous to 1881 do not only contain information on age and sex and not marital status at the civil parish / registration district level. Consequently, it was decided to begin with 1881, and to 'step back' to 1871 and estimate I_g only if necessary. As is shown in later chapters, although there are a few exceptions to the rule, it is evident that the main thrust of the onset of decline is captured by the 1881 figures, and that it was not necessary to do the 1871 or 1861 in order to describe the onset of fertility decline.[1]

Having computed the indices for 1881 it was then intended to compute the Coale indices for the censuses of 1891, 1901, and 1911 - the only other censuses for which the data on births is available at the civil parish / registration district level, as, from 1920 on these data are published by health district, areas which are not only intermediate between the civil parish and the county levels, but which pose further difficulties with regard to boundaries. In the event, the twin constraints of limited time and resources available meant that 1901 had to be 'held over' until after the present study was completed. In large part this was because of the difficulties encountered in resolving the complex boundary changes affecting the 1891 data. In retrospect, it would perhaps have been more satisfactory to move directly to 1911 from 1881; but it remains that, given the primary aim of the study, to capture the onset of decline in this country, that a 'step by step' approach through the censuses from 1881 on was indeed

1 It is planned to construct the If, Im, and Ig' and Ih' for these censuses at a future date

the best way to capture the full complexity of the patterns involved as they unfolded, and not by viewing what may be considered as the 'endpoints' of the transition's first phase.

The problem

There are two ways in which marital fertility can be restricted - by adopting the Malthusian strategy of marrying later, or by operating some form of constraint on fertility within marriage, the neo-Malthusian tack.[46] These means are of course not mutually exclusive, but it is well established that, in general, European pre-fertility decline populations were more likely to restrict their fertility by marrying later, while post-fertility decline populations almost invariably marry younger on average and restrict family size by limiting the number of children born within marriage.[47] As Coale and Treadway have noted:

> ".....a good estimate of the relative influence on overall fertility of differences in nuptiality and differences in marital fertility before parity-related control became important is that differences in nuptiality had about twice the effect of differences in marital fertility."[48]

By the end of the nineteenth century, however, "Once the transition began, flexibility in reproduction was achieved by marital fertility as well as, or often instead of, by marriage".[49]

Habakkuk has argued that the chronology of fertility decline in Europe describes a situation in which family size tended first to be limited by the Malthusian strategy of postponed marriage. Only subsequently, as the age at marriage began to fall, did control of fertility within marriage entirely predominate. He is careful to point out, however, that although "This movement in marriage may provide a clue to the pressures exerted on people..... from the size of the movement it is

evident that it cannot have made a major contribution to the fall in fertility."[50]

Watkins uses the data produced by all the Princeton studies to do a regional-level analysis of nuptiality patterns. Her reasoning in using regions is based on Homans[51] and is concerned with "geographically contiguous provinces that can be seen to share a common culture".[52] In doing so, arbitrary and subjective decisions had to be made about what marks out one group of provinces from its neighbours and makes it possible to call it a distinct region. "A common history is fundamental to this concept of culture; the marks of a common history were usually a long-standing political integrity, as well as the existence of other institutions that would tend to separate one group from another, such as a distinctive religion or language." While "In some countries the designation of regions was obvious", in others it was not so. For Scotland, the lead of Flinn et al was followed, and the thirty-three counties were divided up into six regions[53] - a lead which is also followed in the present study.

The Princeton data, those upon which Watkins bases her regional analysis, are county- or province- level aggregates, and among these are the ones produced for the British Isles by Teitelbaum. In the regional analysis done in the present study, the regional figures are summaries of the indices computed for well over eight hundred Scottish civil parishes. As such, they are likely to be more sensitive to within-region variation, and, especially when mapped for Scotland as a whole, to provide a clearer insight into geographical differentiation at all levels from the civil parish up. Using the data thus, it is possible to compare

the Civil Parish analysis with the regional analysis of Watkins, and also to 'get below' the regional and county-level aggregates. At the same time the analysis should provide clearer insights into the extent to which Habakkuk's hypothesis holds for Scotland - whether the 'preventive check' of delayed marriage did make a significant contribution to the onset of fertility decline in this country.

Sex ratio

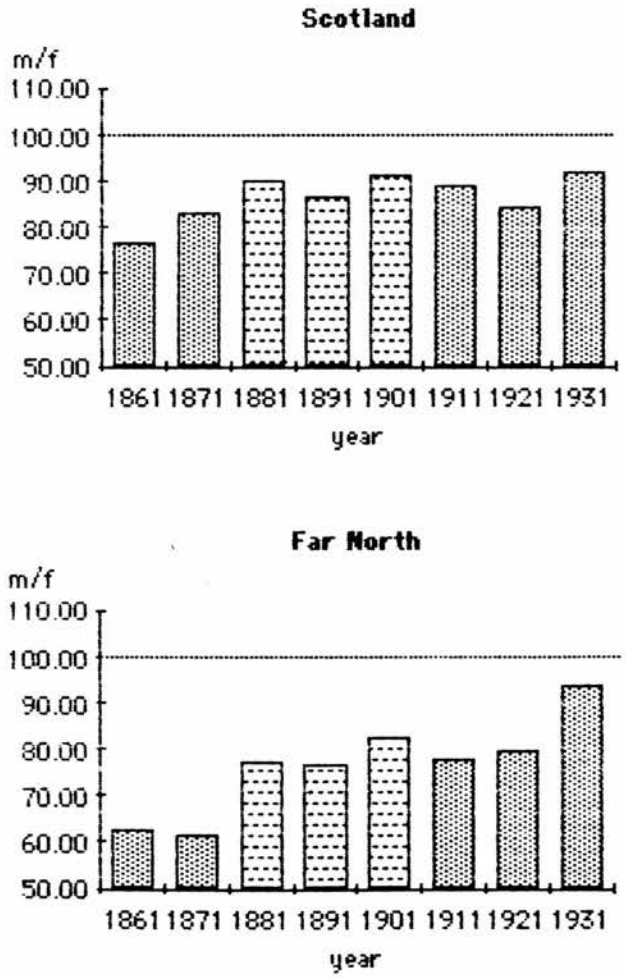
The proportion of women married in a population is governed first and foremost by the balance between the sexes of marital age. Commenting on the period 1801 to 1931, Flinn et al note that "Throughout the period..... women have predominated in Scottish history; in some areas at some times they have severely outnumbered men."[54] The period 1881 to 1901 is no exception to this general trend in Scotland; the ratios of males per 100 females in this country as a whole in 1881, 1891, and 1901 were, respectively, 92.9, 93.3, and 94.6 at all ages, and 90.5, 86.7, and 91.7 at 25-29 years old.

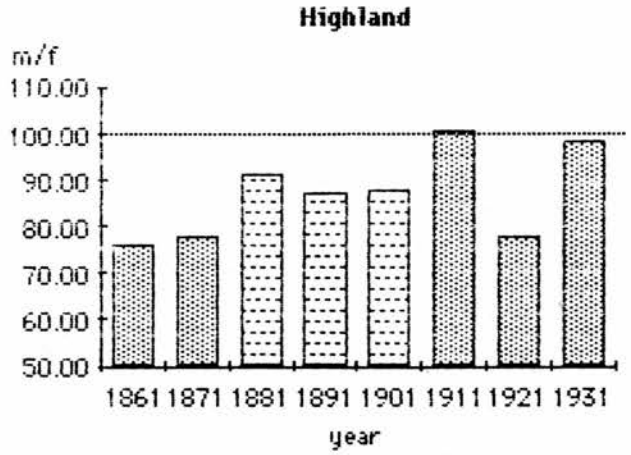
The ratios for the 25-29 age-group are particularly significant, given the high propensity for marriage between these ages. The Scottish national and regional figures for this group are plotted in Figure 3.1. These show that only in the Western Lowlands does the sex ratio approach or exceed parity between 1881 and 1901. At the other extreme, the Borders is alone throughout the period in recording ratios of less than 80.00. (Indeed, the Borders ratio throughout the longer period 1861 to 1921 is consistently below this point). At the same time, the sex ratio in the Far North rises above 80.00 only in 1901. Of

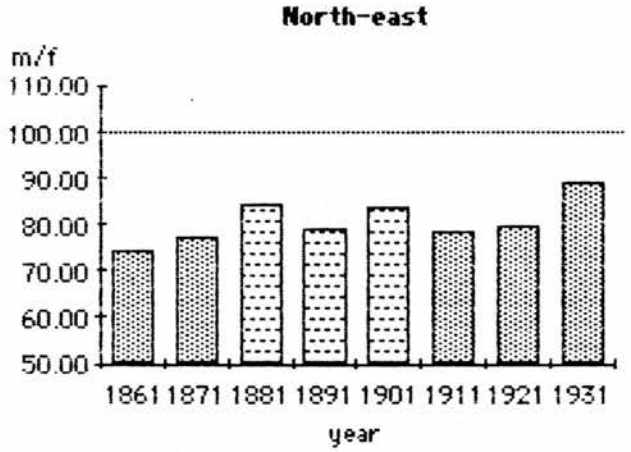
the other four regions, the North-east records a ratio of less than 80.00 in 1891, but in 1881 and 1901 it has a sex-ratio just above 80.00, and this latter figure is similar to the levels recorded for the Eastern Lowlands in all three years. In the Highlands, the ratios are a little nearer to parity, hovering around 90.00 throughout the period.

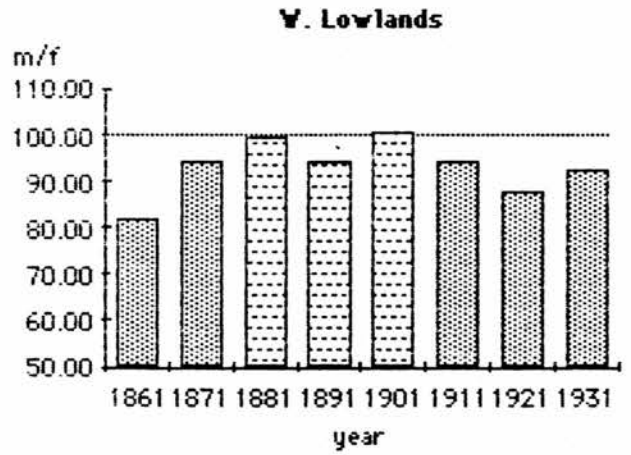
Figure 3.1

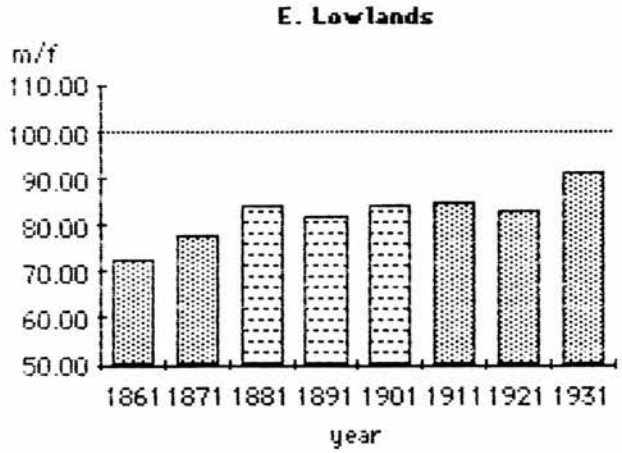
Sex ratios, 25-29 year-olds (males per 100 females), Scotland and regions

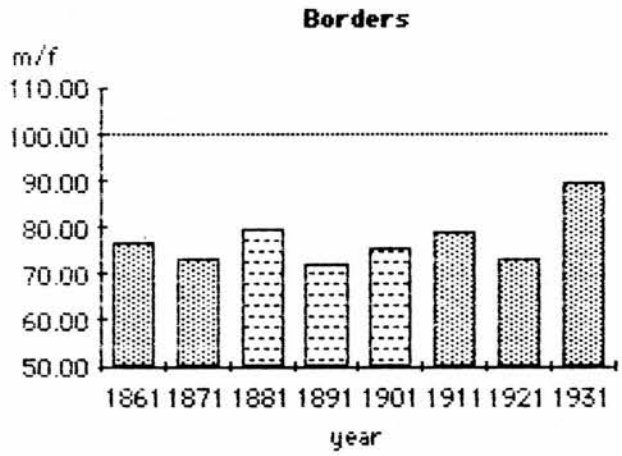



Highland
m/f
110.00
100.00
90.00
80.00
70.00
60.00
50.00
1861 1871 1881 1891 1901 1911 1921 1931
year


North-east
m/f
110.00
100.00
90.00
80.00
70.00
60.00
50.00
1861 1871 1881 1891 1901 1911 1921 1931
year


W. Lowlands
m/f
110.00
100.00
90.00
80.00
70.00
60.00
50.00
1861 1871 1881 1891 1901 1911 1921 1931
year





Source: Censuses of Population, Scotland.
The regions are those described in chapter 3, above and are based on registration counties.

The low sex-ratios in the modal marriage age-group, 25-29, which pertained at the end of the nineteenth century in five of the six Scottish regions, can largely be put down to the greater propensity to migrate of young single males rather than single females. The near-parity of the Western Lowlands, for example, is a result of heavy in-migration from other areas, notably the Highlands, of young men in search of work in industry.[55]

But although many did move to the Lowlands, young persons from other regions, the Far North and the Borders in particular, were more likely to

go overseas.[56] The exact age-composition of the numbers who emigrated from the 1870s on cannot be determined, though Flinn et al have shown that "Males, as might be expected, continued to outnumber females until the 1930s."[57] Nevertheless, the ratio of female to male emigrants did increase dramatically by the eve of the First World War. "In the late 1870s, males outnumbered females by almost two to one..... but the imbalance was steadily reduced thereafter, so that by 1914 an equality between the sexes emigrating had almost been achieved."[58]

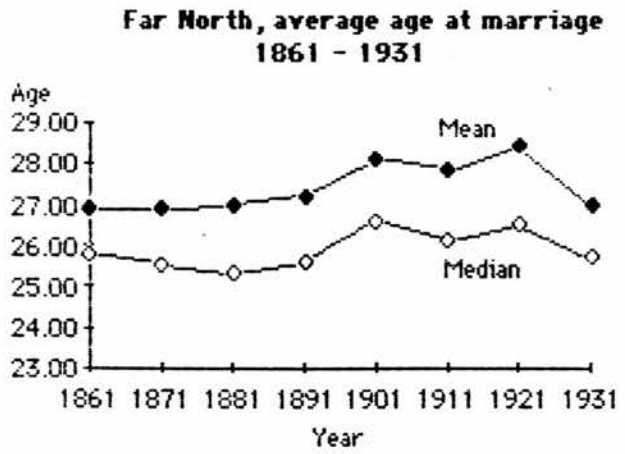
The narrowing imbalance between the sexes in the emigrant population was mirrored in the sex-ratio at home. "The more extreme imbalances in the sex ratio were to be found in the third quarter of the century, and the fourth quarter experienced some very positive shift towards a balance between the sexes."[59] But this recovery, as Figure 3.1 illustrates, was from very low levels, and was subject to a temporary reversal in all regions in 1891, with even the Western Lowlands experiencing a noticeable worsening in the sex-ratio of its 25-29 age group.

Age at marriage

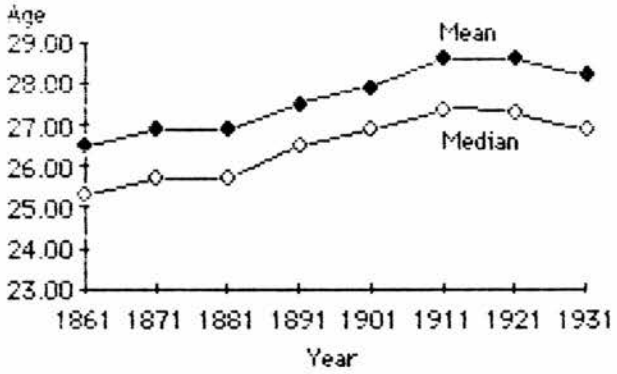
The course of change in the Scottish regional sex-ratios suggests that although young women's' marriage chances improved over the longer term, they worsened in 1891. It is reasonable to expect, then, that the sheer inability of a large proportion of the 'at risk' female population to find marriage partners could well have exerted an upward pressure on the average age at marriage just as the fertility decline got under way.[60] Figure 3.2 demonstrates that this was probably the case, and

suggests some degree of Malthusian response. All the Scottish regions return higher median and mean ages at marriage in 1891, as opposed to 1861, and in all regions the figures show another rise in 1901. With the arguable exception of the North-east, all these rises are substantial, as is the rise in the average age at first marriage which occurred in Scotland as a whole during the period.[61]

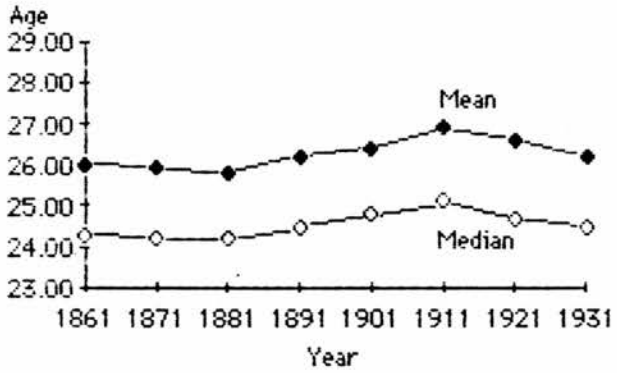
3.2



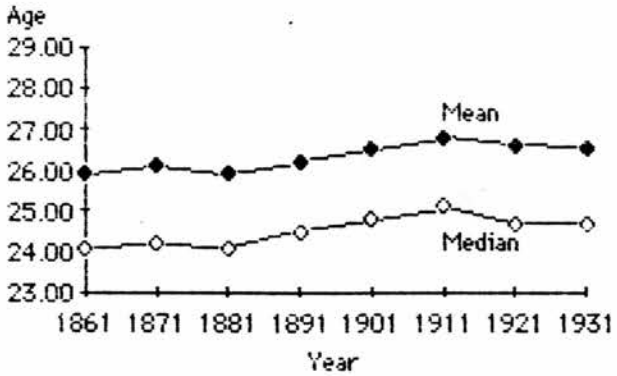
Highland, average age at marriage 1861 - 1931

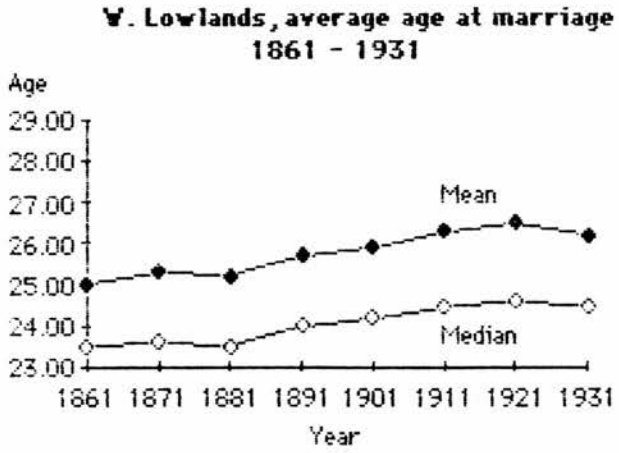


North-east, average age at marriage 1861 - 1931



E. Lowlands, average age at marriage 1861 - 1931





Source: Detailed Annual Reports, Registrar-General for Scotland. The regions are those described in chapter 3, above, and are based on registration counties.

Proportions married

Given the steady improvement in the regional sex-ratios of the modal marriage age-group, and the stability of the average age of marriage up to 1881, it is unlikely that the proportions married in Scotland fell at that time. However, the divergent courses of these variables between 1881 and 1901, as demonstrated above, does suggest that there was a likely decline in the proportions married during the last two decades of the nineteenth century. If this is so, then Habakkuk's hypothesis that the fertility decline was presaged by a fall in the proportions married

might well be valid for Scotland. But to what extent did the proportions married of 'at risk' women alter? Only if this is known, and related to its effect on marital fertility can the the extent to which a 'preventive check' operated be gauged.

I_m, the index of nuptiality

The index used by the Princeton authors to measure proportions of 'at risk' women curently married, and the one which will, for the most part, be used in this study, is I_m. As opposed to the conventional age-specific measure of overall proportions married, in which each age is weighted by the age distribution, I_m, like the other Coale indices, is a fertility-schedule standardised measure. As explained in chapter 2, I_m is weighted by the same fertility schedule as I_g, I_h, and I_f (respectively, the Coale indices of marital, extra-marital, and overall fertility), and gives the highest weights to women between the ages of 20 and 34. However, although I_m, like the overall proportions married is affected by the age distribution of the female population, the effect on I_m is not so great - the earlier the average age at marriage, the less the effect.[62]

But the average age at marriage in Scotland between 1881 and 1901 was high by modern standards, and it is possible that, in some parts of the country at least, proportions married as measured by I_m will be disproportionately lower than it would if a measure free from the influence of age-structure was used. Such a measure is I_m*, and, although it is also weighted by the Hutterite fertility schedule, because it does not employ the age distribution of all women in either its

numerator or denominator, it is free from the influence of age-structure.[63]

Teitelbaum has calculated, for one hundred and ten counties of Britain between 1851 and 1921, that "the simple correlation between I_m and I_m* is below .96 only once and below .99 only three times".[64] But as is shown in table 3.1, when a simple correlation is done between Im and Im* using 856 Scottish Civil Parishes, the results are not quite so clear-cut. R-squared for Scotland as a whole reaches 0.940 only in 1901, and although fairly high r-squareds occur in the Western Lowlands in 1881 and 1901, in the Borders in 1881 0.795 is recorded. Indeed, in the Borders, the North-east, and the Highlands, r-squared fails to reach 0.900 at any time during the period.

The correlations given in table 3.1 for the Western Lowlands and the Highlands are a good illustration of the effect of age at marriage on the two indices. Where the average age at marriage is relatively low, Im and I_m* are always likely to proximate each other. But in a population with a higher age at marriage, while the influence on I_m of the total number of women in the lower age-groups is <u>in</u>creased, the influence of the currently married female population at these ages is disproportionately <u>de</u>creased. Because I_m* is free from the influence of age structure, this error is avoided.

Table 3.1

Simple correlations between regional I_m and I_m*

	r^2			
Region	1881	1891	1901	N
W.Lowlands	0.961	0.930	0.961	109
E. Lowlands	0.935	0.951	0.950	267
North-east	0.840	0.899	0.861	143
Borders	0.795	0.815	0.866	171
Far North	0.930	0.905	0.925	42
Highland	0.843	0.809	0.896	124
Scotland	0.917	0.923	0.942	856

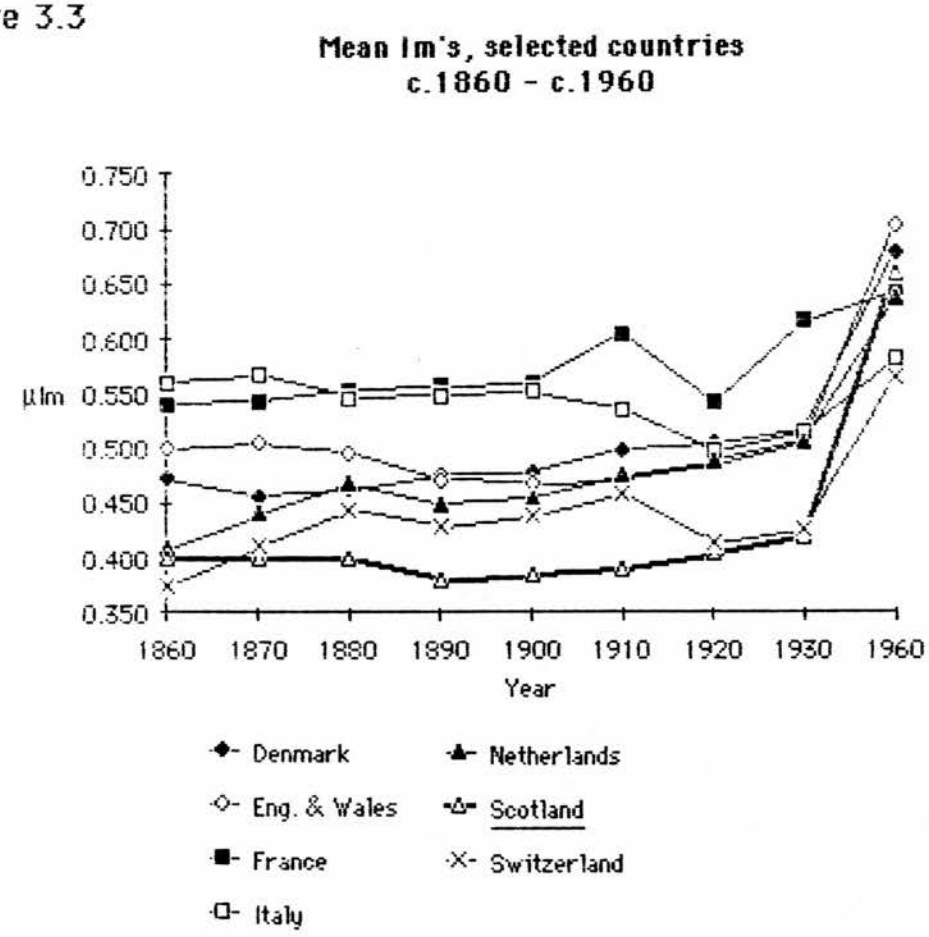
In light of the high correlations between I_m and I_m* which he found, Teitelbaum feels justified in using Im alone,[65] not least because of "its useful arithmetical relationships with the other [Coale] indices".[66] The usefulness of this mathematical relationship cannot be denied. Also, although the r-squareds of the civil parish figures are not as high as those computed from the county-level indices, they are in all cases highly significant. And given the much lower aggregations of the Civil Parish data over the province-level figures of the Princeton studies, it is possible that stochastic error may account for at least some of the difference between the two measures. Partly for these reasons, and also in order to maintain comparability between this study and those of the Princeton authors, I_m is also used here.

The European context

In present-day Europe, the proportions married are, historically, very high. Values of I_m greater than 0.500 are the rule rather than the exception. Indeed, out of twenty-eight European national I_m cited by Coale and Treadway for c.1960, c.1970, and c.1980, in only one case, that of Ireland in c.1970, is an I_m of less than 0.500 recorded. The median of the twenty-eight European countries in c.1970, 0.656, is a much more typical value.[67]

Before the Second World War, the mean I_m of those twenty European countries for which there are data rose significantly above 0.500 only in 1930.[68] Scotland, as Figure 3.3 illustrates, was at the lower end of the European scale throughout.[69] It was not until after the Second World War that the proportions married in this country drew level with the rest of Europe, and this coincided with the post-1930s 'marriage boom' in Europe.[70] Only then was what Hajnal has described as the 'European pattern' of marriage, the "distinctive marks" of which are "a high age at marriage and..... a high proportion of people who never marry at all," undermined.[71]

Figure 3.3



Source: Based on Watkins (1986), table 8.1.

As indicated by Figure 3.3, although there is little change in the proportions married in Europe until the 1930s, the range covered by the I_m is relatively wide before that date - notwithstanding the fact that in only one country did Im reach 0.600 before 1930. Within the countries of Europe variation was also substantial.[72] And, as Teitelbaum has shown, within the British Isles the I_m values for England and Wales, Scotland, and Ireland around the turn of the century cover "essentially the full range of pretransitional experience among all the countries of northwestern Europe. The national figures for I_m were highest for England and Wales, intermediate for Scotland, and lowest for Ireland in each year" between 1871 and 1901.[73] Further, the distinct regional

patterns found within the British Isles were most pronounced in Scotland:

> In all parts of the British Isles the Im tended to be highest in the more prosperous and industrial parts of the country. However, all parts of Ireland behaved like Ireland, and all parts of England and Wales behaved like England and Wales, whereas the indices of the poorer parts of Scotland looked like those of Ireland, and those of the industrial belt of Scotland looked like the marriage indices of England and Wales.[74]

Geographical variation of Im in Scotland

As Teitelbaum suggests, and as Maps 3.1 to 3.6 illustrate, the geographical variation to be found in Im in Scotland has a core-periphery dimension. Maps 3.1 to 3.3 are plotted using fairly narrow intervals, and a 'cut-off' point (0.400->) just above the mean of I_m for the three years 1881, 1891, and 1901.[75] The effect of plotting with these intervals is that, despite a slight decrease in the number of parishes with I_m of 0.400 or above between 1881 and 1901, a clearly defined west-east axis with a north-east 'tail' appears on each map. In other words, the great majority of those parishes with above average proportions married are indeed to be found in the more industrial and otherwise 'prosperous' parts of the country - Lanarkshire, Linlithgow, Stirling, north Ayrshire, much of Fife, and parts of Forfar, Kincardine and Aberdeen.[76] True, some apparently less well-off areas also have Im of 0.400 or above, places such as some of the islands, and parts of Orkney, Caithness, and some parishes on Aberdeen-Banff border. But for the most part those parishes with very <u>low</u> proportions married are to be found in the peripheral areas - the Far North, the Highlands (and islands), and the Borders.

In order to pick out higher 'extreme' areas more easily, for maps 3.4, 3.5, and 3.6, a somewhat higher final interval (0.500 ->) is adopted. On these maps, it is immediately apparent that, apart from a few 'stragglers' in Forfar, Fife, East Lothian, and Ayrshire, the highest values of Im are to be found in a large cluster of parishes which straddles Stirling, Linlithgow, and Lanarkshire.[77]

Equally as striking as the large cluster evident in maps 3.4 to 3.6, is that in each set of maps there is little change in the overall pattern of geographical variation in I_m during the period. All of the maps are based on the Civil Parish data computed for this study. For mapping purposes, 871 units are defined.[78] This number contrasts starkly with the 33 Scottish county figures used by Teitelbaum. Yet, the overall pattern of his county map, which plots the "quintals" of I_m "for 1871 through 1931",[79] is remarkably similar to those portrayed on the Civil Parish maps. Clearly, the overall differences in proportions married, between the North, centre-east, and Borders, which are evident in 1861, persisted until well after the turn of the century.

The national and regional mean Im listed in table 3.2 verify the visual impression given by the maps. These statistics are based on 856 Civil Parishes. As is stated, the figures are ranked by the 1861 values of I_m. In fact, the same ranking holds for all three years. In addition, there is a remarkable degree of consistency within each region in the actual values of I_m throughout the period, as there is in their standard deviations, and although the figures for each province dip in 1891, in none of the regions does I_m fall again between 1891 and 1901.

Table 3.2

Regional Mean I_m by descending rank order in 1881

	Mean Im			Standard deviation		
Region	1881	1891	1901	1881	1891	1901
W.Lowlands (N=109)	0.443	0.420	0.428	0.116	0.105	0.095
E. Lowlands (N=267)	0.428	0.402	0.414	0.091	0.083	0.091
North-east (N=143)	0.392	0.371	0.389	0.059	0.056	0.051
Borders (N=171)	0.368	0.347	0.350	0.058	0.051	0.055
Far North (N=42)	0.343	0.331	0.332	0.066	0.054	0.054
Highland (N=124)	0.332	0.320	0.320	0.052	0.044	0.048
Scotland (N=856)	0.394	0.373	0.381	0.087	0.078	0.082

In the figures for all regions, and for Scotland as a whole, the largest amount of change in I_m occurs in the second decimal place. Thus, in percentage terms the greatest difference in Im during the period is the fall by six percent in the Eastern Lowlands between 1881 and 1891, although the situation is recovered somewhat between 1891 and 1901, and the overall change during the last twenty years of the century in this region is only about three and a quarter per cent. This latter figure corresponds closely to the average change for all six provinces of 3.19 per cent, and the change which occurred in Scotland as a whole between 1881 and 1901, of 3.30 per cent. Indeed, the largest fall in I_m which

occurs over the whole period does so in the Borders, where between 1881 and 1901 it declines by just under six per cent. The North-east, on the other hand, records the lowest fall in I_m over the period, at just 0.77 per cent.

Between 1881 and 1901 in Scotland and its six regions, then, although there is a drop in the proportions married as measured by I_m, nowhere is the change significant. But, as suggested earlier, it is possible that in some places I_m may be influenced to some extent by changes in the age-structure and the average age at marriage of the population. Certainly a noticeable 'dent' does occur in the sex-ratios of the modal marriage age-group and this is paralleled by a rise in the average age at marriage in Scotland and its regions in 1891 (see Figures 3.1 and 3.2 above). A straightforward way of testing the effect of change in these variables is to compare the values of I_m with the corresponding values of I_m*. The relevant values for I_m* are given in table 3.3.

Like the figures for I_m in table 3.2, those for I_m* are presented in descending rank order in 1881. The order of the regions is the same in both tables, for all years. However, with the exception of Highland, the values of I_m given in table 3.2 are higher by varying degrees than the I_m* values shown in table 3.3 - the close correspondence between the indices for Highland form one extreme, and the dissimilarity between the same figures for the Western Lowlands, form the other. This is, to some extent, to be expected, because of the near-parity in the sex-ratio and lower age at marriage in the Western Lowlands; and the lower sex-ratio and higher age at marriage in the Highlands. However, the Highlands has by no means the lowest sex-ratio of the six regions; that distinction

belongs to the Borders; and the average at marriage in the Far North is just as high. This suggests that factors other than those taken into account by the two indices are influential in determining the actual proportions married.

Table 3.3

Regional Mean I_m* by descending rank order in 1881

	Mean Im*			Standard deviation		
Region	188	1891	1901	1881	1891	1901
W.Lowlands (N=109)	0.502	0.476	0.475	0.100	0.098	0.097
E. Lowlands (N=267)	0.470	0.446	0.447	0.088	0.084	0.092
North-east (N=143)	0.447	0.425	0.432	0.054	0.053	0.051
Borders (N=171)	0.418	0.393	0.389	0.056	0.051	0.055
Far North (N=42)	0.382	0.370	0.358	0.069	0.062	0.057
Highland (N=124)	0.330	0.312	0.323	0.056	0.047	0.049
Scotland (N=856)	0.441	0.418	0.447	0.085	0.081	0.084

Despite (minor) differences between the figures for I_m and I_m*, the overall impression of the course of change in the proportions married in Scotland during the last two decades of the nineteenth century, is that there is little. In both tables, the core (and tail) / periphery pattern

holds: the Lowlands (and North-east) have the highest proportions married throughout, and the Highlands, Far North, and the Borders, have the lowest. The percentage changes in the levels of the two indices are almost identical. So, significantly, are the two sets of standard deviations, and these clearly indicate that no matter which index is used there is evidence of no more than a low propensity to change in the proportions married in Scotland and its regions between 1881 and 1901. Final confirmation of this is gained from Maps 3.7 and 3.8. Here, change in proportions married is shown in terms of change in I_m and I_m*, respectively. In all parts of the country there are parishes where the proportions married declines, and, equally, there are places throughout Scotland where it increases with no clearly defined spatial pattern of change.[80]

In summary, the demographic pressure exerted by a worsening in the sex-ratios of the twenty-five to twenty-nine age-group throughout Scotland between 1881 and 1891, and which exerted an upward pressure on the average age at marriage, is reflected in the regional figures for both I_m and I_m*. But the extent of change reflected shows clearly that in no region was the fall in the proportion of 'at risk' married women enough to have had more than a marginal effect on fertility. Even then, although the average age at marriage remained high, the recovery of the regional sex-ratios in 1901 was enough to ameliorate the (slight) negative pressure put on the proportions married in 1891.

It is clear, then, that Habakkuk's caution that what movement there was in the proportions married could not have made a major contribution to fertility is correct - at least insofar as the onset of fertility decline in

Scotland is concerned. Demographic pressures operating at the time probably were instrumental in causing a fall in the number of 'at risk' women currently married, but the extent of that fall was slight, and hardly enough to form a significant 'preventive check'.

Conclusion

In this chapter it has been shown that there was little change in the proportions married of 'at risk' women in Scotland and its regions between 1881 and 1901. This is despite worsening sex-ratios between 1881 and 1891, and rising average ages at marriage in every region, throughout the period. The most persistent areas of high nuptiality are largely contained in the central Lowlands, and those of low nuptiality are situated in the Far North, Highlands, and the Borders. The high nuptiality areas appear to be concentrated in the industrial and otherwise more 'prosperous' areas of the country, while those parishes with the lowest values of I_m are for the most part situated in less well-off areas. However, because of the distinct lack of change which occurs in the proportions married of 'at risk' women during the last quarter of the nineteenth century, it is concluded that there was no significant 'Malthusian' dimension to the onset of fertility decline in Scotland, and, therefore, that parity-control within marriage was from the start the prime agent of change.

Chapter Four

The onset of decline in marital fertility

Introduction

In this chapter the timing of the initial stage of marital fertility decline in Scotland and its place in the decline of marital fertility in Europe is described. Following this, the ability of the civil parish data to 'get below' higher-level aggregates is utilised to distinguish patterns discernible in the Scottish decline within the national-, regional-, and county-levels. In doing so, the fitness of the civil parish data to accurately describe the course and nature of the onset of marital fertility decline at the local level in this country is established.

I_g, the index of marital fertility

The concern of this chapter is fertility within marriage, and so I_g (the index of marital fertility) is the one used here. I_g is an indirectly standardised index arrived at by taking the number of recorded legitimate births in a population in any given time-period, and multiplying it by the observed distribution of 'at risk' (aged between 15 and 50) married women in the population, with each aggregate group weighted by a standard fertility weight. It is thus a weighted proportion of actual fertility over expected maximum fertility, where a figure of 1.000 is taken to represent the achievement of a 'maximum' level of marital fertility. The standard set of rates used in constructing I_g are derived from the fertility experience of the Hutterites, a North American religious sect noted for its practice of early and near-universal marriage, and its avoidance of deliberate control of fertility within marriage.

The indicator of the onset of 'substantial and irreversible' fertility decline given most weight in the Princeton studies is the date at which I_g for a particular area falls by 10 per cent or more from a given 'plateau' level. In the case of Scotland, the level of I_g in 1871 (0.752) is used as the benchmark. In this study, where analysis is made at the national and county levels, the figures given by Teitelbaum in his study 'The British Fertility Decline',[81] will be referred to where appropriate. In most instances though, because the civil parish data set provides figures only from 1881, and to ensure comparability between the national-, regional-, county-, and parish-level analyses presented here, the various levels of I_g in 1881 will be used as the 'plateau'. At the

national level the difference between the I_g for 1871 (0.752) and 1881 (0.732) is only 2.66 per cent, so, given that both figures are substantially above 0.700, comparability with Teitelbaum's, and other studies, is not impaired.[82]

In addition to considering the date at which marital fertility falls by 10 per cent or more below a given 'plateau', the Princeton authors refer to specific levels of I_g as indicators of the degree to which a population is deliberately restricting its within-marriage fertility. Based on the Princeton findings, and as a rough guide to the significance of various specific levels of I_g, 0.700 and above is generally reckoned to indicate "uncontrolled fertility";[83] an I_g of between 0.600 and 0.700 suggests that 'some control' over fertility within marriage is being practised; usually, figures of about 0.600 and below are indicative of populations which are 'definitely limiting' their within-marriage fertility. When I_g falls below 0.600 marital fertility is normally regarded as having entered an 'irreversible' decline.

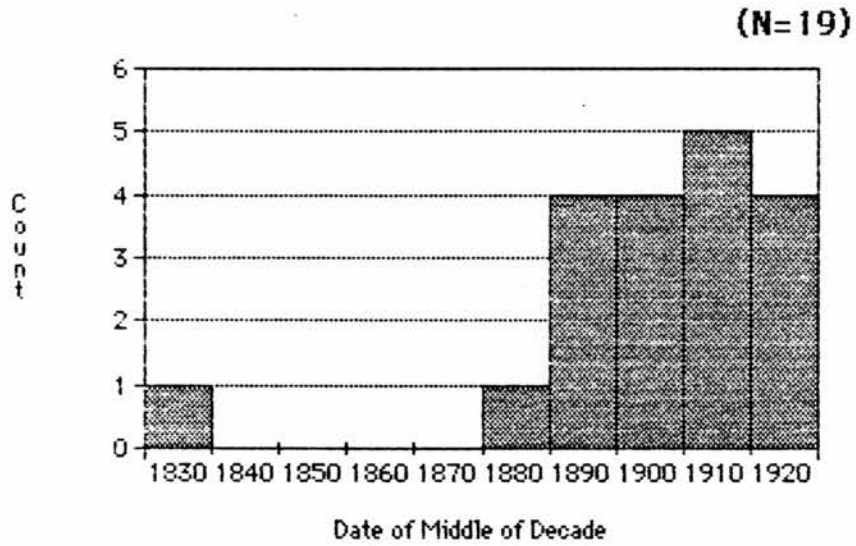
The European context

Figure 4.1 shows the frequency with which the I_g of nineteen European countries declined by 10 per cent or more during the century 1825-1925. This clearly illustrates the overall trend towards declining marital fertility in Europe at the end of the nineteenth century. The process of decline was initiated in Europe from before 1830 (in France), while in Ireland sustained fertility decline did not begin until the third decade of the twentieth century. But for most of the countries of

Europe, including Scotland, fertility decline became 'sustained and irreversible' by the 10 per cent criterion during the last quarter of the nineteenth, and the first decade of the twentieth centuries.

Figure 4.1

Distribution by decade of European countries experiencing a 10 per cent Decline in I_g



Source: Coale, A.J. & Watkins, S.C.
The Decline of Fertility in Europe, Table 2.1

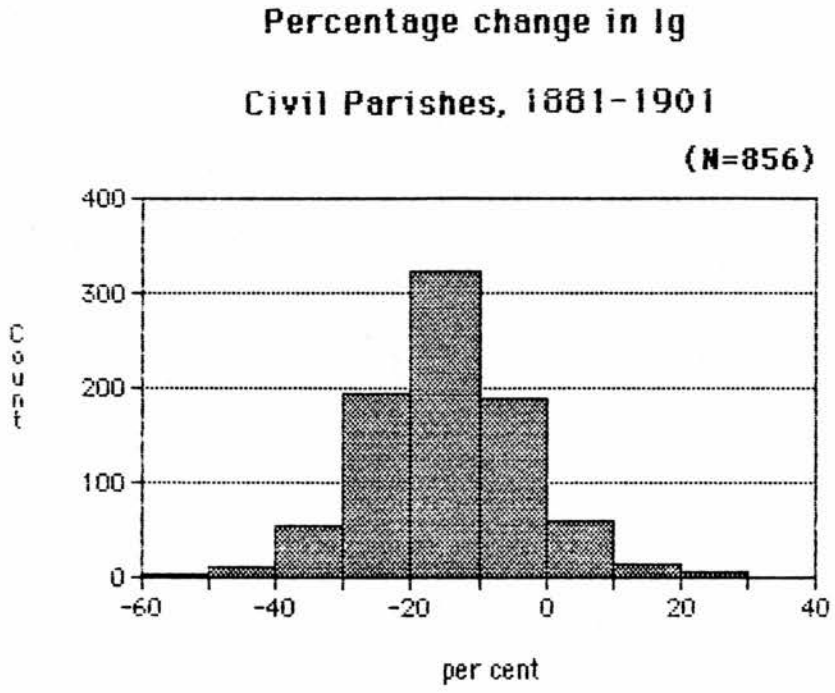
Fertility decline at the Scottish national level

Taking the level of I_g in 1871 (0.752) as a benchmark, Teitelbaum has shown that "By the 10 per cent criterion, the decade 1891-1900 is the date of the onset of 'substantial and irreversible' fertility decline in marital fertility in..... Scotland".[84] If the I_g for 1881, 0.733, is taken as the benchmark, the result is the same. By interpolating a linear trend

between the I_g of 1871, 1881, 1891, and 1901, Teitelbaum is able to give a specific year, 1894, as the date of 'substantial and irreversible' marital fertility decline.[85] If the level of Ig in 1881 is taken as the base year for interpolation then 1897 is arrived at. This suggests that 1881 is indeed as relevant a benchmark as 1871 when using the 10 per cent criterion, and that its use as such does not impair the comparability of the analysis done here with the Princeton studies.

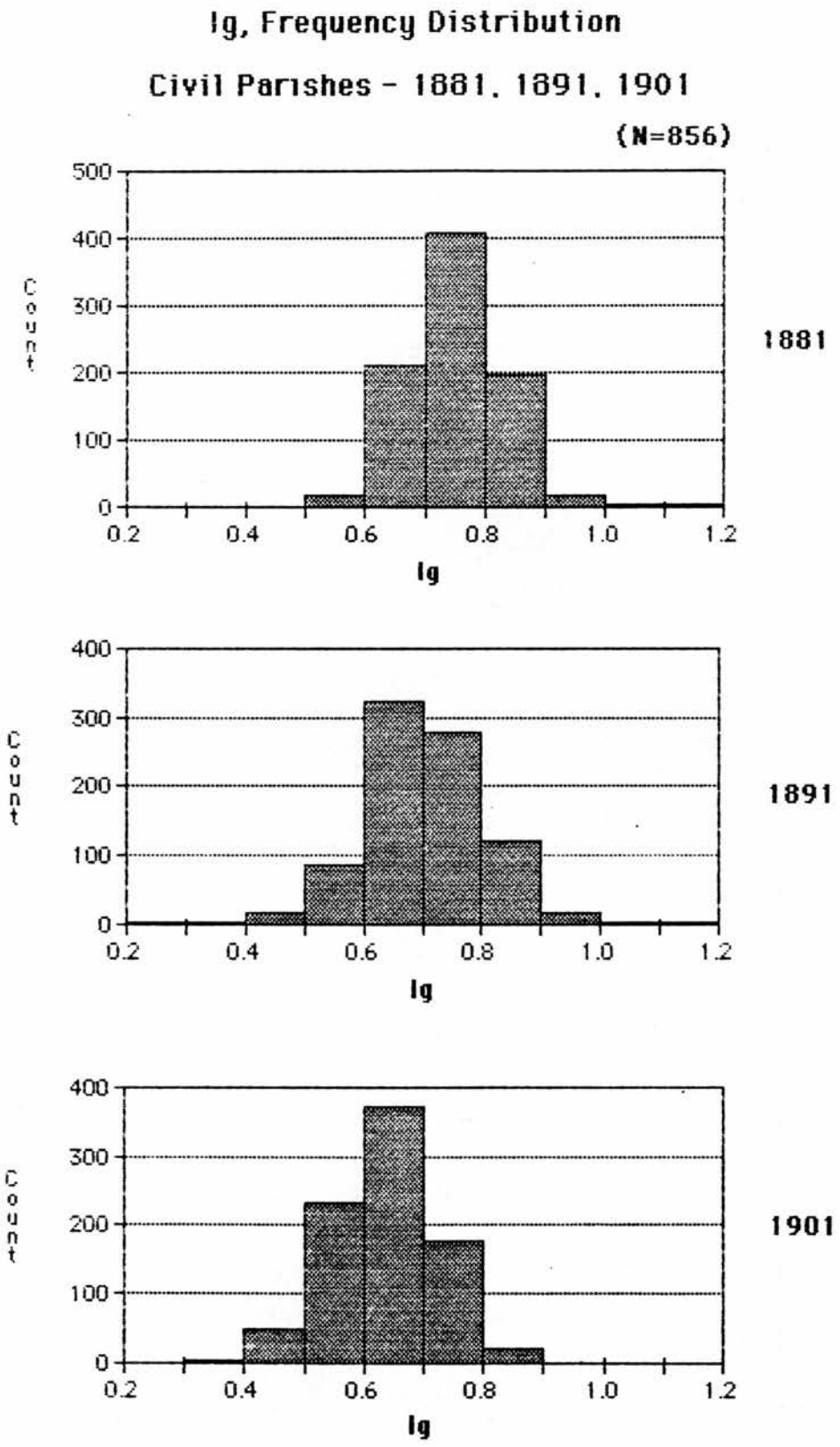
According to the civil parish figures, Scotland in 1881 has an I_g of 0.732, with 628 parishes from 856[86] recording levels of 0.670[87] or more, and these contain 72.00 per cent of the population. As is illustratrated in figure 4.2, between 1881 and 1901 I_g drops by 10 per cent or more in 587 of the 856 civil parishes, and the population of these represents 81.86 per cent of the national population at the turn of the century. Taking the level of I_g in 1881 for each of these parishes as their "plateau", the overall percentage fall in I_g between 1881 and 1901 is 17 per cent - 8.66 per cent in 1881-1891, and 8.79 per cent in 1891-1901. Thus, it is clear by the 10 per cent criterion, whether measured as a single entity from the 1871 'plateau', or by summing the individual experiences of 856 small areas and using the level of I_g in 1881 as the benchmark, that a substantial majority of the Scottish population is 'definitely limiting' its marital fertility by the turn of the century.

Figure 4.2



In assessing Scotland's county-level performance by the 0.600 criterion, Teitelbaum states that, "in the case of Scotland, no counties had reached an I_g of 0.600 by 1890, and only eight of the thirty-three counties comprising less than 22 per cent of the 1891 population did so before the turn of the century."[88] As Figure 4.3 indicates, the Civil Parish data set shows that by 1881 the I_g of 20 parishes are 0.600 or less. However, these represent only 0.60 per cent of the 1881 population. By 1891, 112 parishes have such an I_g, and these represent some 4.79 per cent of the (1881) population. By 1901, 283 of the 856 parishes, accounting for 29.81 per cent of the Scottish population record an I_g of 0.600 or below.

Figure 4.3


Ig, Frequency Distribution
Civil Parishes - 1881, 1891, 1901
(N=856)
Count
500
400
300
200
100
0
0.2
0.4
0.6
0.8
1.0
1.2
Ig
1881
1891
1901

The number of parishes whose I_g have fallen by more than 10 per cent and whose I_g are less than 0.600 by the turn of the century is 262, and these account for 29.02 of the 1901 population. So, according to the civil parish data set, the Scottish fertility decline was by the 0.600 criterion farther advanced at the turn of the century, in terms of the proportion of the population limiting its within-marriage fertility, than the Princeton county-level analysis suggests. However, it remains that, taking both the 10 per cent and the 0.600 criteria into account, undoubtedly the crucial initial period of fertility decline in Scotland is the thirty or so years between the mid-1870s and the mid-1900s. It is precisely this period that is covered by the civil parish data.[89]

Variability in levels of I_g

Barring disaster, the decline of marital fertility is, of course, a far from uniform occurrence in any population. Substantial differences between countries, and indeed between regions and counties can be expected over time. As well, differentiation is the norm within nations and within the various different internal population units which go to make up individual nations. The lower the unit of aggregation upon which a study is based, the more likely is it that the full range of marital fertility experience which pertains at any one time will be observed, and, thus, the observed differentiation may be maximised. As is discussed in Chapter 1, although the Princeton studies, including the one which covers Scotland,[90] have significantly advanced our knowledge and understanding of the decline of human fertility in Europe, the lowest level they have done so at is the département, or arrondissement, or county. Consequently, it is often difficult to be sure

exactly where and when the onset of marital fertility decline began. It is this gap in our knowledge, with respect to Scotland, which the civil parish data set is designed to fill.

Table 4.1 shows a number of comparative national I_g and their standard deviations for various parts of Europe at the end of the nineteenth century. The Scottish civil parish figures indicate that, as I_g declined by 5.60 per cent between 1881 and 1891, and then by a further 8.20 per cent between 1891 and 1901, heterogeneity, as measured by standard deviation, first increased over the earlier decade, and then fell back during 1891-1901, though not quite back to the 1881 level. The civil parish figures for 1891 are more prone to stochastic disturbance than those for 1881 and 1901,[91] and are likely to exaggerate the trend towards greater internal heterogeneity in that year. However, the comparability of the trend in heterogeneity conveyed by the civil parish figures to the trend indicated by the standard deviations reported by Teitelbaum, which are based on the thirty-three Scottish county-level I_g,[92] suggests that internal differentiation was indeed increasing within Scotland, as elsewhere, at this time.[93]

The increases in internal heterogeneity described in Table 4.1 are indicative of the onset of the initial stage of fertility decline. At a later stage, increasing differentiation typically is succeeded by a trend towards greater homogeneity of experience. Divergence-convergence is thus seen as the "classic sequence" by Coale and Treadway: "Such a pattern is the expected sequence for the prevalence of parity-related limitation of fertility in a population that initially is subject to natural fertility".[94] The model is not universally applicable, however. "It is

found in some countries, and not in others. Belgium exemplifies divergence followed by convergence very well.....In England and Wales, on the other hand, the transition from high to low I_g, while extensive, occurred at nearly the same time in all the counties".[95]

Table 4.1

Variability in levels of I_g, 1881, 1891, 1901 - Europe, Scotland, England & Wales, and Belgium

	Year	Mean I_g	S.D.	N
Scotland	1881	0.751	0.080	856
(Civil Parishes)	1891	0.700	0.107	856
	1901	0.638	0.086	856
Scotland[96]	1881	0.739	0.040	33
(Counties)	1891	0.706	0.058	33
	1901	0.631	0.053	33
Europe[97]	1870	0.689	0.124	588
	1900	0.631	0.141	589
England & Wales[98]	1881	0.691	0.030	45
	1891	0.635	0.031	45
	1901	0.562	0.039	45
Belgium[99]	1880	0.791	0.149	41
	1890	0.725	0.169	41
	1900	0.628	0.193	41

The focus of the present study is the initial stage of fertility decline at the level of the civil parish in Scotland, and, therefore, diversity of experience is the expected norm.[100] When measured by the county-level aggregates, insofar as deviation from the norm in Scotland is markedly greater than is the case for England and Wales, and is increasing,

Scotland is a "classic case" in terms of the divergence(-convergence) model. When measured by the civil parish figures, which can be expected to pick up a much wider range of behaviour, there is, despite the rapid decline in Ig, a noticeable lack of any significant increase in heterogeneity between the figures for 1881 and 1901. It may be that heterogeneity continued to increase at the national level after 1901, as Teitelbaum's between-county figures show,[101] but that happens after the first stage in the decline is over. Insofar as this is the case, then the Scottish model is best described as first overall decline, and then divergence-convergence.

The difference between the range of experience indicated by the county- and civil parish-level figures does beg the question to what extent would behaviour in England and Wales appear less homogeneous than its county-level indicators suggest if aggregates more comparable to the Scottish civil parish figures were available. Woods and Smith have produced indices for 620 registration districts of England and Wales in 1861 and 1891, and they state that "when considered at the level of the registration district the experience of fertility decline in late nineteenth century England and Wales appears to be one of considerable heterogeneity."[102] Similarly, Friedlander has computed I_g for 578 areas of England and Wales for each decade of the period 1851-1890. He states that, "up to the 1871-1880 decade, ...[I_g] did not show a consistent trend of decline for a large proportion of the districts. However, from 1881-1890 on, most districts "showed sharp declines" in their marital fertility.[103] Perhaps, then, the difference in levels of heterogeneity experienced by the populations of England and Wales and Scotland might not be so wide after all. Unfortunately, the actual

figures upon which Woods and Smith's, and Friedlander's analyses are based have not been published to date, and so it is not possible to include a more detailed analysis here.

Patterns of fertility decline within Scotland

Because of the low level of aggregation on which the civil parish data set is based, it is able to 'get below' the higher-level aggregates used in other studies. As is shown above, this is true when observing behaviour at the national level, and it is of course also the case when looking at regional-, and county-levels of behaviour.

The high degree of 'flexibility' inherent in the civil parish data is perhaps best demonstrated when they are mapped, and only the boundaries of the civil parishes themselves plotted. Maps 4.1, 4.2, and 4.3, show the geographical distribution of I_g for 871 Civil Parishes in 1881, 1891, and 1901. The 1881 map (4.1) demonstrates clearly the 'traditional' nature of marital fertility in Scotland at the time. Although there is a fairly good spread, throughout the country, of Civil Parishes with I_g below 0.700, it is apparent that most have I_g of 0.700 or above, while only a widely scattered handful have I_g of 0.600 or below. Map 4.2 shows that, by 1891, the number of Parishes with I_g below 0.700 has increased significantly, both in number and in geographical spread. There is also a noticeable increase in the number and spatial dispersion of Parishes with I_g below 0.600 - in the Borders, and parts of Fife, Perthshire, Dunbarton, Argyll, and Orkney. By 1901, as Map 4.3 illustrates, it is clear that most of Scotland is well on the way to its

fertility 'transition'. The majority of the mapped areas have achieved I_g of less than 0.700, and a substantial number show I_g of less than 0.600.

The visual impression of change over the twenty years covered by the three census points is striking, especially in that all parts of the country are affected. As Map 4.4 clearly illustrates, there is only a very small minority of parishes where I_g fails to decline between 1881 and 1901 So, although Maps 4.1 to 4.3 indicate that some parts of the country are more advanced than elsewhere, there is no evidence of a 'geographical diffusion' of family limitation. As the statistics descriptive of the national trend show, this is to be expected. Yet, the fact that there are 'laggards' throughout the country, which by 1901 appear as substantial islands of tradition in an otherwise hurrying sea of change, leaves an impression of locally increasing heterogeneity. Although their impact on the national-level civil parish statistics is negligible, is it the case that these apparently increasing local differentials affect significantly the course of the Scottish experience at the regional-, county-, and within-county levels?

Variation in the decline of marital fertility within the regions

The occurrence of Scotland's initial period of fertility decline at the national-level is, according to the civil parish data, rapid. Yet despite the rapidity of the decline, in terms both of absolute and percentage levels of I_g, the level of deviation in 1901 is little different from that of 1881. Divergence from the 1881 level does occur, but does so around

1891 and is quickly recovered.[105] As Table 4.2 shows, this is also the case at the Scottish regional level.[106]

All the regions of Scotland have a mean I_g greater than 0.700 in 1881, and all have mean I_g of less than 0.700 by 1901. Indeed, the Borders region records a mean I_g below 0.600 at the turn of the century, while that of the Eastern Lowlands is only a little above this level. As well, all 6 regions record falls in their levels of marital fertility greater than 10 per cent over the period - lying within the range of 12.01 per cent (in the North-East) and 18.38 per cent (in the Borders).

Table 4.2

Regional Mean I_g and Standard Deviations

(Descending rank order, I_g 1881)

	Mean I_g			Standard Deviation			
Region	1881	1891	1901	1881	1891	1901	N
3 North-East	0.774	0.755	0.681	0.060	0.089	0.062	143
2 Highland	0.774	0.746	0.680	0.080	0.091	0.085	124
5 West. Lowlands	0.767	0.726	0.659	0.079	0.088	0.073	97
4 East. Lowlands	0.745	0.673	0.619	0.083	0.104	0.082	279
1 Far North	0.741	0.693	0.653	0.089	0.102	0.088	42
6 Borders	0.718	0.652	0.586	0.076	0.112	0.080	171

The rank order by I_g which pertains in 1881, holds for 1891 and 1901, except that the Far North and the Eastern Lowlands 'swap places' at the

middle census point. But in no region can 'uncontrolled' fertility within marriage be said to be the norm by 1901; 'some control' is being practised in five regions, while the Borders records an I_g of below 0.600. All six regions register a decline in I_g of 10 per cent or more, and so by this criterion they have entered a 'substantial and irreversible' decline.

At the same time, the standard deviations indicate that although there is a pronounced fluctuation during the period, the range of experience in Scotland alters little over the period as a whole. If the 1891 statistics are excluded, only two regions, Highland and the Borders, are subject to a slight increase in heterogeneity of behaviour between 1881 and 1901, while the North-East, the Eastern Lowlands, and the Far North show practically no change. The Western Lowlands, on the other hand, is subject to a slight convergence.

As at the national level, the moderately wide range of experience displayed in the regional statistics portrays Scotland as lying about mid-way between the England and Wales and Belgium national experiences, while the lack of a widening in the range of experience is more in line with behaviour in England and Wales than that of Belgium. Thus, at both the national and regional levels, Scottish marital fertility experience during the onset of decline remains divergent, as distinct from being subject an increase in divergence. So, despite the rapidity of the decline in marital fertility, Scotland is not a "classic" case at the regional level in the initial stage of decline.

Variation in the decline of marital fertility within the counties

The 1881, 1891, and 1901 values of the Mean I_g and standard deviations for the thirty-three Scottish counties are shown in Table 4.3. These figures reflect the within-counties movement of marital fertility between 1881 and 1901, and, therefore, there are no equivalent figures available from other studies with which to directly compare them.[107]

While Bute, Orkney, and Selkirk already have I_g a (fraction) below 0.700 in 1881, twenty-nine of the thirty-three counties have I_g less than 0.700 by 1901, and nine of these record figures of below 0.600. Only Inverness, Sutherland, Linlithgow, and Caithness, retain mean I_g of 0.700 or above. Caithness alone experienced a decline in marital fertility of less than 10 per cent between 1881 and 1901.

Once again, a relatively high degree of heterogeneity is apparent in all of the areas under consideration. Also, all counties, excepting Edinburgh, Kinross, Caithness, and Selkirk display a marked 'fluctuation' in heterogeneity over the period. In contrast to the pattern of experience observed within the national- and regional- levels, the within-county figures shown in Table 4.3 indicate that, when the figures for 1881 and 1901 are compared, the degree of differentiation remains constant in only six counties - Nairn, Aberdeen, Argyll, Ross, Fife, and Roxburgh.[108] Also, it is apparent that nearly as many counties experience a lessening of differentiation as are subject to an increase. Within-county heterogeneity, then, is more differentiated than the

within-Scotland, and within-region heterogeneity demonstrated above, and also the between-county heterogeneity reported by Teitelbaum.[109]

The source of within-county differentiation lies to a large extent in the 'artificiality' of the county boundaries themselves. As maps 4.1, 4.2, and 4.3 clearly illustrate, although there are throughout the period individual parishes which experience marital fertility decline in relative isolation, there are also clusters of parishes which enter into the first stage of decline in tandem. Likewise, there are groups as well as individual parishes which fail to record I_g below 0.700 by the turn of the century. It is noticeable that the county boundaries are not defined by the many clusters which appear on the maps. The clusters of parishes which display similar marital fertility experiences throughout the period are either within-county groupings, or ignore county (and regional) boundaries. In other words, a significant and substantial number of parishes have characteristics in common with places in a neighbouring county, or counties, which are more important to the definition of their fertility experience than their connections with some of their within-county neighbours.

Table 4.3

County Mean I_g and Standard Deviations[110]

(Descending Rank Order by Regional and County I_g, 1881)

(N=856)

Region & County		Mean I_g			Standard Deviation			N
		1881	1891	1901	1881	1891	1901	
3	Nairn	0.792	0.649	0.621	0.035	0.018	0.036	4
3	Banff	0.785	0.766	0.688	0.058	0.083	0.041	21
3	Aberdeen	0.775	0.757	0.688	0.062	0.092	0.061	79
3	Elgin	0.768	0.769	0.669	0.064	0.079	0.075	20
3	Kincardine	0.759	0.743	0.666	0.055	0.090	0.071	19
2	Inverness	0.803	0.762	0.702	0.074	0.087	0.084	31
2	Sutherland	0.790	0.801	0.711	0.058	0.069	0.062	13
2	Argyll	0.777	0.724	0.676	0.082	0.100	0.085	41
2	Ross	0.752	0.760	0.673	0.081	0.068	0.080	33
2	Bute	0.693	0.625	0.550	0.069	0.060	0.056	6
5	Ayr	0.787	0.739	0.673	0.075	0.062	0.067	42
5	Lanark	0.757	0.733	0.668	0.074	0.092	0.068	38
5	Renfrew	0.740	0.681	0.604	0.092	0.117	0.074	17
5	Dunbarton	0.716	0.685	0.619	0.075	0.142	0.100	12
4	Linlithgow	0.790	0.749	0.700	0.053	0.090	0.032	11
4	Stirling	0.773	0.711	0.644	0.068	0.079	0.074	21
4	Clackmannan	0.769	0.657	0.605	0.073	0.069	0.090	4
4	Forfar	0.768	0.694	0.642	0.093	0.106	0.081	53
4	Edinburgh	0.751	0.680	0.633	0.055	0.058	0.078	22
4	Haddington	0.733	0.628	0.603	0.074	0.112	0.082	24
4	Fife	0.732	0.659	0.599	0.089	0.110	0.088	57
4	Perth	0.729	0.656	0.603	0.086	0.102	0.071	70
4	Kinross	0.720	0.702	0.602	0.062	0.061	0.074	5
1	Caithness	0.802	0.766	0.750	0.044	0.042	0.073	9
1	Shetland	0.799	0.748	0.676	0.072	0.062	0.048	12
1	Orkney	0.682	0.631	0.598	0.073	0.102	0.069	21
6	Wigtown	0.761	0.695	0.673	0.051	0.060	0.056	17
6	Dumfries	0.720	0.683	0.598	0.066	0.112	0.081	43
6	Kirkcudbright	0.720	0.666	0.595	0.075	0.094	0.061	28
6	Berwick	0.719	0.654	0.577	0.101	0.115	0.078	32
6	Peebles	0.704	0.562	0.572	0.056	0.165	0.068	14
6	Roxburgh	0.701	0.607	0.534	0.077	0.096	0.075	30
6	Selkirk	0.691	0.678	0.566	0.073	0.075	0.047	7

Conclusion

In this chapter it has been demonstrated that at the national level, while the onset of marital fertility decline in Scotland was rapid, the relatively high degree of differentiation which pertained in 1881 was about the same in 1901, and thus that the onset of decline was achieved more or less in parallel throughout the country. This is somewhat at variance with the greater increase in heterogeneity over the period reported by Teitelbaum. The source of the high but consistent level of heterogeneity in Scotland lies not in between-region, or between-county differentials, but in differences between the various individual and groups of parishes which record similar experiences, regardless of county or regional boundaries. Accordingly, it is clear that detailed understanding of the decline of marital fertility in Scotland is likely only to be gained by analysing demographic data which is able to 'get below' county- and higher-level aggregates.

Chapter Five

The decline of extra-marital fertility

Introduction

This chapter is concerned with the the contribution made by fertility outwith marriage to the onset of fertility decline in Scotland. The course of extra-marital fertility decline is described and analysed at the national-, regional-, county-, and civil parish-levels. Throughout the discussion I_h is compared and contrasted with I_g, the index of fertility within marriage.

Illegitimacy

Unlike the number of births within marriage, the fall in European illegitimate fertility represents little more than a change from low to very low fertility.[111] As Lesthaeghe has noted, "In the British Isles, the Low Countries, most of France and Spain, Switzerland, the western part of Germany, and northern Italy, the level of illegitimate fertility rarely exceeded 10 per cent of marital fertility, although there were as many unmarried women in the fecund ages as there were married women..... Hence, prolonged celibacy and early widowhood did not lead to high values of extramarital fertility in most of Western Europe, even when contraception was not widespread."[112]

The question then arises whether, as marital fertility declined, extra-marital fertility did also. The Princeton figures show that throughout Europe the decline of fertility included births outwith as well as within marriage. True, lags did occur between the two in some places. In Belgium, for example, in arrondissements which experienced a relatively late decline in marital fertility, illegitimacy declined about a decade later; whereas in places with a relatively early decline in legitimate fertility, the sequence was reversed.[113] In general terms though, the onset of decline in fertility included both legitimate and illegitimate births. Historically, this is also generally true in England and Wales, where the two tended to rise and fall in tandem.[114] In France in the early eighteenth century though, as the proportions marrying declined, illegitimacy rose.[115] The relationship between the two fertilities may have been different again in the case of Scotland, where

it seems that the level of illegitimacy remained constant at a time when marital fertility is likely to have risen.[116]

In the 1860s, when it was thought (mistakenly) that the Scottish illegitimacy ratio was second highest only to Austria in Europe, "the average annual number of illegitimate births..... amounted, as nearly as possible, to 9%."[117] But there were striking regional differentials hidden by the national average. For example, as Flinn et al have shown, in 1871-5 the proportion of illegitimate births was 16.53 per cent in Banffshire compared to 4.57 per cent in Ross and Cromarty.[118] These levels of illegitimacy provoked much debate during the latter half of the nineteenth century, though the heat died down somewhat when it was recognised that in many countries of Europe the number of births occurring outside wedlock were often subject to undercounting, and as Scotland's true standing in the lower half of the European illegitimacy league became apparent.[119]

The Scottish debate was more concerned with morality than demography. But nine or ten per cent of all births is, even in strictly demographic terms, not insignificant. Indeed, as far as the level of marital fertility is concerned, the Princeton authors argue that a fall of ten per cent or more can be seen as compelling evidence of an 'irreversible' decline. So, when the proportion of births occurring outside marriage reaches 16 per cent or more, as apparently it did in parts of the north-East of Scotland, regional differences must be accounted for.

Flinn et al found that, at the regional level, not only were there gross differences in 1861, but that they persisted, at least until 1931. The North-east had the highest rate of illegitimate fertility in 1861, and still had "by far" the highest in 1931: "in fact, relative to the Scottish average it was a good deal higher than in 1861". The Borders was second highest throughout, and although the North-east and the Borders were subject to a decline in their absolute levels of extra-marital fertility, "both were higher even in 1931 than the Far North or the Highland Counties had been at any time since records began."[120]

The principal measure of illegitimate fertility used by Flinn et al in their 'Scottish Population History', is the illegitimacy fertility rate (IFR). This measure is, as they themselves recognise, far from satisfactory. IFR "is an imperfect yardstick..... because it takes no account of the age-distribution of unmarried women, *within* the fertile age-group 15-49." The best solution "would be to construct a table of *age-specific illegitimate fertility rates* (ASIFR) at different periods for different regions, for this would enable a comparison over time of behaviour within the same age cohorts in different places."[121] Unfortunately though, because of lack of published data, and the time-consuming and labour-intensive nature of the process of collecting data from the vital registers, they were only able to construct age-specific illegitimate fertility rates at the national level for 1855 and 1939, and for four selected counties for 1855 alone.

Even so, Flinn et al have clearly demonstrated that extra-marital fertility can in some places play an important rôle in determining the level of overall fertility. For while it may be true for the most part

that, "in Britain where illegitimate births are a numerically negligible part of the total, I_f [overall fertility] amounts approximately to the product of I_m [the proportion married] and I_g [marital fertility]",[122] it is equally true that at the regional and county levels there are areas where fertility outside marriage is high enough to have a significant effect on the course of overall fertility. It is all the more likely then that below these aggregates there will be places where the differentials will be greater still.

I_h, the index of extra-marital fertility

The Coale index which is used to measure illegitimate fertility used here is I_h. Like I_g, I_h is weighted by the fertility experience of the Hutterites. The only difference between I_h and I_g, then, is that I_g is concerned with marital fertility, whereas I_h is a measure of fertility outwith marriage. Thus, while legitimate births form the numerator in calculating I_g, illegitimate births are used for I_h. Likewise, the use of 'at risk' married women in the denominator in calculating I_g, is supplanted for I_h with the number of 'at risk' single women (including widows).

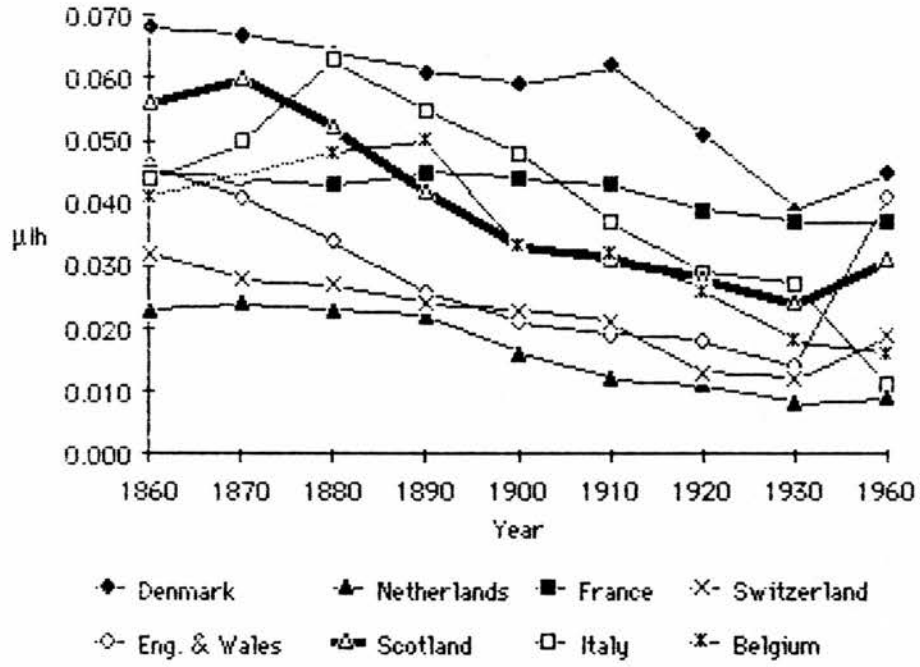
The European context

Figure 5.1 gives the mean I_h for eight European countries, c.1860 to c.1960. As the graph suggests, illegitimate fertility in Scotland approximates the European mean during the last two decades of the nineteenth century. It is also apparent that although I_h briefly increased at the beginning of the period in Italy (1860-1880), Belgium (1860-

1890), and Scotland (1860-1870), the general trend in Europe is downward until the 1930s. This falling off in illegitimacy was most pronounced in Italy, Scotland, and England and Wales from before the turn of the century, and in Denmark from 1910.

Figure 5.1

Mean I_h, selected countries, c.1860 - c.1960



Source: based on Coale & Treadway (1986), Appendix A.

In chapter 4, above, it is demonstrated that the onset of decline in marital fertility began in Scotland[123] between 1870 and 1880. Figure 5.1 indicates that this is also true of extra-marital fertility . This is to be expected, for there is little evidence from any part of Western Europe to suggest that at any time when marital fertility declined, it was 'compensated' for by a significant rise in illegitimacy.[124]

Change in illegitimate fertility at the Scottish national and regional levels

The statistics computed by Flinn et al show, in terms of the illegitimacy ratio, that the percentage of births occurring outside wedlock in 1871 in Scotland was 9.44, falling to 8.44 per cent in 1881, and continuing to decline thereafter, at least up to the 1930s.[125] In terms of the Coale index, although the trend is the same, with I_h at 0.060 in 1881 and I_g at 0.752, extra-marital fertility contributed somewhat less than the Flinn et al figures suggest - just under eight per cent of marital fertility, and this fell to about six per cent in 1901.

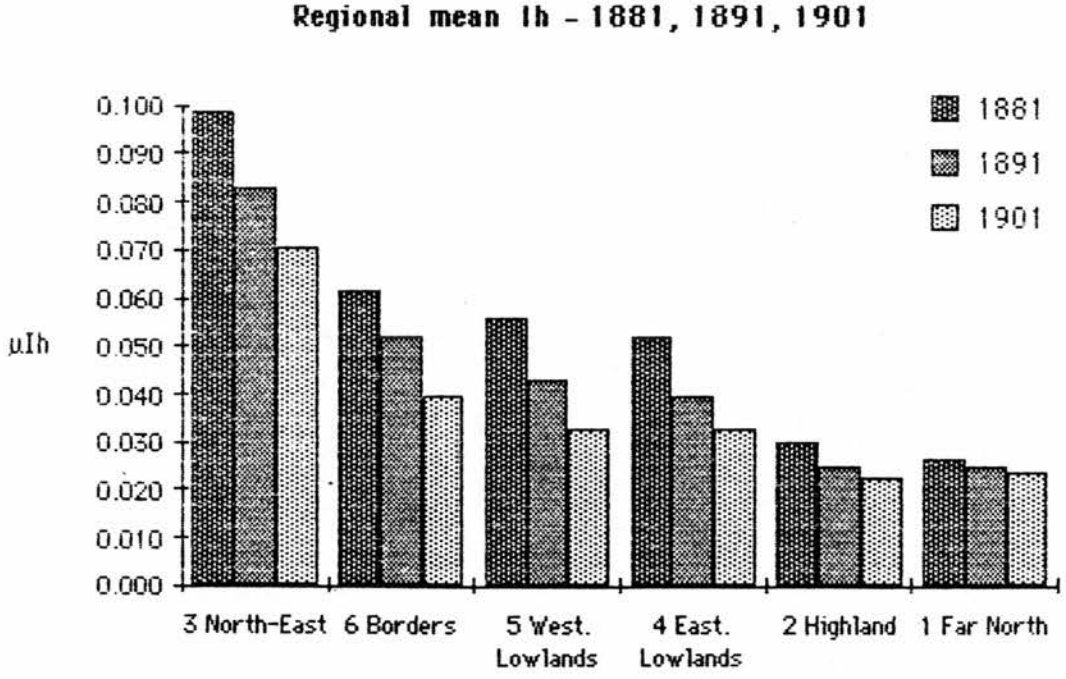
As Flinn et al also show[126], and as is illustrated in Table 5.1 and Figure 5.2 in terms of I_h, the national aggregates mask very marked regional differentials. At this level, three distinct groups can be discerned - the North-east, the Borders and Lowlands, and the Highlands and Far North. Although the trend is downward in each region, the rank order in 1881 is maintained throughout, except that the Highlands and Far North 'swap places' in 1901. As far as within-marital fertility is concerned, as shown in Table 4.2, chapter 4, above, the North-east is also the most fertile. But whereas Highland ranks second highest in terms of I_g, it has, along with the Far North, the lowest level of I_h. I_g in the Borders, on the other hand, is lower than elsewhere, but its level of illegitimacy is second only to that of the north-East. The Lowlands tend to hold the 'middle ground' of extra- and within-marital fertility.

Table 5.1 Regional Mean I_h and Standard Deviations

(Descending rank order, I_h 1881)

	Mean I_h			Standard Deviation			
Region	1881	1891	1901	1881	1891	1901	N
3 North-East	0.099	0.083	0.071	0.033	0.035	0.027	143
6 Borders	0.062	0.052	0.040	0.028	0.029	0.020	171
5 West. Lowlands	0.056	0.043	0.033	0.029	0.027	0.020	97
4 East. Lowlands	0.052	0.040	0.033	0.024	0.024	0.017	279
2 Highland	0.030	0.025	0.023	0.017	0.016	0.013	124
1 Far North	0.027	0.025	0.024	0.015	0.017	0.016	42
Scotland	0.058	0.047	0.039	0.033	0.032	0.025	856

Figure 5.2



Yet, despite the different experiences of the various regions in marital and extra-marital fertility, the most salient point at this, as at the national, level is that both I_h and I_g record declines everywhere. Within

the regions the rôle of illegitimate fertility is one of enhancement of decline. Indeed, whereas the percentage fall in I_g in all regions was between ten and twenty, for I_h the Far North alone records a mean percentage fall of less than twenty per cent (11.11), which is commensurate with its fall in marital fertility (11.88). Thus, in five out of six regions I_h records a significantly more substantial proportional fall than I_g at the onset of fertility decline, and in the remaining region, the Far North, decline in marital fertility is proportionately matched by that of illegitimate fertility. Far from 'compensating' for declining marital fertility, then, the faster decline in illegitimacy helps promote the decline in overall fertility.

Patterns of extra-marital fertility between and within the counties

The level of I_h in the North-east region is the highest in Scotland at the end of the nineteenth century. It is matched or exceeded at the European national level only by Austria, Denmark, Hungary, and Rumania.[127] As Table 5.2 shows, I_h is high in this region principally because of the contributions made by the counties of Aberdeen and Banff, although Kincardine and Elgin are not far behind, whereas the level of illegitimacy apparent in Nairn is more akin to that found further south, in Kinross, Perth, Clackmannan, and Haddington. Even so, I_h in Nairn is about three times higher than in Shetland during the period.[128]

Table 5.2

County Mean I_h and Standard Deviation

(Descending Rank Order by Regional and County I_h, 1881)

(N=856)

	Mean I_h			Standard Deviation			
Region & County	1881	1891	1901	1881	1891	1901	N
3 Aberdeen	0.106	0.087	0.078	0.031	0.033	0.029	79
3 Banff	0.103	0.093	0.076	0.029	0.033	0.027	21
3 Kincardine	0.088	0.076	0.058	0.028	0.034	0.015	19
3 Elgin	0.088	0.071	0.058	0.037	0.039	0.015	20
3 Nairn	0.044	0.040	0.034	0.018	0.007	0.010	4
6 Wigtown	0.087	0.076	0.061	0.019	0.020	0.013	17
6 Dumfries	0.075	0.061	0.047	0.036	0.030	0.023	43
6 Kirkcudbright	0.070	0.060	0.041	0.024	0.025	0.013	28
6 Roxburgh	0.055	0.043	0.030	0.018	0.031	0.010	30
6 Berwick	0.047	0.041	0.031	0.015	0.017	0.015	32
6 Selkirk	0.039	0.024	0.022	0.013	0.011	0.008	7
6 Peebles	0.036	0.036	0.045	0.012	0.036	0.028	14
5 Ayr	0.063	0.050	0.039	0.032	0.029	0.022	42
5 Lanark	0.060	0.045	0.034	0.026	0.026	0.017	38
5 Renfrew	0.032	0.023	0.017	0.013	0.007	0.008	17
5 Dunbarton	0.032	0.021	0.017	0.024	0.025	0.010	12
4 Linlithgow	0.083	0.052	0.050	0.017	0.021	0.011	11
4 Forfar	0.062	0.056	0.043	0.025	0.029	0.019	53
4 Edinburgh	0.061	0.042	0.032	0.025	0.016	0.015	22
4 Stirling	0.055	0.045	0.034	0.025	0.024	0.018	21
4 Fife	0.051	0.040	0.031	0.022	0.020	0.017	57
4 Kinross	0.049	0.037	0.032	0.011	0.015	0.007	5
4 Perth	0.045	0.032	0.031	0.021	0.020	0.016	70
4 Clackmannan	0.043	0.027	0.017	0.015	0.006	0.005	4
4 Haddington	0.042	0.030	0.027	0.074	0.112	0.082	24
2 Inverness	0.037	0.028	0.027	0.022	0.019	0.014	31
2 Argyll	0.033	0.027	0.024	0.017	0.017	0.017	41
2 Sutherland	0.028	0.024	0.021	0.010	0.016	0.006	13
2 Bute	0.022	0.023	0.013	0.008	0.005	0.004	6
2 Ross	0.022	0.022	0.022	0.009	0.013	0.009	33
1 Caithness	0.049	0.050	0.051	0.009	0.010	0.008	9
1 Orkney	0.024	0.021	0.019	0.010	0.012	0.007	21
1 Shetland	0.016	0.012	0.011	0.007	0.006	0.004	12

Compared to I_h in Shetland in 1881, that for Aberdeen is between six and seven times as high. Whereas illegitimate fertility is just over two per cent of marital fertility in Shetland, in Aberdeen it stands at over thirteen per cent. At the same time, the percentage difference between marital fertility in Shetland and Aberdeen is just under thirteen per cent, whereas the difference in their levels of extra-marital fertility stands at about eighty-five per cent.

Although Aberdeen and Shetland stand at the two extremes of European illegitimacy, they do not stand entirely alone. As Figure 5.2 demonstrates well, there is a fairly smooth gradation of extra-marital fertility experience in Scotland which holds as I_h declines in each region. This is also true for the most part at the county level, as the figures given in Table 5.2 demonstrate.

The degree of within-county homogeneity, as measured by their standard deviations, is very high for all counties in 1881, but only in Peebles and Haddington is it subject to any decrease between 1881 and 1901. In Berwick, Argyll, Ross and Cromarty, Caithness, Orkney, and Shetland homogeneity remains about the same in 1881 and 1901, while in the other twenty-five counties it increases.

Of all thirty-three counties, only Peebles records a significant increase in I_h between 1881 and 1901. It is also the only county, with the partial exception of Haddington, which, according to its standard deviations, is subject to a significant increase in its internal heterogeneity. So it is likely that some parishes in that county recorded a fall in I_h while some

were subject to an increase. Caithness is the only other county which records any increase in I_h, and, although the amount of rise is by itself hardly significant it does raise the level of the county's mean I_h from well below the national average in 1881, to well above it in 1901. By doing so Caithness also moves from seventeen up to six in rank order. But what makes this rise in this county's I_h significant, is that the level of within-county level of heterogeneity remains very low throughout.

I_h at the Civil Parish level

Maps 5.1, 5.2, and 5.3, illustrate the geographical dispersion of I_h in 1881, 1891, and 1901. The mean I_h for Scotland as a whole in 1881, 1891, and 1901 are 0.058, 0.047, 0.039, respectively, (giving an average value for the period of 0.480), so those Parishes with an Ih of 0.050 or more have above average illegitimacy. In 1881, just under half, 405, of the 856 parishes have an I_h of less than 0.050; in 1901, 626, or nearly three-quarters of all parishes record an I_h below this level. There is also a slight increase in the number of parishes with an I_h below the average for the individual years - 488 with an I_h less than 0.058 in 1881, and 509 with an I_h less than 0.039 in 1901.

Of those places where I_h remains above 0.050, the very large cluster of parishes in the North-east, covering most of Aberdeen, Banff, Elgin, and Kincardine, is most remarkable. Here, one hundred and two out of one hundred and forty-three parishes have an I_h in excess of 0.049 in 1881, 1891, and 1901. Nairn, the one other county in the region, stands out in relation to the rest because none of its four parishes records an I_h

above 0.049 at all three points during the period.[129] Conversely, because relatively high illegitimacy is so widespread in the rest of the region, even Banff, where nineteen out of twenty-one parishes consistently achieve an I_h greater than 0.049, can not be distinguished as a single entity.

In the Lowlands, while 130 out of 279 parishes have an I_h of 0.050 or above in 1881, by 1901 only 40 do. Thus, Maps 5.1 and 5.3 show that while in 1881 there is a large swathe of parishes in the region which have relatively high extra-marital fertility, by 1901 this has been reduced to two separate areas. The most southerly of these is substantial, and consists of twenty or so parishes forming a long sweep across the country, from Muiravonside in Stirling, through Linlithgow and Lanark, to central Ayrshire. The other area sits astride the Forfar / Perth border. This latter collection of small clusters forms more of a 'tail' to the North-east group, than a northerly continuance of the central cluster.

The Borders is second only to the north-East in terms of high I_h at the regional level in 1881, and is the only region where more than half of the parishes have an I_h of 0.050 or above - 109 from 171. Compared to the North-east in 1901, however, I_h has collapsed. This is apparent from Maps 5.1 and 5.3 - only 48 from 171 parishes have a relatively high I_h at the turn of the century. These 48 are fairly well grouped together though, in the extreme south, and especially in Wigtown in the extreme south-west.

Elsewhere, the most noticeable cluster of parishes with high I_h is that at the extreme north-east tip of the mainland, in Caithness. Because, with the exception of Reay and Thurso, all of the Caithness parishes record either a higher or constant (and above national average) I_h in 1901 compared to 1881, the whole county stands out in Maps 5.1, 5.2, and, especially 5.3 (1901), as a distinct unit, particularly as all the parishes of Sutherland and Ross and Cromarty have below average I_h at the turn of the century. Also immediately apparent, are the three Islay parishes which are consistent throughout the period in recording I_h above 0.049.

It remains though, that despite the persistence of substantial areas of relatively high I_h in 1901, the overall trend in illegitimate fertility is downward during the last two decades of the nineteenth century. Out of 856 parishes, I_h falls to some degree in 726 between 1881 and 1901; shows no change in 11 cases; and in only 119 does it rise. Of the 119, the majority, 92, record a rise of ten per cent or more.

But, it is not the case even in those parishes where I_h rose that it did so in response to declining marital fertility. Rather, in most parishes it rose in tandem with marital fertility. Even given a generous interpretation of relative significance - a ten per cent rise in extra-marital fertility is matched against a ten per cent fall in marital fertility - in just twenty-three parishes of the ninety-two 'risers' in Scotland does I_h rise significantly as marital fertility falls. The I_h and I_g for these places are shown in Table 5.2. Although eleven of the twenty-three parishes are in neighbouring counties, Aberdeen (county number 10), Kincardine (11), and Forfar (12), none of the parishes

shares a common border - only Stobo and Lyne in Peebles (28) are next to each other. This implies that these places where the course of change was against the general trend were either subject to different pressures than their neighbours, or, given the same pressures, responded differently.

In fact, in all cases these places are next to parishes which have higher than average, though generally falling, I_h, in both 1881 and 1901, and this suggests that rising I_h was likely to be a temporary phenomenon. But still, it is only in north-East that a substantial number of parishes retain high I_h relative to I_g. This is illustrated in Maps 5.4-5.5 where illegitimate fertility is shown as a percentage of marital fertility. Already in 1881 the great majority of civil parishes, 634, have an I_h which is less than ten per cent of their I_g, and 256 of these are under five per cent. By 1901 the number under ten per cent has increased to 746, and the number below five per cent is up to 386. In all cases, in both 1881 and 1901, in those parishes which have an I_h of less than ten per cent of I_g, I_h is under the national average for that year. So in none of these parishes is high or even moderately high I_h 'masked' by high I_g.

Table 5.2

Civil Parishes where I_h rose by ten per cent or more and I_g fell by ten per cent or more, 1881/1901

	I_h		I_g	
County / Parish	1881	1901	1881	1901
3 Dunnet	0.041	0.056	0.803	0.644
10 Keithhall	0.057	0.089	0.775	0.663
10 Kildrummy	0.058	0.065	0.832	0.660
10 Fyvie	0.078	0.103	0.761	0.683
10 Slains	0.100	0.124	0.844	0.710
11 Fettercairn	0.040	0.052	0.844	0.718
11 Nigg	0.069	0.089	0.794	0.702
12 Kettins	0.030	0.069	0.744	0.562
12 Airlie	0.040	0.045	0.747	0.640
12 Oathlaw	0.047	0.052	0.810	0.464
12 Murroes	0.063	0.081	0.854	0.638
12 Lunan	0.081	0.104	0.868	0.676
13 Collace	0.039	0.071	0.847	0.570
14 Kinglassie	0.030	0.057	0.874	0.588
22 Ochiltree	0.046	0.061	0.973	0.736
23 Carmichael	0.045	0.053	0.626	0.517
25 Kirknewton	0.067	0.074	0.802	0.692
27 Whitsome	0.042	0.065	0.712	0.585
27 Eccles	0.045	0.050	0.680	0.550
28 Stobo	0.024	0.063	0.762	0.498
28 Lyne	0.036	0.099	0.786	0.491
28 Skirling	0.042	0.100	0.697	0.541
31 Kirkconnel	0.063	0.075	0.656	0.641

Comparative spatial patterns in I_h, I_g, and I_m

Overall, the broad regional and county differentials in I_h which are evident in 1881 remain as strong in 1901. This is so because, as the figures given in tables 5.1 and 5.2 indicate, the overall trend in I_h throughout Scotland is downward, and the tendency for within-county homogeneity of experience is to increase. This broad downward trend in I_h is, in turn, attributable to the tendency throughout Scotland for illegitimate fertility to remain 'linked' to fertility within marriage. Thus the onset of fertility decline in Scotland is, as expected, one of decline in fertility overall.

Comparison of the maps for I_g (4.1, 4.2, 4.3) and those for I_h (5.1, 5.2, 5.3) indicates that whilst the decline in marital fertility is fairly evenly spread throughout the country between 1881 and 1901, that of fertility outwith marriage remains subject to the marked regional differentials which existed during the onset of fertility decline at the beginning of the period. There are, nevertheless, two areas of high fertility which persist on both sets of maps - in the north-East and in the central Lowlands. The clusters are not exactly conterminous, but they do overlap to a large extent. If the maps for I_m (3.1 to 3.6) are included in the comparison, the central Lowlands cluster again stands out, and although there is some showing of high proportions married in the north-East, it is not so pronounced as in the East - in Kincardine, Forfar, and Fife. In terms of relatively high and persistent I_h, I_g, and I_m, then, the north-East and the central Lowlands appear to be significantly different from the rest of Scotland, and in terms of I_h and I_g, the

central Lowlands, and parts of the extreme south-west Borders appear to be most resistant to the general trend of decline in fertility.

Conclusion

Because of the relatively low number of births which occur outside wedlock, illegitimacy can usually be regarded as having little demographic significance, and, indeed, this in general was the case during the decline of fertility in Scotland. But there were important geographical variations in illegitimate fertility which only become evident when figures are available for a large number of small areas such as in the Civil Parish data used here, and these should not be ignored.

The fact that there were such places "suggests', as Flinn et al conclude, "the strength of continuing sexual traditions irrespective of changing economic and social circumstances".[130] Traditions set, and maintained, locally. In a wider context, then, and despite the overall minimal proportional contribution of extra-marital fertility to fertility decline overall, understanding why illegitimate and legitimate fertility should decline at the same time but at different rates may in some cases provide clues to why fertility declined at all in Scotland at the end of the nineteenth century.

Having now discussed the role of nuptiality and the decline of both marital and extra-marital fertility, the next and subsequent chapters seek to add different demographic, economic, and social perspectives to the analysis. In the next chapter, the impact of urban-rural differentials

in the decline of fertility are discussed. Following this the role of employment opportunities for women in the Scottish burghs is discussed, and this, in turn is followed in chapter eight by a case study of East Lothian, a 'rural' county.

It isn't size that counts so much as the way things are arranged.

E. M. Forster

Howard's End (1910)

Chapter Six

Urban-rural differentials

Introduction

Having discussed the onset of fertility decline in Scotland in relation to proportions married, and in terms of marital, extra-marital, and overall fertility, it is proposed at this point to widen the analysis. In this chapter, the main analysis is done in relation to civil parish population size, which is taken as a rough measure of urbanity. In the first part of the chapter the analysis is centred around differentials in the decline of marital fertility between 'rural' areas, 'small urban', and 'large urban' places. Most births took place within marriage at the time. Indeed, as is argued in chapter 5, above, with the decline in extra-marital fertility being more rapid than that within marriage, a greater proportion of births were legitimate at the turn of the century than was the case in 1881. The proportions married changed little in most cases, though whether marriage was related to community size is briefly considered in this chapter.

Following the summary analysis, the ability of the civil parish data to 'get below' higher level aggregates is used to analyse the 'large urban', and selected 'small urban' and 'rural' areas individually. Here, the

components of overall fertility, I_g, I_m, I_h, and overall fertility itself, as measured by I_f, are studied at the level of the individual parish for all places with populations of 20,000 or more, a selected number of "small urban", and two clusters of 'rural' parishes. This allows a clearer understanding of the differences which exist between places in the same category to be developed.

The classical position

Classical theory tells us that the prime mover behind the transition from high to low fertility is the development of industrial and urban societies, where traditional values, which support high fertility, are undermined.[131] However, the research done and published on the national-, regional-, and county-level fertility of most European countries, including Scotland, by the Princeton European Fertility Project, has led to doubt over the general applicability of the more simplistic aspects of orthodox theory. France underwent its marital fertility decline well in advance of the other countries of Europe, and this happened prior to industrialisation, and long before the majority of its population lived in cities. In Britain as a whole, the first home of the 'industrial revolution', urbanisation was well under way before the onset of fertility decline in the last quarter of the nineteenth century. Even taken separately, the timing of urbanisation in England and Wales and Scotland was similar. In England and Wales, well over half of their combined populations can be classed as urban by 1851.[132] In Scotland, nearly sixty per cent of the population were living in towns and cities by 1861.[133]

But the spatial distribution of urban centres was substantially different in the two nations at the turn of the century. In England and Wales, despite the predominance of London in both absolute and percentage growth terms during the latter half of the century, urbanisation continued to increase throughout the country, especially around northern metropolises such as Manchester and Liverpool. As is illustrated in Map 6.1, the bulk of the population of Scotland at the turn of the century was

almost entirely contained within the 'central belt', bounded by the Firths of Tay, Clyde, and Forth.

The Problem and the data

Although many studies have shown that urbanisation and fertility decline are not always necessarily closely correlated, Sharlin, in summarising the Princeton results, has recently argued that "while the causal relationships are .... not quite so direct and simple as was once thought, it is hard to reject the idea that there is a relationship between urban-rural differences and the demographic transition".[134] He adds that, although "marital fertility varies inversely with size of place" there are exceptions, which "seem related to variations in occupational structures across urban places and across rural places." Thus, he decides that "urban-rural differentials have limited value for the study of the demographic transition."[135] Similarly, Teitelbaum comes to the conclusion that in the British Isles "urbanisation had little to do with pre-decline levels of marital fertility....," but he does go on to suggest that "it contributed positively to the pace of fertility decline once it began."[136]

Nevertheless, there are important urban-rural differentials, suggested in the classical theory, which the Princeton data have confirmed. One of these is that, whatever the general level of fertility, fertility in urban areas is almost always lower than in rural places. Sharlin argues:

> "The single most comprehensive generalization about urban-rural fertility differentials in Western Europe is that urban fertility is lower than rural fertility at virtually every date for which data

were collected by the European Fertility Project. The generalization is most comprehensive with respect to marital fertility."[137]

This consistent difference between urban and rural fertility is compounded during the demographic transition by the tendency, though sometimes slight, for marital fertility to decline first and faster in the cities than in the countryside.[138] As well, "the level of marital fertility in cities within a given country seems to vary by size of the city. The largest cities have the lowest fertility."[139]

Urban and rural areas also differ significantly and consistently with regard to nuptiality. Here again, the levels to be found in cities are usually lower than those found in the surrounding countryside. Indeed, "there are even fewer exceptions to this rule than with marital fertility."[140] In a recent investigation of registration district data for England and Wales, Woods has also found a strong relationship between I_m and I_g in urban areas: "The most striking feature of the urban results is the importance of I_m as a predictor of I_g in 1891. Marital fertility declined first in those urban districts where nuptiality was lower than average." In rural areas there is no significant association between the two measures.[141]

Because the data used by Sharlin in summarising the work of the Princeton authors, and Teitelbaum in producing the Princeton volume on the British Isles, are at the provincial- or county-level, approximate measures of urbanity have to be used. In the case of Scotland, Teitelbaum uses an index of urbanisation "defined as the proportion of a county's population living in urban areas of 20,000 or more people".[142] In other words, the greater the proportion of a county's inhabitants who dwell in

'small urban' areas and cities, the more urban is that county regarded as being. In the case of Scotland, for example, the county of Lanarkshire in 1901 is taken as almost entirely 'urban' because about ninety per cent of its inhabitants live in Glasgow and eight other places with populations of 20,000 or more at that date.

But there are thirty-eight civil parishes in Lanarkshire, and thirty of these contain fewer than 20,000 people, representing just over ten per cent of total population in 1881, and slightly under nine per cent in 1901. Of this thirty, twenty have populations of less than 5,000 in 1901, and sixteen of the places are, arguably, more rural in 1901 than in 1881, in that they have fewer inhabitants at the later date and had most likely lost, or were rapidly losing, key social and economic functions to their urban(ising) neighbours. The ability of the civil parish data to 'get below' the county-level data used by the Princeton authors enables the classification of individual parishes by reference to the size of their own populations. Thus, the low level of aggregation on which the Civil Parish data is based obviates the need to construct an index such as that used by Teitelbaum, and, therefore, allows the separation out and comparison between areas of all sizes anywhere in Scotland. This in turn enables the investigation of some of the hypotheses of classical theory to be undertaken at a very low level of aggregation, and avoids the danger of 'swamping' many rural areas under the noise generated by their urban neighbours. Consequently, the civil parish data are particularly well suited to investigating urban-rural differentials.

For purposes of comparison between the civil parish data and that of the Princeton authors, it is desirable to fall back to some extent on the

definitions adopted by them. To this end, a parish is taken as 'large-urban' if it contains 20,000 or more people in 1901. However, it is not desirable in the Scottish context to regard all places with populations of less than 20,000 as 'rural'. Scotland has many 'principal towns' which during the period acted as 'service centres', and population magnets to their surrounding rural areas - Stornoway, Maybole, Wick, for example; many were also local centres of industry - Hawick (textiles), Dumfries (textiles, timber trade, iron-founding, etc.), Kirkintilloch (chemicals, iron-founding, etc.). One hundred and eight civil parishes such as these, which had populations between 5,000 and 20,000 in 1901, are here regarded as 'small-urban', and as being intermediate between 'rural' and 'urban'. Consequently, the 723 parishes which have fewer than 5,000 inhabitants in 1901 are regarded as 'rural'.

But it should be noted that some of the parishes with 20,000 or more inhabitants sit uncomfortably with the other 'urban' places. Cambuslang, referred to locally as 'the largest village in Scotland' was at the time a town of 12,252 persons surrounded by a cluster of villages in which practically all of the 8,000 balance of the parish's population lived. Similarly, in the case of Dalziel, which had 37,257 inhabitants in 1901, while some 14,000 of its population lived in Wishaw, the remainder of the parish's population lived in various mining villages. Seven thousand of the inhabitants of the town of Wishaw, however, are included in Motherwell, in the neighbouring civil parish of Cambusnethan. Motherwell and Wishaw are today (officially) one and the same place, but whether the inhabitants of the two places at the turn of the century would have agreed, is of course another matter.

There are 'small-urban' parishes which contain no recognised town, though in most cases the population distribution is centred on a large village. Conversely, there are civil parishes which, although the majority of their populations reside in what is historically and functionally recognised as a town, because they have populations of less than 5,000 they are regarded here as 'rural'.

Two examples of 'small-urban' parishes with no town are Harris, in the Western Isles, and New Cumnock, in Ayrshire. Harris, with a population of 5,271 at the turn of the century is in fact a collection of islands: Harris itself, and Bernera, Ensay, Killigray, Pabbay, St.Kilda, Scalpa, Scarp, Scotasay, Tarrensay, and Soay. Similarly, the population of New Cumnock parish was 5,367 in 1901, while the village of the same name had a population of just 2,005. Examples of 'rural' parishes which contain a functional town are Portree, on Skye, and Eyemouth, in Berwickshire. The 1901 population of Portree parish was small, just 2,781, and the population of Portree itself, at 872, was tiny. Nevertheless, the nearest town, Stornoway, is sixty miles away; Portree therefore was of necessity the commercial centre for a large number of islands, and a seat of sheriff courts, as well as for long being a tourist centre regularly visited by Glasgow steamers. Eyemouth town, on the other hand, contained all but fifty-one of the parish's 1901 population of 2,436. Its main function was as the focal point of the large fishing district which extends from St. Abb's Head in Berwickshire, to Amble in Northumberland.

Anomalies such as these are of course an unavoidable result of the restrictive ecological definition employed. Fortunately, they form only a

small proportion of the total number of cases in the data set. But in any case, because the basic building blocks of the civil parish data are small areas, it is possible to make fine judgements about individual places in a way that it is not possible to do with higher level data. So, although in the summary analysis done in this chapter the small number of anomalies involved are disregarded, as is normal practice when using ecological data, in the analyses done of individual places, in this and subsequent chapters, where anomalies appear, they are accounted for. Given this, what light does an examination of the relationship in Scotland between fertility decline and urban-rural differentials throw on the wider debate?

The national context

As is shown in chapter 4, above, the number of civil parishes which have achieved a decline in marital fertility of 10 per cent or more by 1901, and which record an I_g of 0.600 by that date is 262, and these represent just under thirty per cent per cent of the 1901 population of Scotland. In that year, 25 such areas have populations of 20,000 or more, 8 parishes of which, representing seventeen per cent of the Scottish population, experience a fall of more than 10 per cent in marital fertility and have an I_g of less than 0.600 between 1881 and 1901, and thus are 'definitely limiting' their marital fertility. Of the other thirteen per cent of the population 'substantially and irreversibly' limiting their marital fertility by the turn of the century, seven per cent are in parishes which number less than 5,000, whereas those parishes of between 5,000 and 20,000 people account for just over five per cent. of the 'limiting' population.

That more than half of the thirty per cent of the Scottish population who achieve an I_g of 0.600 or less by 1901 live in areas comprising populations of 20,000 or more people, does not lend weight to the idea that the degree of urbanisation in Scotland is a useful indicator of the likelihood of family limitation occurring earlier in larger urban areas. More than half of the country's total population live in these places. Equally unsupportive of the 'urbanisation' hypothesis is the contribution made to the overall decline by areas which have populations of less than 20,000. Of these, places with populations of between 5,000 and 20,000 people, where approximately one quarter of the overall population live, contribute approximately one quarter of the percentage of the population with an I_g of 0.600 or less by 1901. The 'rural' parishes then, which contain the remaining quarter of the 1901 Scottish population, contribute the remaining twenty-five per cent or so of those 'definitely limiting' the size of their families by that date. Thus, not only is the decline in marital fertility spread fairly evenly across the country spatially, as is argued in chapter 4, above, it is also, taking the nation as a whole, very evenly distributed in terms of per cent of population.

Neither is it the case that there is an inverse relationship between population size and I_g in any of the three years. In Table 6.1 is given the r^2s of correlations done between mean I_g and the log of population in both 1881 and 1901, for places with populations in 1901 greater than 20,000; between 5,000 and 20,000; and less than 5,000.[143] Although the negative signs for the urban areas indicate some degree of inverse relationship between marital fertility and population size, the r^2s, like those of the positively signed correlations for the other two population size categories consistently show no association. So although there may be

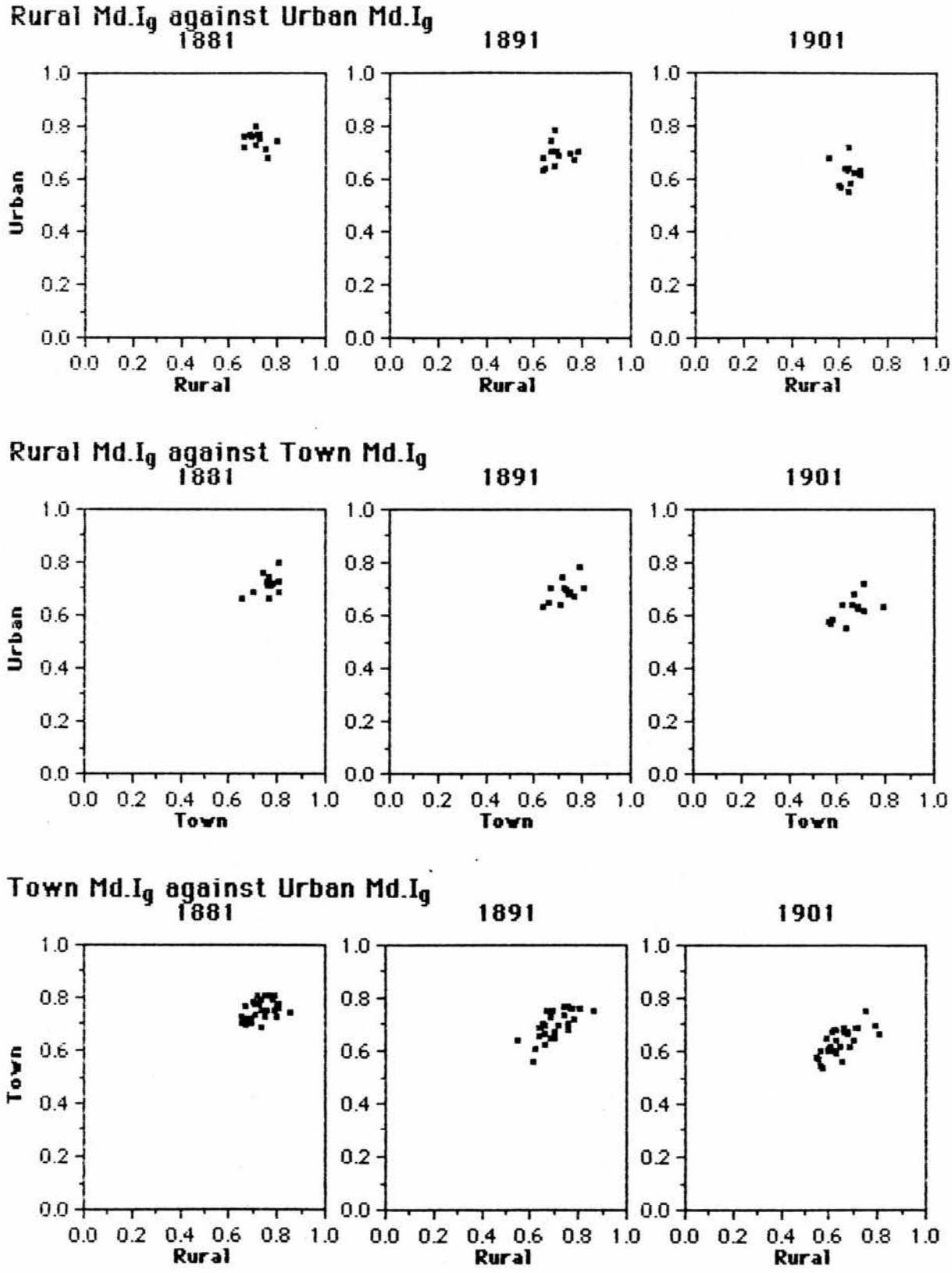
some tendency for urban areas to have fractionally lower marital fertility than rural areas, between the urban areas themselves, as between the 'small urban' and between the rural parishes, size of population accounts for little or none of the difference in I_g.

Table 6.1
Correlations between I_g and log(x) of population in 1881, 1891, 1901. Civil Parishes with populations greater than 20,000, between 5,000 and 20,000, and of less than 5,000 in 1901.

		Population ('000s)		
	Year	≥20	≥5<20	<5
	1881	(-) 0.079	(+) 0.008	(+) 0.004
(sign) r^2	1891	(-) 0.092	(+) 0.000	(+) 0.022
	1901	(-) 0.025	(+) 0.002	(+) 0.015
	N	25	108	723

To what extent, then, did urban and rural fertility vary together? Figure 6.1 illustrates the correlations between urban, town, and rural median I_g in 1881, 1891, and 1901, in the thirty-three Scottish counties.[144] In all three years the range of rural against urban values in both directions is quite small, and so the variance remains constant as the overall mean level of marital fertility declines. Correlations done with these data indicate that there is a shift from a slight negative relationship in 1881 (r^2=0.18), to a slighter positive one in 1891 (r^2=0.04), and finally to no relationship in 1901. The rural against town, and the town against urban figures are more spread out, and although these correlations are not high either, they are all positive and indicate a stronger relationship than those for rural against urban. The r^2s for town against urban are: 0.21 (1881); 0.34 (1891); and 0.30 (1901). Those for rural against town are: 0.19 (1881); 0.48 (1891); and 0.23 (1901).

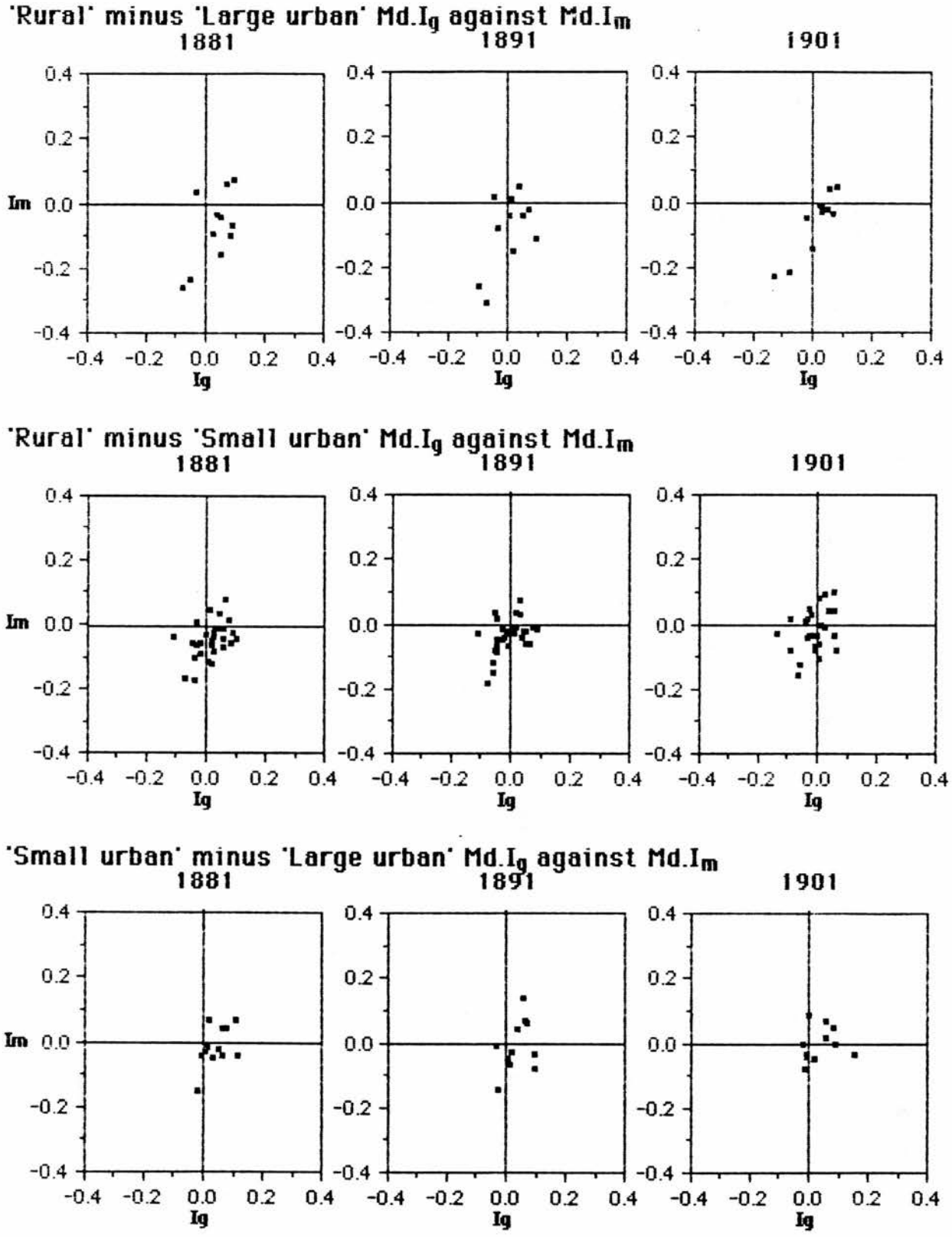
Figure 6.1 Differential Rural, Town, and Urban, Md.I_g



According to Sharlin, there are only "notable exceptions" in the European provincial level data where urban and rural I_g are not highly correlated. This is so because of 'empirical regularities' found in European provincial-level data: namely, that urban fertility was nearly always lowest, and fell first and fastest, giving the impression that the rural areas followed suit in a diffuse manner.[145] Insofar as the civil parish data are not highly correlated, there is no apparent direct diffusion of limitation between 'large urban' and 'rural' areas in Scotland, and therefore the Scottish experience may well be exceptional. The stronger correlations for town against urban, and for rural against town, on the other hand, suggest that in these cases the civil parish data is more in line with that of the Princeton authors. But even here the relationships between the civil parish subgroups are not nearly so strong as those indicated between rural and urban areas in the Princeton data. Thus, the amount of diffusion occurring in Scotland between places of different sizes is not likely to have had more than a minor effect on fertility decline.[146]

Figure 6.2 illustrates 'large urban' - 'small urban' - 'rural' differences from another perspective. The data used here represent 'rural' minus 'large urban' I_g (horizontal axis) against 'rural' minus 'large urban' I_m (vertical) axis, for the eleven counties which contain one or more parishes of more than 20,000 people in 1901; 'rural' minus 'small urban' I_g and I_m for the twenty-nine counties with one or more places of between 5,000 and 20,000 people in 1901; and 'small urban' minus 'large urban' I_g for eleven counties. Again, median I_g values are used.

Figure 6.2 Differential 'Rural', 'Small urban', and 'Large urban' Md.I_g against Md.I_m



Eight out of eleven counties, in 1881 and 1901, and seven in 1891, have higher 'rural' than 'large urban' marital fertility - this is to some extent in line with the findings of the Princeton Project. (But it is worth noting that Lanarkshire, the most heavily urbanised Scottish county, is a consistent exception to the rule). The picture is even less clear-cut between 'rural' and 'small urban' areas. For although in 1881 in only nine out of twenty-one cases are the 'small urban' I_g higher than those of the surrounding 'rural' parishes, in 1891 and 1901 there are sixteen cases where marital fertility in the 'rural' areas is lower than that of the 'small urban'. Of the differentials between the 'small urban' and the 'large urban' areas the 'small urban' have lower I_g in only two cases out of eleven, in 1881 and 1891, and in five in 1901.

The differences between 'rural', 'small urban' and 'large urban' I_g in Scotland are in the great majority of cases relatively small, and at all times well within the range of between 0.0 and ±0.2 only rarely exceeded in the European provincial data.[147] Of the eleven 'rural' minus 'large urban' figures, only that for Dunbarton, in 1901, exceeds (+)0.1. Between the 'small urban' and the 'large urban areas' (+)0.1 is exceeded in Aberdeen and Edinburgh in 1881 and in Inverness in 1901. In the 'rural' minus 'small urban' series, (+)0.1 is also exceeded only once, in Ross and Cromarty in 1881, and is equal to (+)0.1 only in Wigtown.

The differentials of the 'small urban' minus 'large urban' figures are within the range -0.1 to +0.1 in all three years. So while this suggests that at the onset of the fertility decline in this country a greater proportion of couples living in 'large urban' places were limiting the size

of their families than were doing so in 'rural' and 'small urban' areas, there was a greater tendency after 1881 for couples in 'rural' areas to limit family size before their 'small urban' neighbours. In the great majority of cases though, the difference in observed behaviour between 'large urban', 'small urban', and 'rural' places is small.

Figure 6.2 also shows clearly that both the Scottish 'large urban' and 'small urban' areas tend to have higher levels of nuptiality than the 'rural' areas. This is so in eight out of eleven counties in 1881, 1891, and 1901. According to Sharlin, this tendency is extraordinary, for, as noted above, there are even fewer exceptions to the rule that cities have lower nuptiality than there are to the rule that they have lower marital fertility. According to the data illustrated in Figure 6.2, in Scotland the relative strength of the I_m 'rule' is apparently inverse to the European norm.[148]

This may be explained, at least to some extent, when it is remembered that, as shown in chapter 3, above, Scottish nuptiality is consistently the lowest in Europe with the single exception of Ireland. This, coupled with the greater tendency during the last quarter of the nineteenth century for young single males rather than females in search of employment to migrate to urban, and especially to urban-industrial areas, is likely to have had a positive effect on the proportions married of 'at risk' females there. This likelihood is borne out by the fact that the three 'large urban' areas which consistently have lower I_m than their 'rural' neighbours are Forfar, Edinburgh, and Perth.[149] In these counties, the only truly urban-industrial parish is that of Dundee - and Dundee is of course synonymous with jute, and offered employment to a largely

female workforce during the period. Perth also offered employment for women in textiles, and in domestic service. In Edinburgh there was a heavy demand for domestic servants, and an increasing one for shop assistants in the growing number of consumer outlets in the city, not least in Princes and George Streets, and St. Andrew Square.[150]

Significantly, Dundee, Perth, and Edinburgh also have among the lowest levels of urban I_g.[151] In fact, as is shown in Table 6.3, there is a relatively strong relationship between the two indices for 'large urban' areas in 1881, 1891, and 1901, with that for 1891 being particularly notable. In the places with populations between 5,000 and 20,000 there is a weak relationship between I_m and I_g, while in places containing less than 5,000 people there is no relationship at all between the two indices.

Table 6.3

Simple correlations between I_m and I_g
1881, 1891, 1901.
Civil Parishes with populations greater than 20,000, between 5,000 and 20,000, and of less than 5,000 in 1901.

		Population		
			≥5,000	
	Year	≥20,000	<20,000	<5,000
	1881	.541	.272	.009
r^2	1891	.726	.288	.003
	1901	.645	.233	.010
	N	25	108	723

The r^2 for the England and Wales data in 1891, at 0.457, is somewhat less than that computed from the civil parish data, but the Scottish figure is based on a low N of 25, whereas the England and Wales figure is

based on an N of 222.[152] But in any case, as argued above, the effect which I_m has on I_g is not likely to be direct, but "rather that the late marriage of spinsters, or their not marrying at all, was influenced by the supply of male partners, social and institutional restrictions on marriage coupled with class or employment, or alternative employment opportunities."[153]

Differential fertility decline in the 'large urban' areas

The general lack of support given to the 'urbanisation theory' in the summary analyses of the civil parish figures is understandable, when it is realised that only eight of the twenty-five large urban places record a decline of more than 10 per cent between 1881 and 1901, and register an I_g of below 0.600 by the end of the period. Indeed, there are three places of 20,000 or more people in 1901 which not only fail to achieve a decline of 10 per cent in marital fertility over the period, but also retain an I_g of over 0.700; and seven places which, although they meet the 10 per cent criterion, still have an I_g greater than 0.700 in 1901. How can the diverse experiences of the 'large urban' 'limiters' and 'laggards' be accounted for?

One way of gaining a clearer understanding of underlying patterns and trends when summary analysis is inconclusive, is to look at selected places individually and attempt to 'tease out' influences which are either hidden when summed or whose weight is affected by different ecological settings. Given in Figure 6.4 are statistics relating to the eight 'large urban' 'limiting' areas with populations of 20,000 or more in 1901. Dundee, Arbroath, Perth, Kirkcaldy, Dunfermline, and Edinburgh are in the

Eastern Lowlands, while the other two parishes, Cathcart and Kilmarnock are situated in the Western Lowlands. Seven of the areas are subject to a substantial growth in population over the period, the exception being Arbroath, which remains stable.

Four of the eight places already have an I_g below 0.700 in 1881, and it is probable that family size was being limited in these places before this date. But certainly they, along with the other four places in this sub-group achieve declines in marital fertility well in excess of 10 per cent between 1881 and 1901, as well as achieving I_g well below 0.600, and, in the case of Cathcart, an I_g of substantially less than 0.500, by the beginning of the twentieth century.

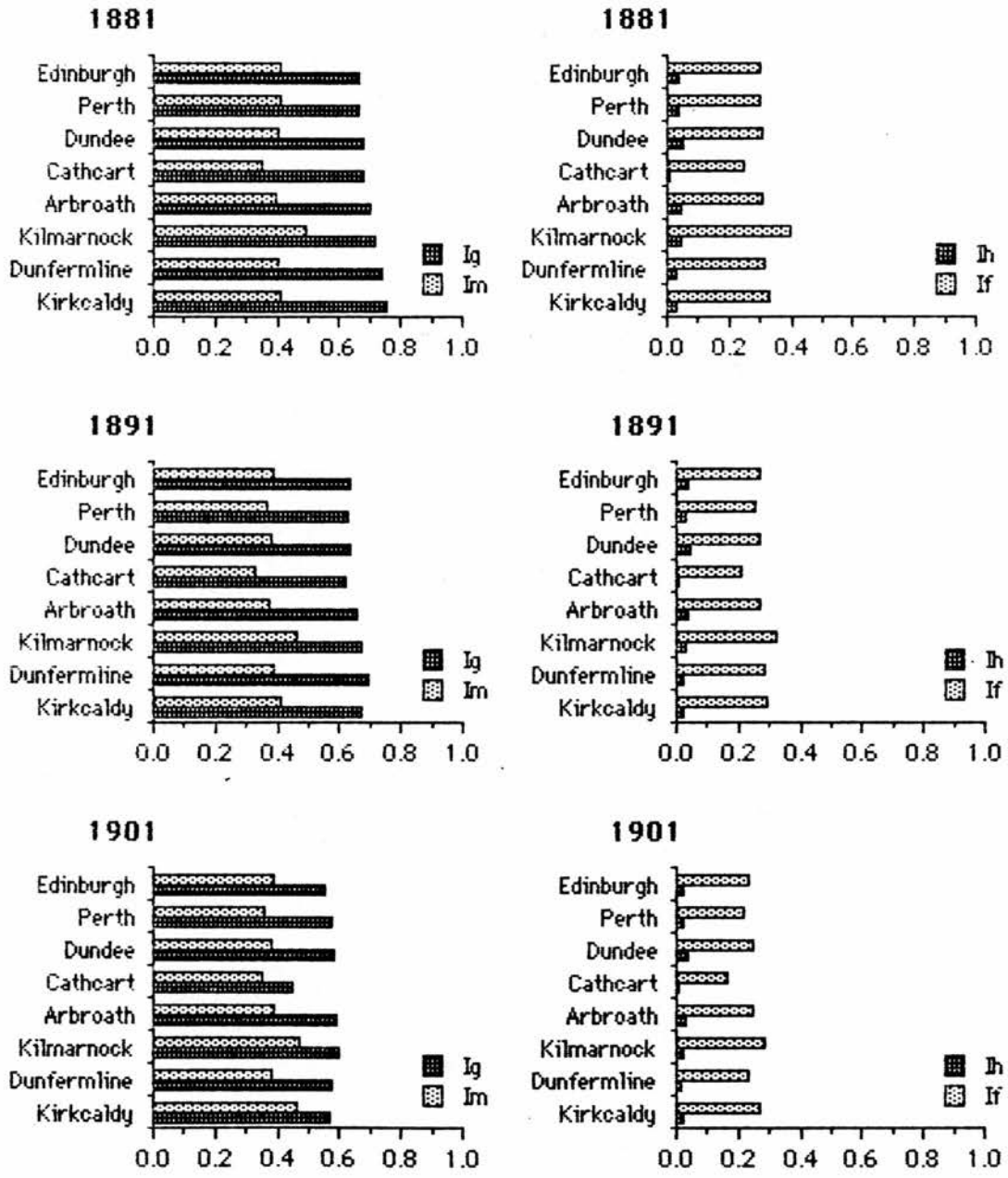
The I_m for Kilmarnock in 1881 and 1901 equates to the mean for the 25 'large urban' parishes,[154] but its I_m for 1891, and the I_m for the other seven places in all three years are below the mean. There is some fall in I_m in Edinburgh, Perth, Dunfermline, and Dundee, between 1881 and 1901, but only in Perth is it substantial (13 per cent), while in the other three places it is between six and seven per cent. Of the remaining three parishes only Kirkcaldy records any significant change - its I_m rises by nearly twelve per cent.

Change in their levels of extra-marital fertility does not have more than a marginal effect on fertility overall in these places. I_h is not high in any of the eight in 1881, and it declines in them all between 1881 and 1901 - with the single exception of Cathcart, where it remains constant at an exceptionally low level.

Figure 6.4

Parishes with populations greater than 20,000 where I_g is greater than 0.700 in 1881, between 0.600 and 0.699 in 1891, and less than 0.600 in 1901

(N=8)



In sharp contrast to the eight 'large urban' parishes which are substantially limiting their marital fertility by the turn of the century, stand seven areas, each also containing more than than 20,000 people in 1901, and all with growing populations, where I_g consistently remains above 0.700. Again, all of these places are in the Lowlands. Indeed, they are all in the same county, Lanark, and form the core of a large cluster of places of various population sizes in the central Lowlands with relatively high I_m, I_g, I_h, and I_f. The indices for the seven parishes are illustrated in Figure 6.5.

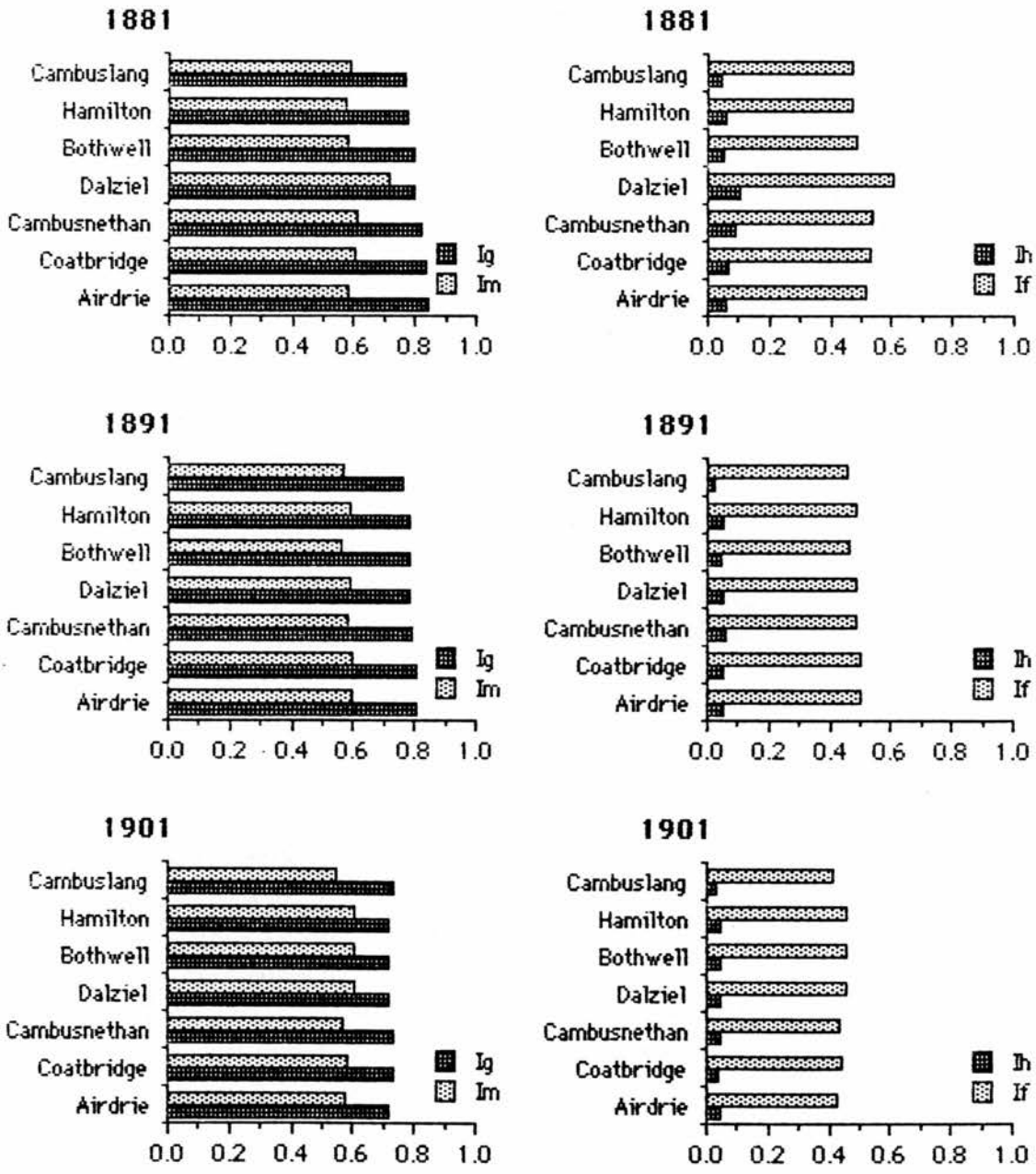
Even though marital fertility does fall to some extent in them all over the period, and only three places, Cambuslang, Bothwell, and Hamilton, fail to achieve a 10 per cent decline in fertility between 1881 and 1901, all seven retain an I_g greater than 0.700 in 1901. In all seven places, however, I_m is substantially above the national mean in all three years. Except for Cambuslang throughout, and Coatbridge in 1901, extra-marital fertility, though falling everywhere, is above the national averages for 1881, 1891, and 1901. On the other hand, only in Dalziel and Cambusnethan in 1881 can it be said to be very high. This, but more importantly the combined effect of high levels of I_g and I_m during the period, act to keep overall fertility high throughout.

Figure 6.5

Coale Indices

Civil Parishes with populations greater than 20,000 where I_g is greater than 0.700 in 1881, 1891, and 1901[155]

(N=7)



The indices for the remaining ten parishes with populations of 20,000 or more in 1901 are shown in Figure 6.6. The populations of all these places increases by more than ten per cent between 1881 and 1901, with the exception of Greenock, where it falls by approximately 1.5 per cent. Aberdeen is alone in recording an I_g of less than 0.700 in 1881, though the I_g of Stirling and Greenock are barely above 0.700 at the same date. Nevertheless Stirling and Greenock are the only parishes which fail to register a 10 per cent fall in their marital fertility between 1881 and 1901, though at 8.79, and 9.32 per cent, respectively, they are very close to the mark. However, all ten parishes do record an I_g substantially below 0.700 in 1901 - with the partial exception of Clydebank - and the I_g of Falkirk, Aberdeen, and Glasgow, are not very far away from the 0.600 level.

There is also a mixed bag of I_m values in these places. In Clydebank and Falkirk, I_m is consistently above the urban mean, (which stands at 0.739, 0.710, 0.637, in 1881, 1891, and 1901, respectively), while in Paisley, Ayr, Inverness, and Stirling, it is consistently below; and in Rutherglen, Glasgow, Greenock, and Aberdeen, the I_m are above average in some years and below in others. Like those for I_g and I_m, the range of I_h values is wide - from 0.019 in Rutherglen in 1891, to 0.092 in Aberdeen in 1881, though in most instances it is below the national average, and falling over the period. Indeed, the only place where extra-marital fertility is consistently above the national average is Aberdeen, but this is perhaps to be expected, given the high I_h in the North-east at the time.[156] In the cluster as a whole, I_f, again though falling, being the product of I_g, I_m, and I_h also varies widely between the ten places.

Figure 6.6

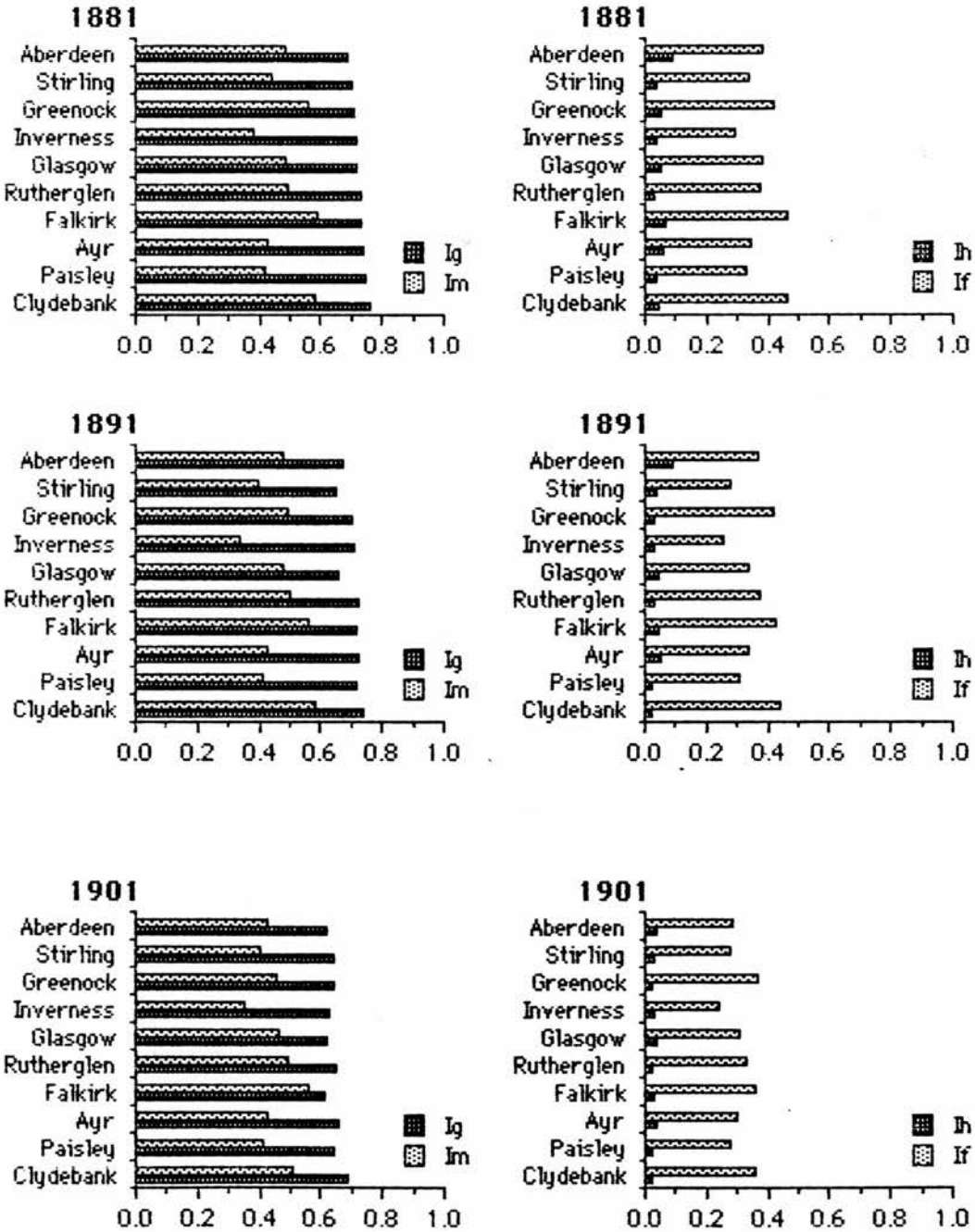
Coale Indices

Civil Parishes with populations greater than 20,000

where I_g is greater than 0.700 in 1881

and between 0.600 and 0.699 in 1901

(N=10)



In summary then, all twenty-five places with populations in excess of 20,000 at the turn of the century are alike in that they do all record some degree of decline in fertility, but only eight out of the twenty-five can be said to be 'definitely limiting' their marital fertility by 1901, while seven retain I_g values clearly above 0.700, the level at which it is reckoned 'no deliberate control' is taking place. Thus, examining the indices of some individual places confirms the findings of the aggregate analyses, namely that large size in terms of population, even in those cases which are unambiguously cities, is of no real value as an indicator of likely fertility behaviour in Scotland. There are places from as far north as Inverness, the 'capital' of the highlands, to Kilmarnock in the south-west that have populations of 20,000 or more, and which exhibit very different fertility behaviour during the period. Although Inverness and Aberdeen are the only two places which fall outside the Lowland 'central belt', bounded by the Firths of Tay, Clyde, and Forth, the 'definitely limiting' and those places where 'some control' is being exercised over fertility, are spread across the country, while the large urban areas where 'no deliberate control' is being exercised are contiguous.

But although size is of no value as an indicator of fertility experience, it is apparent that in the two 'extreme' sets at least of the 'large urban' parishes - the 'limiters' on the one hand, and the 'laggards' on the other - the relative strengths of the various indices are fairly consistent with each other. This suggests that the diversity of demographic experience found in the 'large urban' places is more likely to be a response to locally, rather than nationally, operating variables. Whether these

variables are cultural, economic, or some combination of the two is taken up in the next chapter.

Differential fertility decline in selected 'small urban' areas

Given that the indices for 'large urban' places can be put into fairly precise categories based on their levels of I_g, can the same be done for the 'small urban' areas? In order to look closely at individual 'small urban' places it is not practicable to use all 108. A representative sample will therefore be used. To this end, the Coale indices for twelve selected 'small urban' places are illustrated in Figure 6.7. These twelve parishes were randomly selected, without replacement, from the 108 'small urban' parishes in the civil parish data set.[157] Except for Harris and New Cumnock the majority of the parish populations lived in the actual town from which the parish takes its name.

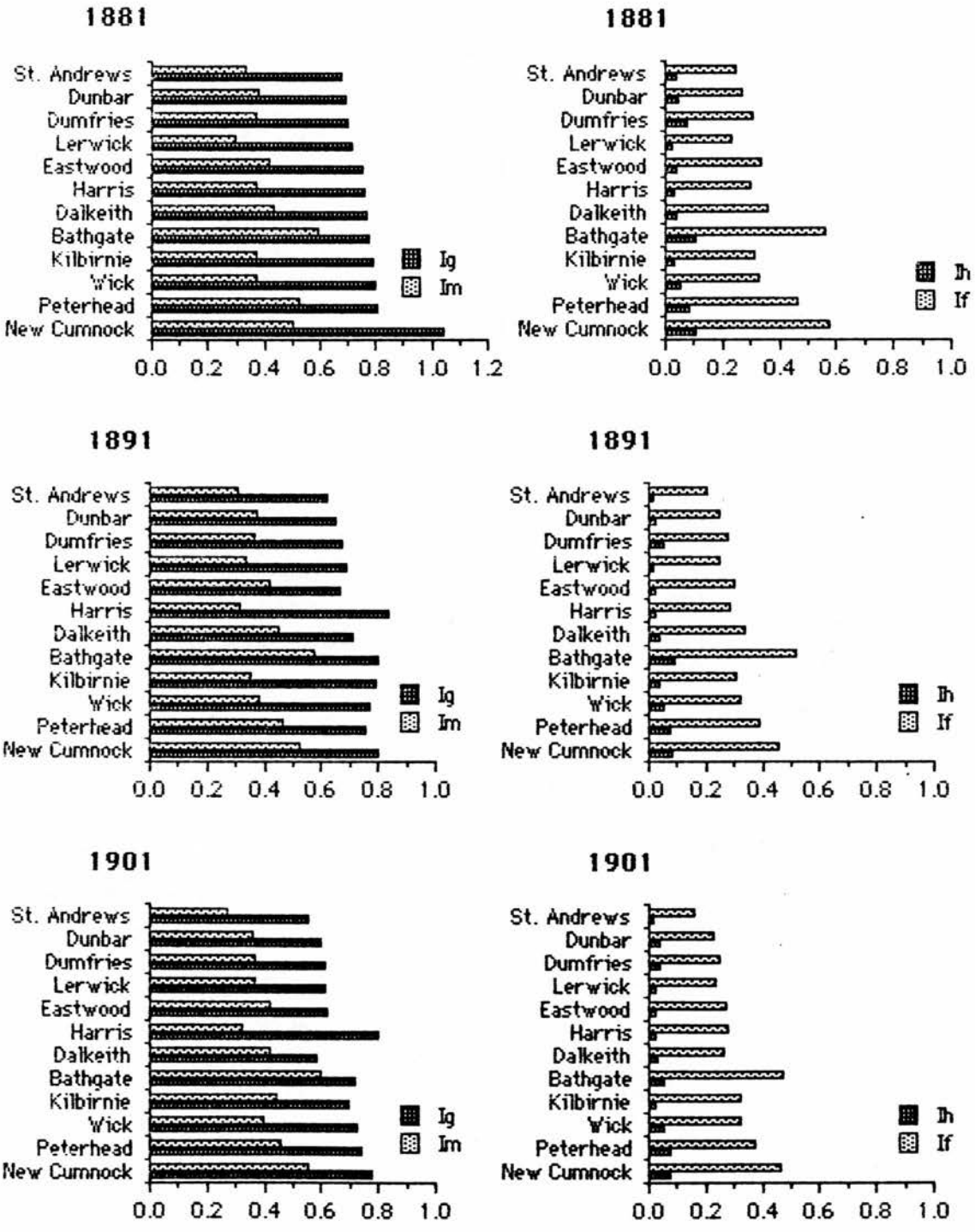
Nine of the sample 'small urban' places increase their population size between 1881 and 1901, and five record increases in excess of thirty per cent, though the other four gain by ten per cent or less. Wick, Dalkeith, and Dunbar are subject to losses of population, but, at well under ten per cent - 6.51, 5.43, and 3.45, per cent respectively, the losses are fairly small.

Figure 6.7

Coale Indices

Selected Civil Parishes

with populations of between 5,000 and 20,000 in 1901.[158]



The range of values recorded for the Coale indices of the 'small urban' sample places is wide. St. Andrews has the lowest I_g in 1881 at 0.673, which falls between 1881 and 1901 by over eighteen per cent to 0.550, suggesting that a substantial proportion of this population were 'definitely limiting' their marital fertility by that date. At the other extreme is New Cumnock, which from all the 856 areas in civil parish data set in 1881 is one of only five with an I_g above 1.000. By 1901 it still has an I_g well above 0.700 and can thus be reckoned to be imposing 'no deliberate control' over its marital fertility (though as the percentage fall over the period is no less than 25 per cent, this judgement is made with some reserve). Only Harris, arguably not 'urban' at all, has an I_g in 1901 (0.797) which is higher than in 1881 (0.758), a rise of just over five per cent. Of the remaing nine parishes, although marital fertility declines in them all, it is notable that those places which still have I_g in excess of 0.700 in 1901 record falls of less than ten per cent over the period, while all those with I_g under 0.700 in 1901, record falls of more than ten per cent; however, apart from St. Andrews, only Dunbar and Dalkeith have I_g values below the 'limiters' mark of 0.600 in 1901.

The pattern of change in nuptiality is not so clear-cut as that of I_g. In seven of the sample parishes it falls - markedly in St. Andrews, less so in Harris and Peterhead, while it is more or less stable in Eastwood, Dumfries, Dunbar, and Dalkeith. In Lerwick and Kilbirnie there are fairly hefty rises in I_m; there is a moderately large increase in Kilbirnie, while the small increases in nuptiality apparent in Wick and Bathgate indicate stability rather than a significant change in level. Thus, there is no systematic relationship between falling I_g and change in I_m, in that,

whereas I_g falls everywhere except in Harris, I_m rises in some places, falls in some, and remains practically stable in others.

Extra-marital fertility also falls everywhere, though the very low levels of I_h which pertain throughout the period in Harris, Eastwood, Lerwick, St. Andrews, and, to a lesser extent, Kilbirnie, means that even a small absolute decline in illegitimacy would in percentage terms be large. It is not surprising that the sole North-east parish, Peterhead retains an I_h well above the national average in all three years, given the generally high levels of illegitimacy to be found in Aberdeenshire at the time. But the I_h of New Cumnock is extremely high in its regional context, and although it falls by some thirty per cent between 1881 and 1901, it remains (slightly) above even that of Peterhead in 1901. In the other five places, I_h is very high in Bathgate in 1881 (at the same level as that of New Cumnock), and though it falls by half between then and the turn of the century, it too remains above the national average. I_h in Wick also stays above the national average throughout, by remaining stable at, or slightly above, 0.050. Dumfries begins the period with fairly high level of illegitimacy during the period, and despite the fact that I_h falls almost by half between 1881 and 1901, it is still moderately high in 1901. In Dunbar I_h is at about the national average in both 1881 and 1901.

The course of change in overall fertility follows that of I_g fairly closely in seven of the twelve "small urban". But in the rest, because of differential directions and rates of change in marital fertility and nuptiality, and, in one case in marital and extra-marital fertility, change in I_f and I_g follows different courses. In Lerwick, Harris, and Kilbirnie,

the direction of change in I_f is in opposition to that of I_g. In Harris, I_f falls by over eight per cent, as opposed to a five per cent rise in I_g; in Lerwick and Kilbirnie I_f remains stable, despite I_g having fallen by over ten per cent, and relatively low (and falling) illegitimacy in both cases. In all three cases therefore, I_f is very much affected by differential amounts of change in nuptiality - dramatic rises in Lerwick and Kilbirnie, and a fairly large fall in Harris. In St. Andrews, Wick, and Peterhead, the direction of change in marital and overall fertility is downwards, but the rates of decline are very different. In St. Andrews and Peterhead the decline of I_f is enhanced by a greater rate of decline in I_m over I_g, while in Wick the rate of decline in overall fertility is held back because nuptiality rises. In Bathgate alone is the rate of decline affected significantly by change in the level of illegitimate fertility. Here, despite there being no decline in I_m, I_f falls faster than I_g because I_h falls by 50 per cent - from 0.108 in 1881, to 0.054 in 1901.

As with the patterns evident in the 'large urban' areas, so the 'small urban' areas exhibit a wide range of demographic experience. It is apparent that here too, in order to understand fertility change in these areas, it is likely to be more productive to focus on more local rather than nationally operating variables.

Differential fertility decline in rural areas

Given the fact that the great majority of parishes had populations of less than 5,000 and experienced some decline in their fertility between 1881 and 1901, it is to be expected that many clusters of rural parishes sharing similar levels of the various indices are to be found throughout

the length and breadth of the country, from the Shetlands in the very far north, to the Rhinns of Galloway in the extreme south-west. Information on two examples of such clusters are given in Figures 6.8 and 6.9. These examples were chosen on three counts: by reference to their levels of I_g; by the fact that all the individual parishes had populations of less than 5,000 in both 1881 and 1901; and because the two clusters are situated in different parts of the country.

In the first example, all the parishes have I_g above 0.700 in 1881, between 0.600 and 0.699 in 1891, and less than 0.600 in 1901. These parishes straddle the Roxburgh - Berwick border. The parishes in the second example all have I_g above 0.700 throughout the period. This cluster sits astride the Banff - Aberdeen border.

In the Roxburgh- Berwick-shire cluster, six of the seven parishes have populations under one thousand, and are very small places. Even so, each of the parishes suffers a loss of population between 1881 and 1901, giving a mean population loss for the cluster as a whole of just under eleven per cent, though this hides a range of between 1.98 (St. Boswell) and 23.54 (Smailholm). Nevertheless, I_m holds up, at a little below the national average, in all but two places, St. Boswell and Makerston, where it declines to well below 0.300.[159]

Figure 6.8

Coale Indices

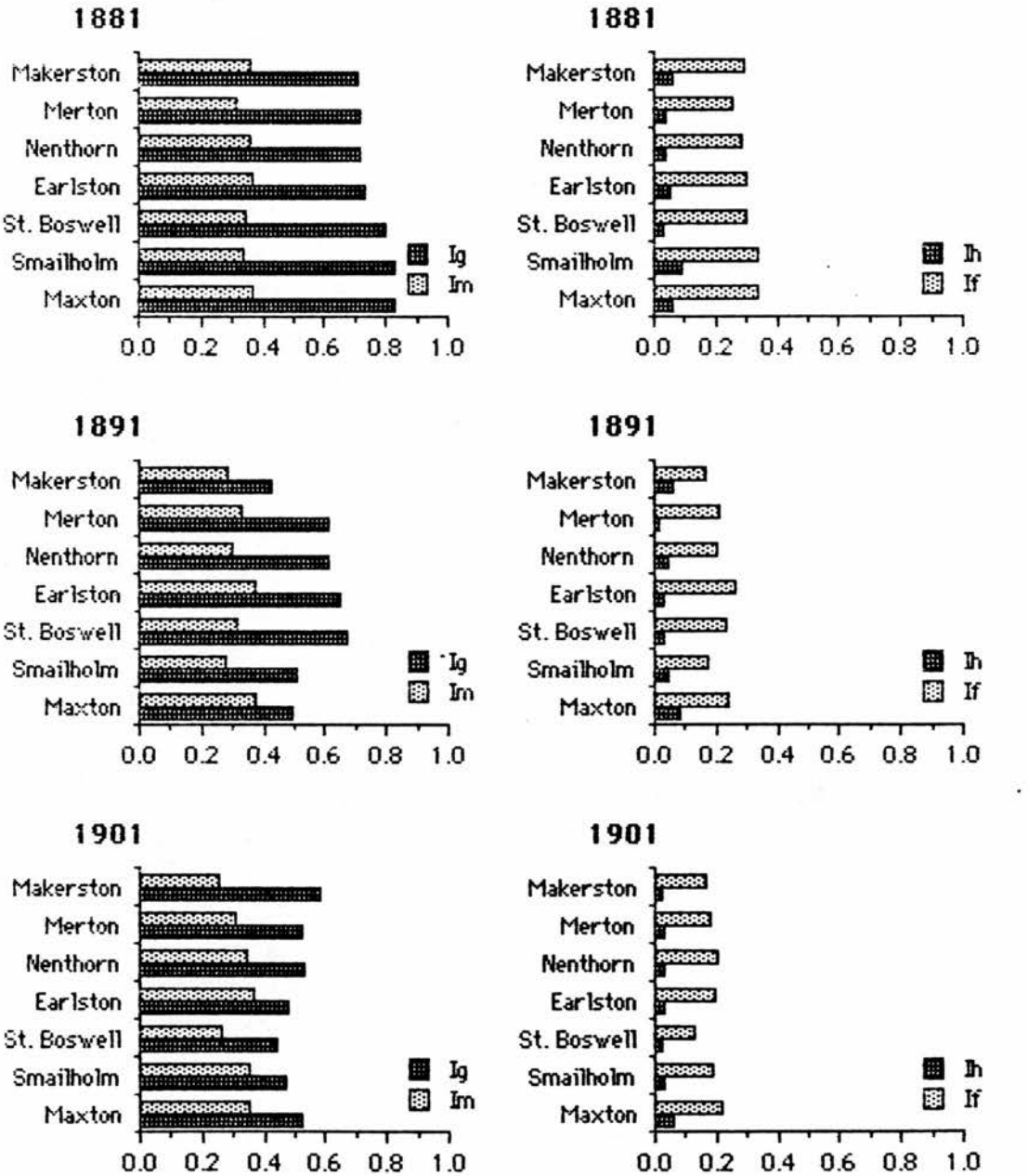
Selected cluster of Civil Parishes

with populations less than 5,000,

where I_g is greater than 0.699 in 1881,

between 0.600 and 0.699 in 1891, and less than 0.600 in 1901

(N=7)



Extra-marital fertility is generally low in this cluster, and begins and ends the period at above the national average only in Maxton, though it is also moderately high in Smailholm in 1881, and Makerston in 1881 and 1891. But, given the pronounced decline of marital fertility in all the parishes over the period, and the generally stable levels of I_m, I_f records a substantial fall throughout.

The average population size of the Banff-Aberdeen cluster is higher, and only three of the ten parishes contain less than one thousand people by 1901. Although the general trend in population is here downward as in the Berwick-Roxburgh cluster, the largest parish, Boyndie, maintains a population of just over two thousand in both 1881 and 1901, while the smallest place, Botriphnie, actually enjoys an increase of over eight per cent, from 696 in 1881, to 754 in 1901.

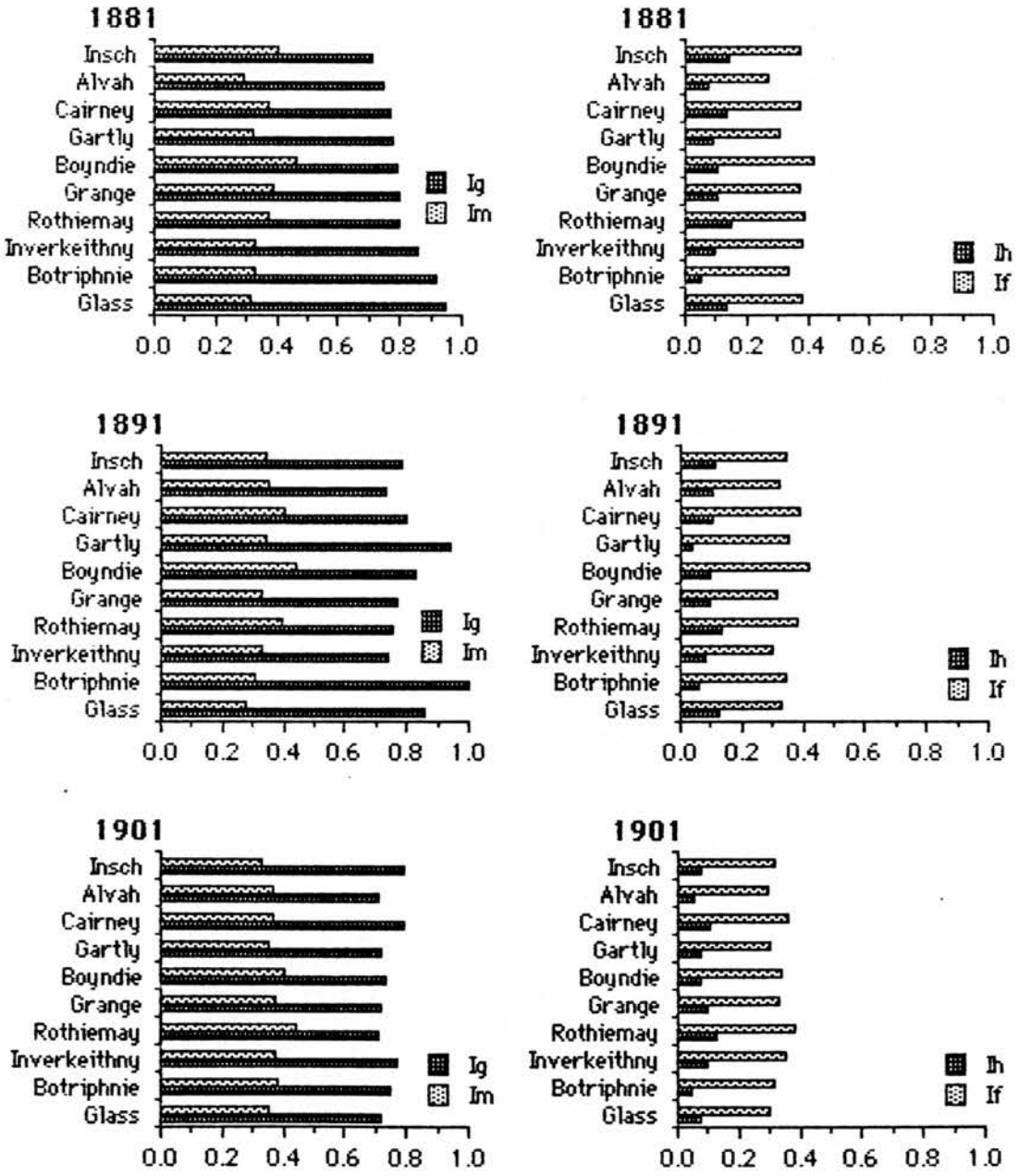
As with population, so the general trend in I_g is downward - in four places the decline exceeds ten per cent. But there are exceptions. Over the period, marital fertility increases substantially, by over 12 per cent, in Insch, and slightly, by over three per cent, in Cairney. Yet Insch and Cairney are two of only three parishes which record a fall in I_m - the other being Boyndie - though in Insch the decline in I_m is negligible (1.87 per cent), whereas in Boyndie (12.36) and Cairney (18.61) the percentage fall is quite large. On the other hand, the increases in I_m recorded for the other seven parishes are equally large, ranging from 9.35 per cent in Gartly, to 23.59 in Alvah. Nevertheless, the absolute levels of I_m throughout the cluster are, as with the Berwick/Roxburgh group, slightly below the national averages. In fact, the only place where I_m is

consistently above the national averages is Boyndie, the parish with the second largest percentage fall in I_m in the group.

Figure 6.9 Coale Indices

Selected cluster of Parishes with populations less than 5,000, where I_g is greater than 0.699 in 1881, 1891, and 1901

(N=10)



As might be expected from the regional figures given in chapter 5, above, extra-marital fertility is high in this area. In fact, I_h is above the national average in every parish in all three years, though it fails to decline between 1881 and 1901 in only one place, Inverkeithny, and even here it does not rise but remains constant. Because both I_g and I_h fall, I_f does too, except in Alvah. Here, the decline in marital fertility is so slight, (5.09 per cent), while the increase in I_m is so large, (23.89 per cent), that even the hefty fall of 31.94 per cent in I_h cannot prevent I_f increasing from 0.269 to 0.289, a percentage rise of just under seven and a half.

In summary, the two selected clusters of rural parishes exhibit different experiences with regard to fertility, except, of course, that the underlying trend in fertility is one of decline. The main difference between the two groups lies in their levels of marital fertility, which although declining in eight of the ten parishes remains above 0.700 in the Banff/Aberdeen cluster, while in the Berwick/Roxburgh group 'fertility transition' is achieved between 1881 and 1901. It is notable that the two clusters have very similar, and generally stable levels of I_m throughout the period, a situation which, as the summary analysis has shown, is by no means exceptional in rural areas. Thus, the levels of overall fertility in the two places must relate directly to differences in parity control within marriage; this is so even in the North-east cluster where although extra-marital fertility is high, or very high in all places throughout, it too declines between 1881 and 1901.

As in both the 'large urban' and 'small urban' areas, it is likely that fertility patterns in rural areas are more likely to result from local,

rather than national trends. Just why there should be 'clusters' of 'limiters' and 'laggards', such as the two examples used here, throughout the country is, however, not quite clear. It is likely that in the 'rural', as in both the large and small 'urban' areas the great diversity of demographic experience to be found in various different parts of the country is linked to locally defined economic and cultural factors. How and why these might influence fertility is the subject of the next chapter.

Conclusion

In this chapter it has been shown that, as the Princeton summary volume concludes, "urban-rural differentials have limited value for the study of the demographic transition".[160] But the civil parish analysis does not accord with the Princeton generalisation that urban places tend to have lower absolute levels of marital fertility than their rural neighbours. A clear, inverse relationship between population size and I_g is not discernible in Scotland - levels of urbanisation in this country, (at least as measured by population size alone), have little direct effect on marital fertility.

The relationship between proportions married and urbanisation, on the other hand, is more clear cut, but not in the way suggested by the Princeton studies. According to the civil parish data there is a tendency for Scottish urban areas to have higher levels of nuptiality than rural areas - this is in line with Woods' analysis of registration district data for England and Wales. The results given here, along with those of Woods, thus stand in opposition to those found by many of the Princeton authors.

With regard to the effect of nuptiality on marital fertility, in the 'large urban' civil parishes there is a moderately strong linear relationship between proportions married and marital fertility. The same relationship between the two measures is much less apparent in the 'small urban' areas, and does not show at all in the rural parishes. The direct cause of higher nuptiality in urban-industrial areas is probably the greater propensity of young males rather than females to migrate to these places in search of employment. Consequently, it is likely that the marriage chances of females in the migrants' target areas were significantly improved. This factor is likely to have worked to a lesser extent in 'small urban' places, while marriage chances in the 'rural' areas are likely to have been worsened, given that it is these places that most of the young male migrants were leaving.[161] Conversely, it is suggested that some 'large urban' areas with a high proportion of employment outside the home for women have lower than average nuptiality and fertility.

Some of the reasons for the opposing conclusions arrived at in the Princeton studies and the civil parish data, at least insofar as Scotland is concerned, become apparent when the fertility and nuptiality experiences of individual places are looked at in detail at the level of the individual parish. At this level, what the summary analyses suggest might be happening, can be seen clearly. The wide diversity of demographic experience to be found throughout the country is set by local, and not national trends. To be sure, there is an overall, national trend of decline in fertility, and the great majority of parishes follow it. But the precise way that this trend is accomodated at the small area

level varies greatly throughout the country. Even the individual members of small clusters of 'rural' parishes, where similarity of behaviour in terms of marital fertility is the defining characteristic of the cluster, often have dissimilar levels of nuptiality, or illegitimate fertility, or both, and, thus, different levels of overall fertility.

Why fertility and nuptiality experience should be so different in 'urban' and 'rural' areas is explored in more depth in the next chapter. There, analysis is conducted in terms of differences in economic and cultural variables, which, it is argued, are the keys to understanding local variations in demographic, experience in Scotland.

Chapter Seven

Occupation and church membership

Introduction

Following on from the theme set in previous chapters, in this chapter the onset of fertility decline in selected places in Scotland is further analysed at below the county level. The main theme of the analysis is the relationship between economic and cultural factors and fertility decline. This is done in terms of a summary analysis of differential rates of 'occupied' females and church membership levels in the Scottish burghs.

The problem

It is now widely accepted that, in historical populations going through 'demographic transition', fertility is more likely to decline first in places where a high proportion of women are employed as waged workers outside the home. This was particularly so in textile areas, probably largely because it was in these areas that the highest rates of job opportunities for women were. Conversely, in mining areas, where generally few employment opportunities existed for women outside the home, fertility was high.[162]

Occupation *per se* may be held to account for behaviour, but it can not, of course, *explain* it. Coalminers, as a group, might have had more children on average than textile workers, but that is not to say that they had large families *because* they were coalminers. Like most people, coalminers and textile workers have children for a variety of reasons, and not least of these reasons is personal gratification. At the family and social levels, on the other hand, pro-natal pressure can be seen as taking the form of a moral obligation. It is the various attitudes adopted to this obligation by different groups which enjoins some to have larger families than others.

Occupation is normally assumed to have impacted on womens' attitudes, including attitudes to preferred family size, through the degree to which a sense of independence which working for, and receiving, cash wages imbued. Presumably too, independence before marriage encouraged an awareness of self on the part of women within marriage, and this may have produced greater probability that these women would feel entitled

to force their husbands to, as one of Roberts' respondents put it, 'behave themselves' by abstaining from sexual intercourse.[163]

Extra-familial contacts made outside the work-place are also likely to have been important in shaping womens' attitudes. One source of such contacts was the church. True, the official policy of all the churches at the end of the nineteenth century was still, as it always had been, one of encouragement of marital fertility. "For centuries the Christian doctrine regarding deliberate family limitation was clear-cut and unambiguous. The primary (some fathers of the Church claimed the *only*) aim of sexual intercourse in marriage was the procreation of children."[164] Yet, whatever the official doctrine of the churches, fertility declined. This may well have been because, as McLeod concludes, "between about 1880 and 1930 new patterns of life were emerging in most parts of Britain, as a result of which, regardless of individual religious belief, the social importance of the churches had greatly diminished."[165]

Lamenting over what they perceived as a worrying national trend in Scotland, the Life and Work, and the Social Problems, committees of the United Free Church[166] were, in 1916, "alarmed by the fact that the birth-rate was declining among the middle and well-to-do artisan classes - from which the Protestant churches mainly drew their members - but not among 'the least competent class of the population'." The committee attributed this decline "not to 'natural causes' but to voluntary limitation which was in turn due to 'the desire for social comfort, the dread of the future for children, and the increased cost of maintaining a family'."[167] The Established Church of Scotland view was,

as on most social issues, probably more reticent, but essentially the same. (It is likely that the United Free Church committee members had personal experience to call upon in their assessment of reasons for the decline in fertility. According to the 1911 Fertility census, the mean number of children of all 'ministers of the church' in Scotland was, at 4.33, amongst the very lowest of any ocupation.[168] There is no doubt, therefore, that they can be listed among the 'pioneers' of family limitation in this country). The official doctrine of the Roman Catholic church, of course, remained absolutely opposed to 'unnatural' family limitation throughout.[169]

For Protestant Scotland, then, although it might be expected that places with high levels of church membership would have tended to 'resist' the decline of marital fertility, it is likely that the situation was somewhat similar to that found by Lesthaeghe and Wilson in Protestant areas of Denmark, Germany, Holland, and Switzerland, where "secular adaptions occurred even within the churches and produced a fundamental reaction in only a limited number of cases." They add that, "Moreover, in Protestant countries secularization became pronounced only as a result of or parallel with the growth of Socialism and social reform."[170]

The data

Can the relation between fertility and occupation, on the one hand, and fertility and religious extra-familial contacts, on the other, be measured in the case of Scotland at the end of the nineteenth century? The civil parish data set contains the Coale fertility indices for all of Scotland in 1881, 1891, and 1901, split into 856 'small areas', or civil parishes.

Unfortunately, the published figures on occupation below the level of the county and covering the 1881 to 1901 period for Scotland are for burghs only. Even then, these data do not cover all burghs, let alone those towns which did not have burgh status. Specifically, there are no statistics on occupation for individual burghs of less than 5,000 people in the 1901 census, while in the 1881 census the lower limit is 10,000.

Because of the 10,000 cut-off point employed in the 1881 census, a considerable number of burghs are excluded from the tables. Not least among these are some important 'county towns', including Lanark, Renfrew, and Haddington (East Lothian). Figures for Lanark and Renfrew are to be found in the 1901 census. But Haddington, along with many other burghs, is still omitted. Two examples of 'key' burghs for which there are no published occupational data are Lerwick, which had a population of 4,541 (out of a 1901 civil parish population of 6,519), and Cupar in Fife, which had 4,511 inhabitants in 1901 (out of a civil parish population of 6,518).[171] Two examples of towns of more than 5,000 inhabitants which are excluded because they did not have burgh status are the town of Stevenston in Ayrshire, which in 1901 had a population of 6,554 (out of a civil parish population of 9,497), and Cambuslang, a town of 12,252 inhabitants in 1901 (out of a civil parish population of 20,211).

The occupational figures for all burghs of 10,000 or more inhabitants in 1881, and, of those in 1901 with 5,000 or more inhabitants, are, however, comprehensive. The number of places in 1881 for which data are available and can be used, is just twenty-six, which falls far short of the 133 civil parishes classed as 'small urban' and 'large urban' in

chapter six. But even for 1901 the number of 'small urban' places is reduced in this chapter to just forty-two, while the number of 'large urban' places is reduced by two, as Cambuslang and Cathcart do not have burgh status, giving a total number of 'urban' places of sixty-five. It is also the case that the Coale indices, being based on civil parish census data, are often computed from a combination of burgh and 'extra-burghal' populations. Nevertheless, with only two exceptions, in the sixty-five[172] urban places used, the majority of the inhabitants did actually live in the town named which, in most instances, bears the name of the civil parish. The two exceptions to the population rule are, Buckie, in which forty-eight per cent of the population of Rathven civil parish lived in 1901, and Cowdenbeath, which contained forty-seven per cent of the population of Beath civil parish in 1901. Both the 1881 and 1901 data are used here as the percentage of women in employment, and are referred to as the 'Female occupation rate'.

The church membership data are fully described in Chapter 2. Briefly, these data are at the civil parish level for all the Protestant denominations in 1891. They are used here as the total membership in each civil parish expressed as a percentage of the population of each civil parish. Unfortunately, there are no data on the number of people adhering to the Roman Catholic church in Scotland.[173]

There are no data available for the civil parishes on voting patterns, though Socialism was certainly not an unknown factor in Scotland. After all, the forming of the British Labour Party, as the Labour Representation Committee, in 1900, was pre-dated in Scotland when Keir Hardie formed the Scottish Parliamentary Labour Party in 1888. Nevertheless, what the

relationship of the growth of Socialism may have had to secularisation in Scotland, and thus, by inference, on attitudes to family size at the end of the nineteenth century, must, for the time being at least, remain an unknown quantity.

Occupation and fertility in urban areas

Despite the fact that, as was argued in the previous chapter, population size has no significant independent role as an indicator of levels of fertility and nuptiality in Scotland at the end of the nineteenth century, a modified form of the urban-rural format employed in chapter six is persisted with here. This is done quite simply because, as noted above, the available data on occupation demand it. Given the small total of 'small urban' and 'large urban' places for which there are data on occupation, and because it is certain that all of these places are towns or cities, the brief summary analyses done here treats all the included burghs simply as 'urban'.[174]

Illustrated in Figure 7.1 are the correlations between the Coale indicators and the 1881 and 1901 'Female occupation rate'. In both 1881 and 1901, there is an inverse, though fairly weak relationship between the female occupation rate and the level of marital fertility. The relationship between occupation and nuptiality is also inverse, and stronger in both years. Between illegitimate fertility and the female occupation rate, on the other hand, though inverse the association is very weak. But the combined strengths of I_g and I_m, mean that the relationship between I_f, the index of overall fertility, and the occupation rate is moderately strong.

Given the consistently inverse nature of the association between the demographic indices and the female occupation rate, in the twenty-five burghs for which data is available in 1881, and in these same twenty-five plus forty-one other places, for which data is available in 1901, it does indeed seem that the degree to which women are 'occupied' outside the home can be said to affect fertility and nuptiality. In other words, in the large Scottish burghs, the more opportunity there was for women to find work outside the home, the more likely were they to limit their marital fertility, the less likely were they to be married, and, to some extent, the less likely were they to bear illegitimate children.

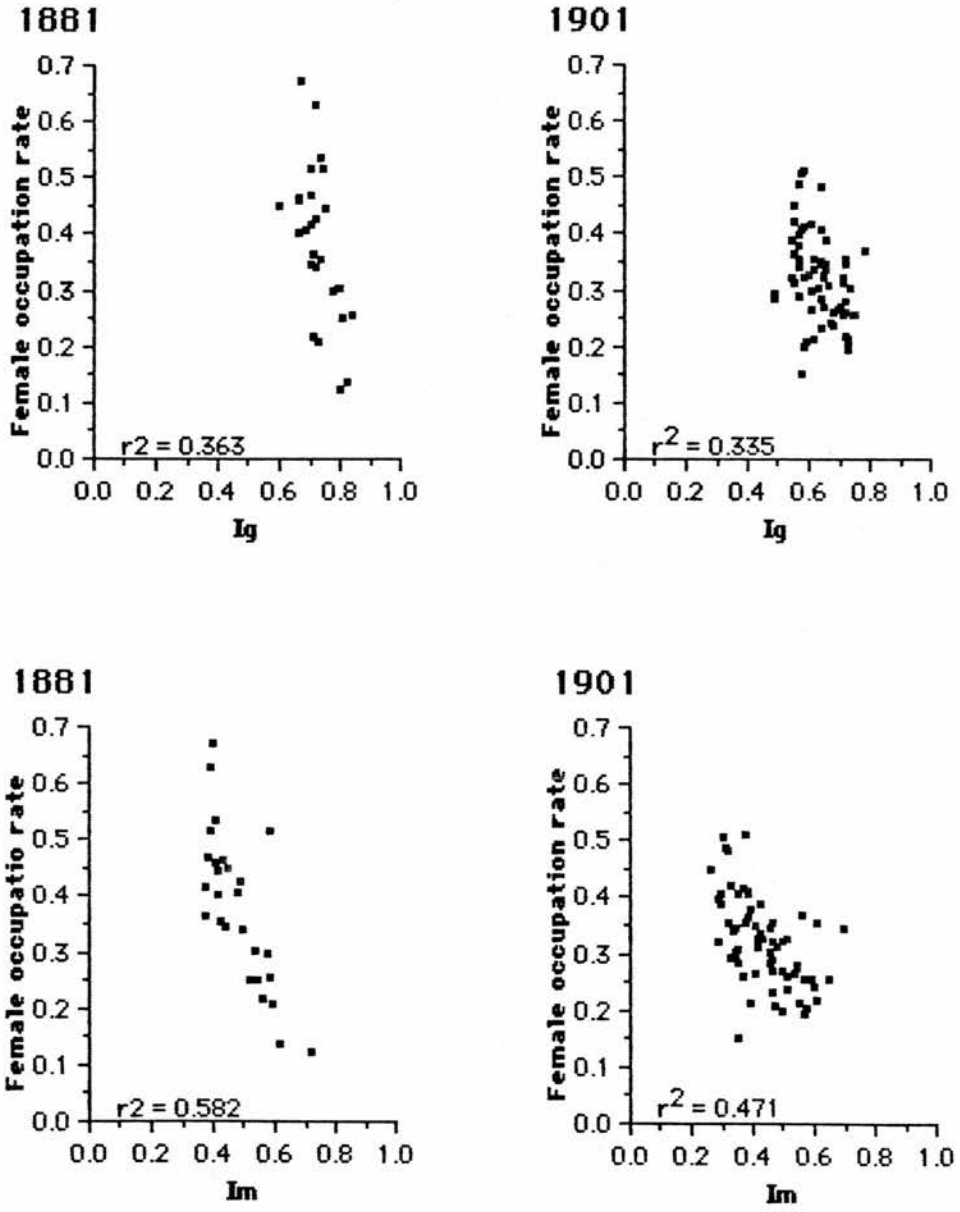
Yet despite the consistency in direction of association, the relationships between the demographic indices and the occupation rate for women are not strong. Thus, the decline in what relationship there is between the various indices and female occupation may be spurious, especially given the very small number of cases involved in 1881.

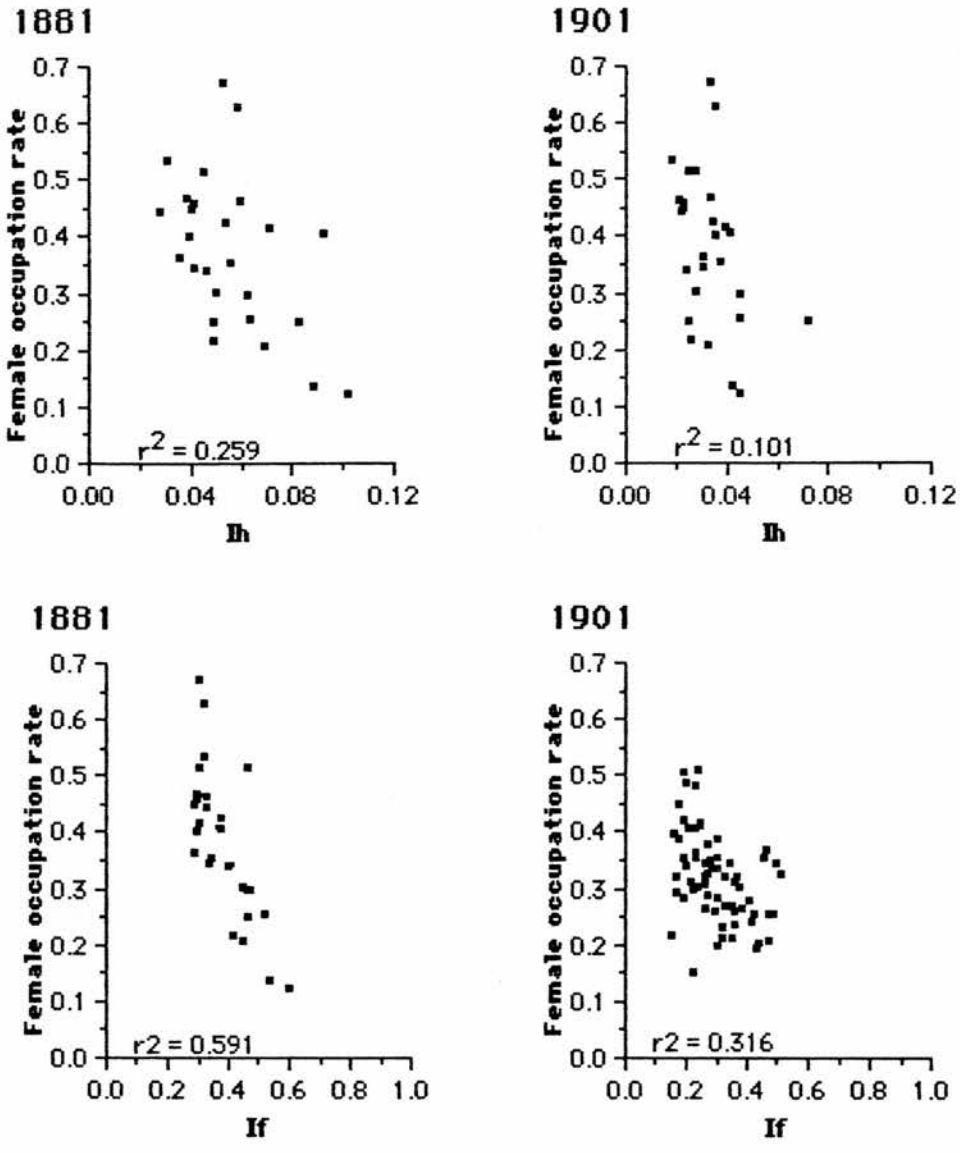
Figure 7.1

Relationship between the Female Occupation Rate and the Coale indices of fertility and nuptiality in Burghs of 10,000 or more inhabitants in 1881, and of 5,000 or more inhabitants in 1901.

(1881, N=27)

(1901, N=65)





A more satisfactory approach would be to construct a model capable of being subjected to multivariate analysis. But, again, given the small number of cases available for Scotland, and the marked skewness of the data, the significance of the results produced would be highly contentious. On the other hand, even if only a small number of variables are used, the standarised residuals produced from such an analysis can be a useful way of identifying 'extreme' values. Given in Table 7.1 are those places with standardised residuals less than minus one, or greater than plus one, produced by regressing the burghs' I_g against their

respective I_m and Female occupation rate for 1901. Also given in the table is a rough guide to the principal sources of employment in each place for both males and females.

Table 7.1

Principal sources of employment, and standardised residuals from regressions of I_g against I_m and Female occupation rate for the Scottish burghs in 1901

(descending rank order)

Burgh	Std. res.	Principal sources of employment Males : Females
Campbeltown	1.92	Food,Building, Fishing, Transp. : Domestic
Peterhead	1.91	Fishing, Transp., Wood, Build. : Dom, Food
Wick	1.80	Fishing, Wood : Domestic, Dress
Kilsyth	1.77	Mining : -
Kirkintilloch	1.54	Metals, Mining : Domestic, Textiles
Forfar	1.50	Textiles : Textiles
Oban	1.34	Transport, Food : Domestic, Food
Fraserburgh	1.34	Wood, Food, Fishing : Domestic, Food
Port-Glasgow	1.21	Metals : Textiles
Stranraer	1.11	Transport, Food : Domestic, Dress
Bathgate	1.03	Mining : Domestic
Irvine	1.00	Mining, Transport : Domestic
Kilmarnock	-1.00	Metals, Transport, Building : Textiles
Edinburgh	-1.07	Building, Transp.,Food : Domestic,Dress
Kirkcaldy	-1.41	Building, Metals : Textiles
Carnoustie	-1.51	Dress, Building,Metals : Text.,Dress, Dom.
Leven	-1.54	Mining : Textiles, Domestic
Lochgelly	-1.91	Mining : -
Dunoon	-2.29	Building, Food, Transp. : Dom., Food, Dress
Gourock	-2.40	Transp.,Metals, Commerce,Building : Dom.

The residuals and the mixed economies of most of the places in the table, give an indication of why the correlation between the Coale indicies and

the Female occupation rate is low for the Scottish burghs. Although many of the burghs appear to offer the same mix of employment opportunities, it is of course likely that the relative weight of each industry in local job markets was different. This seems to be the case even in single industry towns such as Forfar and Lochgelly. Forfar was a textile community where women formed about 45 per cent of the total number of persons engaged in occupations in 1901. Lochgelly was a mining town, where women formed only 16 per cent of the total number of occupied persons. In fact, the 1901 I_g for both places are similar: Forfar's is 0.640, while Lochgelly's is 0.654. But Lochgelly's fell from 0.789 in 1881, while Forfar's fell from 0.716.

For the other places, it seems that their economies were varied, with 'high fertility occupations' competing with 'low fertility occupations' to set the local pattern of fertility behaviour. In Port Glasgow and Leven, for example, high fertility predominated despite the fact that women made up about 25 per cent of the total numbers occupied in each place. Which suggests once again that local factors other than type and number of opportunities available were impacting on attitudes to fertility.

Overall then, while the fairly meagre indications given by the Scottish urban data of an inverse connection between occupation and fertility and nuptiality suggest that the availability of employment for women outside the home did affect their attitudes to family size, the relationship between the two is far from clear. Perhaps more and better small area statistics would improve matters. But as Woods has concluded after subjecting his England and Wales registration district data to multivariate analysis: "The *most* that can be hoped for is that

some of the background social-economic-demographic variables which are associated with extreme levels of marital fertility, as it declines rapidly, will be distinguished."[175]

Church membership and fertility in urban areas

In compiling the Scottish church membership figures for publication in 1893, Howie's aim was, "to give as much reliable information as possible in regard to the large numbers in the country, and especially in the large centres of population, who have no church connection".[176] He was, thus, concerned to quantify the extent to which the churches had ceased to be a focal point in people's lives, and saw the growth of urban areas as a prime cause in the undermining of communal solidity.

Howie might well have been correct in his assumption. Taken as a whole, and at the regional level though, there is no apparent relationship in Scotland between church membership levels and population size. But this might be attributable to 'noise' created by the lack of statistics for catholics, coupled with errors in the protestant church figures for some areas.[177]

The correlations between the 'urban' church membership figures and the Coale indices for the 'urban' parishes are no more suggestive. There is an inverse, though weak, relationship between church membership levels in 1891 and the level of marital fertility in 1901 (r^2 = 0.241), and between the level of church membership in 1891 and nuptiality in 1901 (r^2 = 0.271). The relationship between the 1891 church membership and the

Female occupation rate in 1901 is slightly stronger, as signified by its r^2 of 0.412.

Correlations done between the sex-ratios for 20-29 year-olds and the church membership data add an intervening dimension to the picture by returning r^2s for 1881 and 1901 of 0.702, and 0.425, respectively. Although the data used are not capable of showing a direct link between them, it seems likely that where there was a 'surplus' of women in an 'urban' population, church memberships were higher than average, and fertility was lower. To the extent that this was so, then those involved were going against the the official policies of the churches. Women in urban areas with few job opportunities, and which tended to have a surplus of males, were much more inclined to marry, and to limit their family size less. Although the data do not allow church membership levels to be differentiated by sex, it may be that women in these areas were also less likely to belong to a church.

It could be that 'adaptions' of policy, of the type found by Lesthaeghe and Wilson to have occurred in continental Protestant countries operated in some Scottish burghs, while in others a more 'traditional' interpretation held sway. If so, then this could provide a clue to the lack of correlation between the church membership data and fertility at the national level: perhaps a conservative approach to religion and a conservative level of abstention from intercourse went together. It is possible too, that the 'class dimension' alluded to earlier, which is likely to have attached to church membership in this country,[178] had a part to play in the forming of different attitudes in different memberships. On this point the data is entirely silent. But whatever effect church membership had on the lives

of the Scottish burghal populations, and whichever groups of people it affected most, it does not seem to have been consistent in its impact on attitudes to fertility. It is likely, therefore, that only detailed examination of individual places will provide tangible answers to the question of what part the church, and membership of it, played in forming group attitudes to family limitation during the decline of fertility in this country.

Conclusion

In the summary analysis of 'urban' areas, or burghs, there is an apparent, though weak, relationship between occupation and fertility. In particular, the use of data on occupation, by sex, in the 'urban' analysis suggests that where employment opportunities for women were high, then marital fertility was low. Arguably then, in working outside the home, and especially in factories, women in the Scottish burghs indeed were more likely than those employed in the home to be imbued with a sense of independence, which they probably carried forward into married life.

The relationship between church membership and fertility and nuptiality in the Scottish burghs is, surprisingly perhaps, inverse. It is even weaker than that between occupation and the demographic indicators. Little, therefore, can be read into it - except the negative conclusion that whatever the perceived policy of the Protestant churches may have been on family limitation, its impact over the country as a whole was very inconsistent.

Overall, the summary analysis conducted here has proved inconclusive. This may be because of the paucity and nature of the data available. Perhaps the relationships looked for did not exist. Studies of other places suggest the former rather than the latter; but until better quality data are produced for small areas in Scotland, no more firm conclusions are likely to be achieved. What remains, and can be said with a fair degree of certainty is that the demographic experience of the Scottish burghs was very varied. The likelihood also remains, then, that it was the manner in which various factors, such as employment opportunities for women, operated differently in different localities which set the scene for the formation of attitudes to family size. If this is so, then it is probable that only studies focussed on local areas are capable of providing clear insights into such differentials.

Assuming the likely importance of locally operating factors in setting the pattern of demographic experience in Scotland at the end of the nineteenth century, 'local knowledge' gained through the study of small areas in some detail is likely to add an informative perspective to the understanding of fertility decline. In the next chapter, therefore, a different tack is taken. There, although the demographic data for the civil parishes of one 'rural' county, East Lothian (Haddington-shire), are also analysed in terms of occupation and church membership, given an even greater paucity of statistics on occupation the approach adopted is more historiographic than has been the case so far.

Chapter Eight

East Lothian - a 'rural' county[179]

Introduction

T. S. Muir, the Geography Master of Edinburgh's Royal High School wrote, in 1915, that, "East Lothian is not a manufacturing county. Most of the industries are of such small economic importance that in Lanarkshire they would not be mentioned."[180] Even so, in common with West Lothian (Linlithgow-shire) and the rural parts of Midlothian (Edinburgh-shire), as a rural county East Lothian was far from backward: "The farmers of the Lothians have for long been celebrated for their skill and progressiveness".[181] At the county level, East Lothian also was a relatively early 'limiter' of fertility within marriage in Scotland. Studying this 'rural' county in some detail, therefore, throws up clues as to why some counties adopted such restraint before others, while at the same time throwing light on aspects of differential behaviour within the county.

One county, twenty-four civil parishes

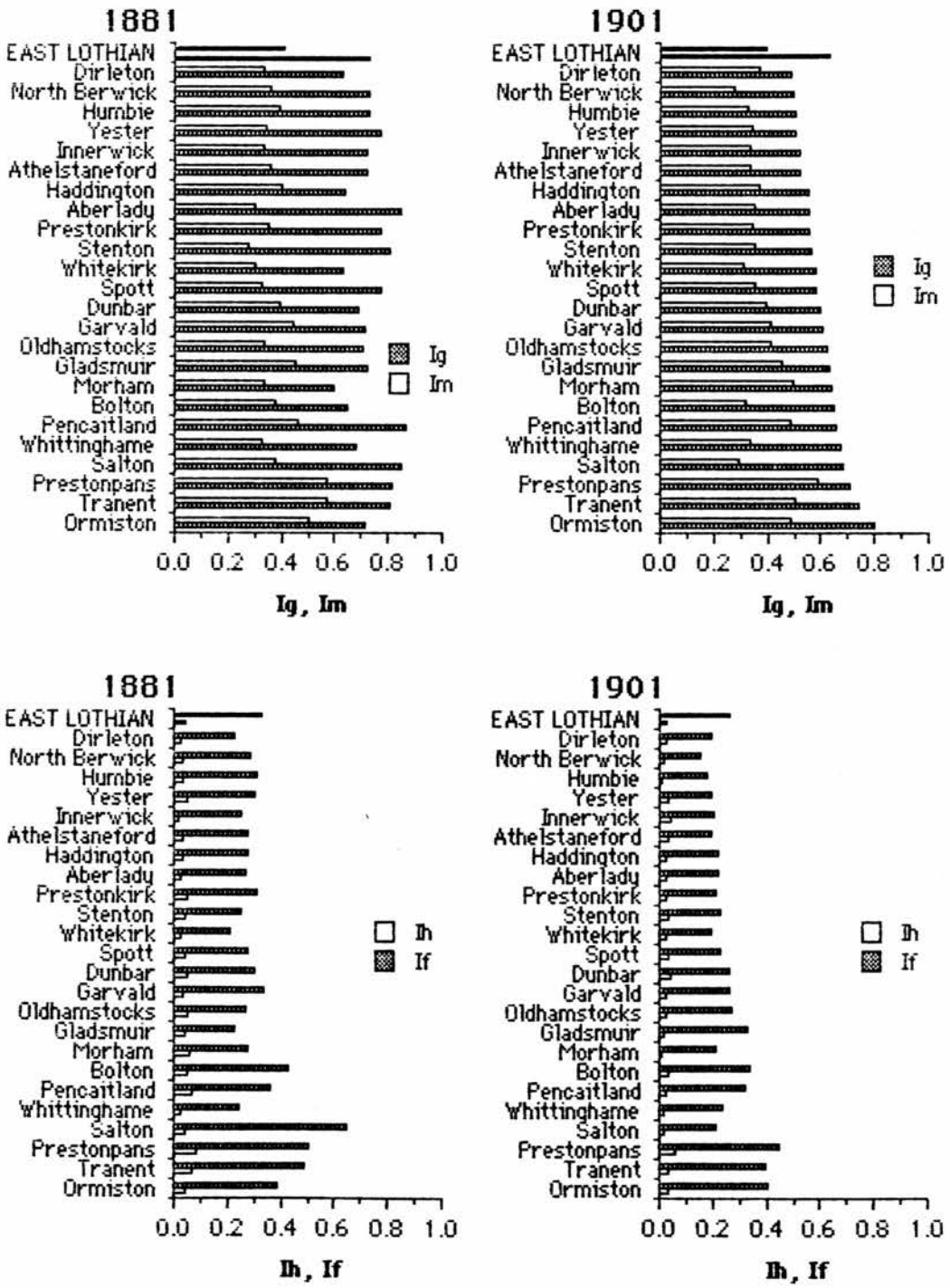
Given that East Lothian was a 'pioneer' of family limitation in Scotland, how good an indicator of behaviour at the parish level is the county-level experience? Figure 7.1 shows the level of marital fertility in terms of I_g for the county as a whole, and for each civil parish in East Lothian, in 1881, 1891, and 1901. The spatial distribution of I_g in 1881 and 1901 is represented graphically in Maps 7.1, and 7.2. These Figures and Maps indicate that fertility within marriage did indeed fall substantially in the county as a whole during the period: with the exceptions of Ormiston, Bolton, and Morham, all the county's parishes registered a fall in marital fertility at this time. Nuptiality, on the other hand, remained generally constant. There is a fall in I_m in thirteen parishes, and a rise in eleven. I_h is generally low, except in Ormiston, Tranent, and Pencaitland in 1881, but it either falls by 1901 or fluctuates at very low levels everywhere. The general trend in I_f is downward, despite differential levels of I_m, with one noteable exception, Ormiston, where it rises by five per cent.

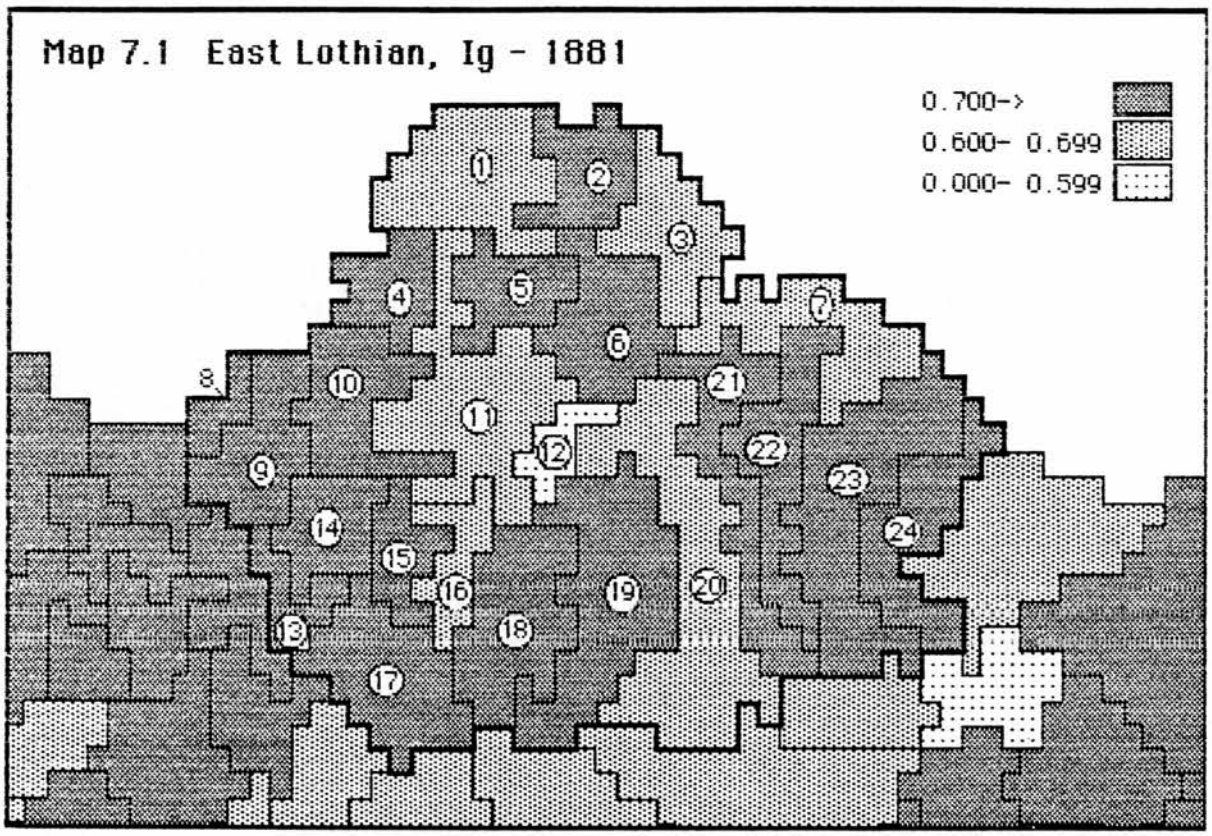
But although the general trend in fertility in East Lothian, as in Scotland as a whole, is downward, there are marked inconsistencies. Dirleton, which has the lowest I_g (0.488) in 1901, was in 1881 already almost certainly controlling its within-marriage fertility to a marked degree: it shows the second lowest figure (0.633) in the county for that year. All the more remarkable then is the decline in the marital fertility of North Berwick over the same period, from 0.734 in 1881, to 0.492 in 1901. So, although in both these parishes marital fertility decline is consonant with East Lothian's overall experience, the downward trend in

North Berwick and Dirleton was markedly greater than that for East Lothian as a whole.

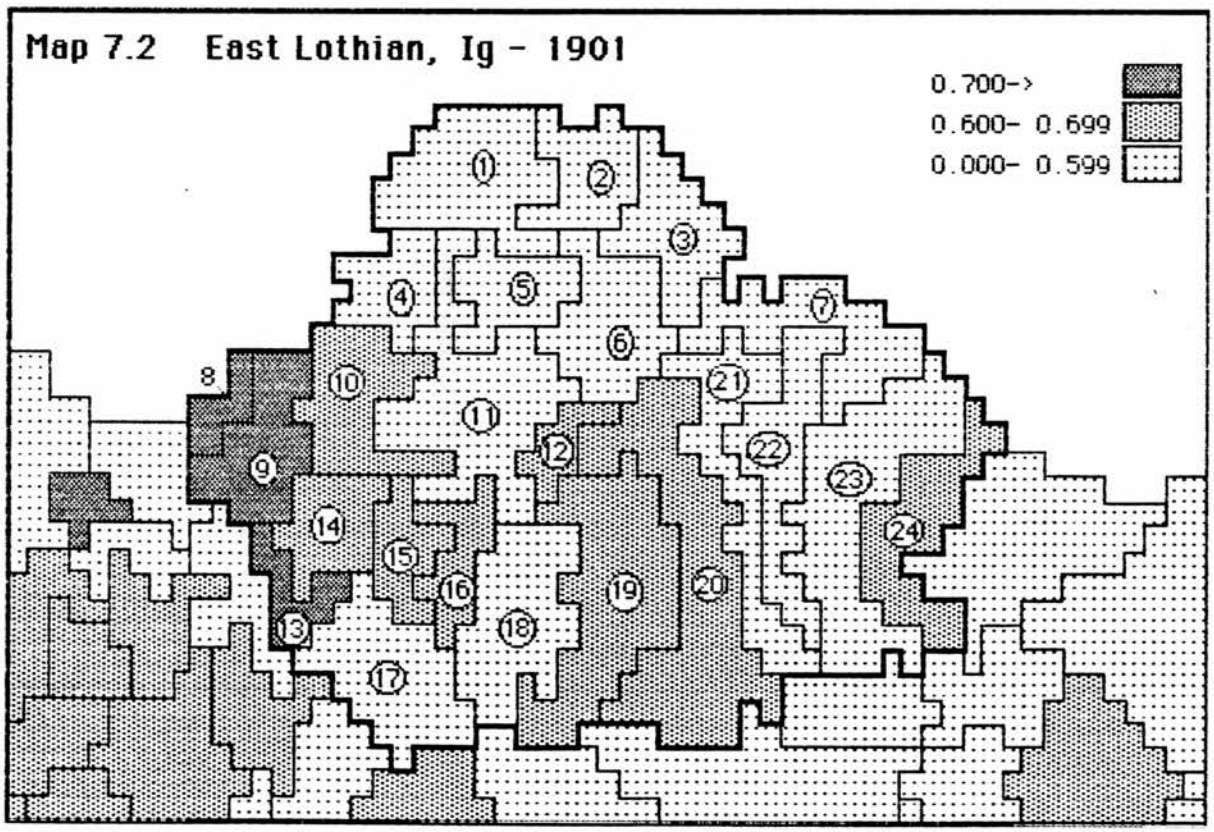
Figure 7.1

East Lothian - Coale indices, 1881 and 1901





1.Dirleton 2.North Berwick 3.Whitekirk 4.Aberlady 5.Athelstaneford
6.Prestonkirk 7.Dunbar 8.Prestonpans 9.Tranent 10.Gladsmuir 11.Haddington
12.Morham 13.Ormiston 14.Pencaitland 15.Salton 16.Bolton 17.Humbie 18.Yester
19.Garvald 20.Whittinghame 21.Stenton 22.Spott 23.Innerwick 24.Oldhamstocks



In stark contrast to the situation in Dirleton and North Berwick, is the failure by 1901 of the Ormiston, Tranent, and Prestonpans group to achieve I_g below 0.700, the point where, it is reckoned, that 'no deliberate control' is being practised over marital fertility. This shows up most dramatically in Maps 7.1 and 7.2. Geographically contiguous, and forming the county's North-east District, these are the only parishes to retain Igs above 0.700. Given the overall trend towards the limitation of fertility within marriage in East Lothian, it is perhaps the conservative behaviour of these parishes which illustrates best the need to explain behaviour below the level of the county. Ormiston in particular went decidedly against the wider trend, showing an increase of eleven per cent in its marital fertility in 1901 (0.797) over that for 1881 (0.713). Tranent, on the other hand, did record a drop in I_g (from 0.804 in 1881, to 0.738 in 1901), as did Prestonpans (down from 0.817 in 1881 to 0.710 in 1901), though all three parishes' fertility remain above 0.700, indicating a minimal level of fertility limitation. Indeed, if these three parishes are omitted from the East Lothian total, then the 'county' I_g for 1901 is 0.564, as opposed to 0.618.

Fertility and occupation in East Lothian

How then might the wide variations in East Lothian's marital fertility experience, so graphically illustrated by the behaviour of Dirleton and North Berwick on the one hand, and the Ormiston, Tranent, and Prestonpans group on the other, be accounted for? Superficially at least, the resistance to change of Ormiston and Tranent and, to a lesser extent, Prestonpans, is predictable, because this cluster was then a

thriving coal-mining area. As was argued in chapter seven, there is good empirical evidence from other places to suggest that coalminers tend to produce relatively large families.[182] How can the extent to which this was the case in East Lothian be estimated.? There are no published figures for Scotland on occupational structure for individual places, outwith the larger burghs, covering the last quarter of the nineteenth century below the county level. But as Haines has stated, "when demographic information on separate occupations is lacking, as it frequently is, then small areas containing high concentrations of particular occupational groups can be used in its stead".[183]

After the sinking of the Lady Victoria pit at Newtongrange, Midlothian,[184] in 1890, the North-East District of East Lothian became an integral part of the modern Lothians coalfield. In East Lothian alone, annual output of coal almost doubled between 1879 and 1899, from 233 thousand tons in 1879, to 450 thousand tons in 1899, and then more than doubled in the decade 1899 to 1909, at the end of which it was over one million tons.[185] By 1923, the three main pits in the area, Prestonlinks, Prestongrange, and Fleets were among the largest mines in the Lothians - (employing 1,026, 988, and 593 persons respectively at that date).[186]

Coalmining was dirty, disease-ridden and dangerous. It was also skilled, despite its intrinsic emphasis on heavy manual labour, and produced a distinctive ethos which tended to closely bind the community. Indeed, coalmining communities tended to be isolated and isolationist, a phenomenon "confirmed both by the miners' own exclusiveness and the unwillingness of others, for example farmers' daughters, to associate

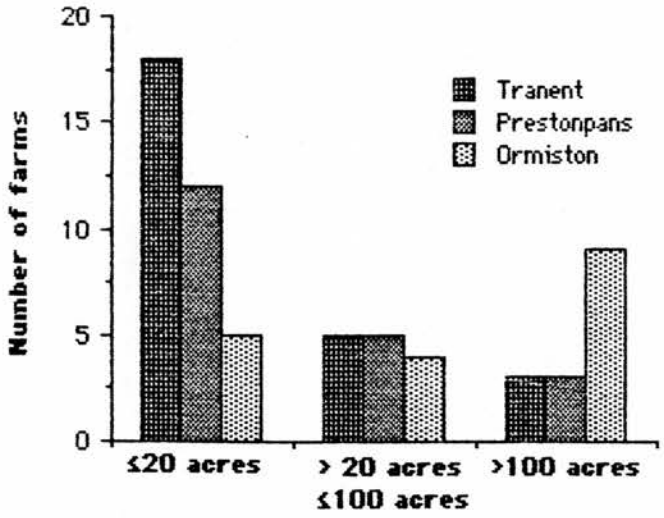
with them".[187] There was rarely any female employment in coalmining areas, and this, coupled with the comparatively high wages paid in mining,[188] might well have acted to keep fertility high.

But although coalmining predominated, there were other industries in the area at the turn of the century. In Prestonpans, there were "extensive works for the manufacture of bricks, tiles, and other fireclay goods, and a large brewery".[189] The fireclay goods were all "made from the blaes and fire-clay drawn from the colliery".[190] In Fowler's brewery in 1902, "there are forty men and boys connected with the brewery. There are ten travellers employed daily pushing the trade throughout the country, and a staff of six clerks continually in the office."[191] The other major source of employment in the parish, as 'pans' suggests, was the salt works, where "the turnout at the present time [1902] compared with only a few years ago is almost incredible."[192] As well, "the market gardens excel in producing cabbage and leek plants, and parsley."[193]

The range of employment available in Ormiston and Tranent was not so wide as in Prestonpans. But the "natural fertility of the soil, and proximity to the great market of Edinburgh,"[194] meant that both the village of Ormiston, and the "important burgh" of Tranent were the centres of civil parishes which had for long been important in agriculture.[195] Indeed, as early as the first half of the eighteenth century, "John Cockburn, the last of his race to own Ormiston..... [had] introduced proper drainage and regular rotation of crops, planted many trees, and was the father of scientific market and fruit gardening in Scotland."[196]

How many persons were employed in agriculture in these parishes is not known. But, as illustrated in Figure 7.2, most farms in the area in 1870 were small, though in Ormiston there are as many farms over 100 acres as there are smaller than this. The actual size of the farms of over 100 acres is unknown, and this is likely to make any estimate of numbers employment extremely fragile. But if the county average for 1881 is taken as a (very rough) guide, then each farm over 100 acres is likely to have employed between twelve and thirteen persons, in a ratio of males to females of two to one. The number of persons employed on farms between twenty and fifty acres was probably three, and of less than twenty acres, none.[197] In 1901 the number of female farm labourers may well have been greater than the number of men employed on many farms. According to the 1901 census females represented over thirty-five per cent of the county's 'extra-burghal' labour force in that year. In Aberdeen-shire, the corresponding percentage was between nine and ten per cent.[198]

Figure 7.2 Tranent, Prestonpans, and Ormiston, 1870, number of farms by size category.



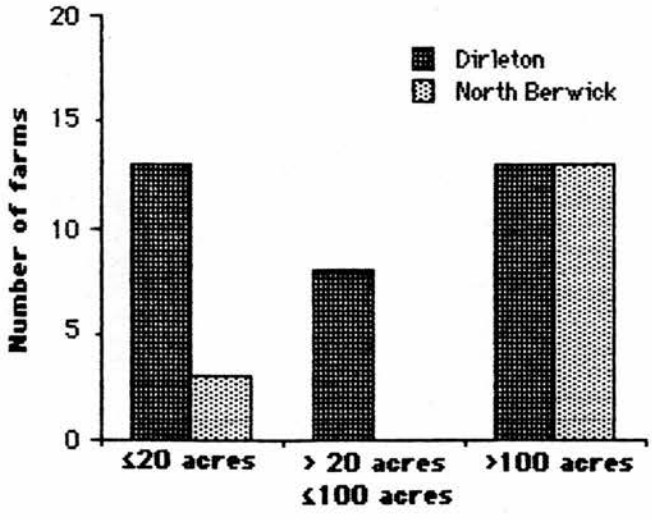
Given that Prestonpans had a more diverse occupational structure than both Tranent and Ormiston, it is perhaps significant that there is markedly greater drop in the value of I_g there (from 0.817 in 1881, to 0.710 in 1901), than there is for Tranent (from 0.804, in 1881, to 0.738 in 1901), while marital fertility increased in Ormiston. According to the 1911 Fertility Census, those employed in "Brick, Cement, Pottery, Glass Manufacture" tended to produce, on average, 6.01 children, a number "apparently greater than the general mean" for Scotland. On the other hand, those in occupations classed under the "Manufacture of Spirituous Drinks" who had an average number of children of 5.85, were found to "approximate the general mean". These numbers are decidedly smaller than those given for coal-miners, and coal-hewers, whose average family sizes, at 7.01, and 6.42 children respectively, are classed as "significantly greater than the General Mean".[199] Similarly, the average number of children produced by agricultural labourers and farmservants, at 6.42, was "significantly greater than the General Mean".[200]

The apparent tendency of those employed in the Pottery, and the Drinks industries, to have fewer children than their coalminer and agricultural neighbours may be seen as a pointer to why marital fertility fell faster in Prestonpans than Tranent. But as all the 1911 figures are Scottish national averages, it is of course likely that they do not at all accurately reflect the behaviour of persons engaged in these occupations in Prestonpans. On the other hand, employment in Prestonpans, Tranent, and Ormiston, was predominantly in coal-mining, and all three parishes still produced a higher level of marital fertility in 1901 than any other East Lothian parish.

The different occupational structures of Dirleton and North Berwick might hold the key to the advanced declining fertility of these places. Each was predominantly agricultural, though North Berwick also engaged in fishing, while Dirleton contained a few small coal mines and stone quarries. In addition, Gullane (in Dirleton) offered "good facilities for bathing and has both public and private golf courses". The town of North Berwick also had "noted golfing links", plus "a healthy bracing climate, and is a fashionable summer resort."[201]

The number of farms in Dirleton and North Berwick in 1870, is shown in Figure 7.3. The modal category here, as opposed to the situation in the Tranent, Prestonpans, and Ormiston group, is of one hundred acres or more, and so it is probable that more employment in agriculture was available in Dirleton and North Berwick than in the three north-east district parishes. Taken separately though, this is not so likely in Dirleton, where farms of less than one hundred acres are more normal.

Figure 7.3 Dirleton and North Berwick, 1870, number of farms by size category.



As argued above, the 1911 Census shows that the average number of children produced by agricultural labourers and farmservants, at 6.42, was "significantly greater than the General Mean".[202] Again though, because these are averages for Scotland as a whole, we cannot be sure how relevant they are at the parish level. It could be that the 'agricultural depression' which affected much of Britain during our period encouraged people in the rural areas of Dirleton and North Berwick to tighten their belts, and have fewer children in an attempt to keep family costs down. Devine, however, argues that "The 'Agricultural Depression' in Scotland caused problems but did not result in a crisis".[203] Further, he argues that in the Lothians wages and conditions of labour showed a marked improvement before the turn of the century, not least because, with "conditions of employment in agriculture.....seen by an increasing number of farm workers as less attractive than life in industry and the towns",[204] wages were necessarily bid up in an attempt by farmers to keep enough labour on the land. This suggests that those farmworkers who remained, had no apparent economic reason to alter their fertility behaviour.

Better wages in agriculture notwithstanding, the insistent attraction of East Lothian farm-workers to the towns, and other industries, probably meant that those engaged in agriculture in Dirleton and North Berwick were already by 1901 so small a proportion of the overall 'at risk' populations that their fertility has a limited effect on the civil parish figures. The populations of both Dirleton and North Berwick increased at this time - by 20 per cent, and 36 per cent, respectively - but not necessarily their agricultural populations. Indeed, both North Berwick

and Gullane were 'commuter' towns, and home to an increasing number of Edinburgh businessmen. (North Berwick had been connected to Edinburgh by rail as early as 1850, and the connection to Gullane was completed in 1898). With these parishes also becoming more fashionable (and accessible) as holiday resorts, and because of the likely out-migration of many farm-workers, it was probably the parishes' service sector populations which expanded. Resorting to the 1911 Fertility Census once more, we are told that occupations as diverse as railway porters; dentists; club, institutional, and domestic servants; lawyers; eating-house, and boarding keepers; etc., produced numbers of children "significantly less than the General Mean".[205] Thus, to the extent that the (on average, less fertile) service sector populations of Dirleton and North Berwick were expanding, and the (on average, more fertile) agricultural populations were declining, the sharp fall in marital fertilty shown in these parishes' I_g can probably be adequately accounted for.

Fertility and church membership in East Lothian

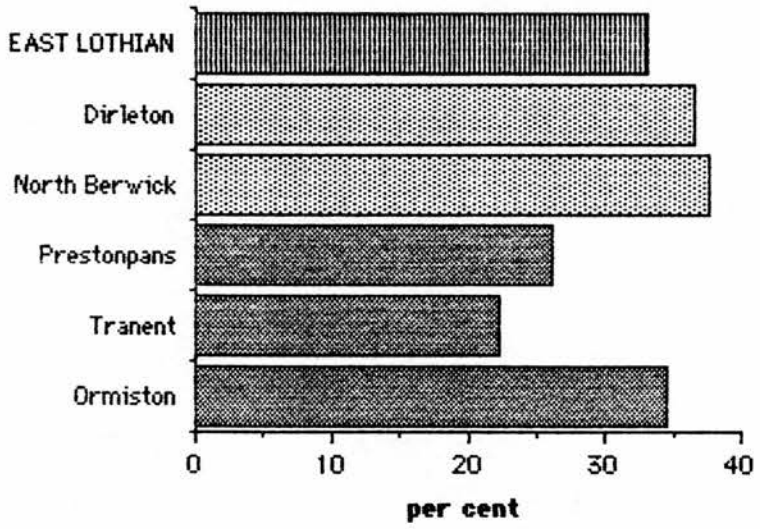
According to Howie, the reported level of adherence to the Established, Free, and United Presbyterian churches in Scotland at the end of the nineteenth century was about twenty-six per cent of the total population. On the same basis, East Lothian's membership was about thirty-three per cent. The level of church membership in 1891, for East Lothian and the five parishes concentrated upon here, are shown in Figure 7.4.

The communities of East Lothian which maintained the highest rate of marital fertility between 1881 and 1901 were, as noted above, the predominantly mining communities of Ormiston, Tranent, and Prestonpans. Miners, however, were not known at the time for their religious zeal. Indeed, it was noted in the 1890s that "In the Presbytery of Haddington, 'indifference prevails to a great extent'; though the native miners were fairly regular in attendance, the newcomers were 'utterly impossible to get hold of'."[206] The relative lack of enthusiasm for religion in the North-east District is indicated in Figure 7.5.

Figure 7.4

Church membership as a percentage of total population, 1891

East Lothian and selected parishes



In Tranent, the percentage of the population who are church members is only 22 per cent, and that of Prestonpans is not much higher, at 26 per cent. Ormiston's level of membership, however, is, at thirty-four per cent, in line with the county level. An explanation for the wide differences in level of membership between Ormiston and the the other

two palaces, might lie in the different number of 'newcomers' each received. Between 1881 and 1901 the population of Ormiston increased by only 164 persons (from 1,026 to 1,190), while the populations of Tranent and Prestonpans increased by 919 (5,198 to 6,117), and 809 (2,573 to 3,382), respectively. If so, though there is of course no way of really knowing, then the inhabitants of Ormiston may have been more typical of the 'traditional' inhabitants of the area: "in the 1890s, many country presbyteries in the South of Scotland reported that virtually all the families still had a church connection, and that people came to worship with a fair degree of regularity."[207]

Church membership levels in both North Berwick and Dirleton, at thirty-eight, and thirty-seven per cent respectively, were higher than the county average. Thus, the 'pioneers' of East Lothian, as exemplified in the behaviour of the populations of these parishes, would, like those of Ormiston, seem to be more typical of rural Scotland than the inhabitants of Tranent and Prestonpans. The important difference though, is that marital fertility declined sharply in Dirleton and North Berwick, but it rose in Ormiston. Perhaps then, the church members of Dirleton and North Berwick contained a relatively large proportion of middle-class 'pioneers' of family limitation in their ranks, while the church members of Ormiston were more working class and conservative in their atitudes to fertility. The data to hand at present cannot show this; only further detailed research into these communities is capable of providing clear answers.

Conclusion

Although the county of East Lothian may, as a whole, be classed as a relatively 'early limiter' of marital fertility, below the county level a much more complex mosaic of experience is evident. Whilst the general trend in fertility is inexorably downward, there is one significant exception to the rule (Ormiston), and two important laggards (Tranent and Prestonpans). The impact at the county level of fertility behaviour in these places is significant. For if the data for Ormiston, Tranent, and Prestonpans are omitted from the calculation, then East Lothian 'county' I_g for 1901 falls from 0.618 to 0.564, a level substantially below that which a population is reckoned to be 'definitely limiting' its marital fertility.

As has been argued here, and as exemplified in the cases of Dirleton and North Berwick on the one hand, and the Ormiston, Tranent, and Prestonpans cluster on the other, the reasons for East Lothian's internally differentiated decline in marital fertility is likely to be attributable to the various occupational structures of its parishes. But without a more precise idea of these structures, it is not possible to say how accurate the assumptions made about the effect of occupation on attitudes to family size are.

With regard to the level of church membership, in the county as a whole there is an inverse, though weak, relationship between it and marital fertility, and this is born out in four of the five parishes concentrated on here. The exception is Ormiston, the only civil parish in the county where marital fertility rose, and church membership was high, despite its being

a community in which mining predominated. Perhaps there are important class dimensions to be drawn out, which 'intervene' in the hypothesised relationship between church membership and fertility. The data available at present cannot provide that dimension. So, whatever the actual reasons behind fertility decline in the civil parishes of East Lothian, and elsewhere were, they are likely to remain obscure without further detailed research at the level of the small community.

Chapter Nine

Conclusion

The primary concern of this thesis has been to describe the onset of fertility decline in Scotland at the level of the lowest unit of aggregation for which data are published, the civil parish. The purpose behind this concern was two-fold: to establish a clearer picture of the course of fertility decline in this country than has been done hitherto; and to create a database which would form a 'springboard' for further research, in an effort to seek explanations for the occurrence of a Scottish 'demographic transition'.

Although the main task of the present study has been description, explanations for the decline of fertility in this country have also been sought. The published data available on variables at the level of the civil parish are, however, meagre. Neither do they match the 'sensitivity' of the Coale indices of fertility and nuptiality around which the database is built. Consequently, few firm answers have been found. If nothing else though, the analyses have highlighted the need for further research. Moreover, the study as a whole has emphasised the need for detailed research at the small area level.

In this chapter, the main findings of the thesis will be outlined, and the threads which link them drawn together.

There is one finding that does seem to accord at civil parish, county, and national levels for Scotland: the apparent stability of levels of nuptiality, as measured by I_m, during the onset of fertility decline. As the analysis in chapter three showed, and as is clearly illustrated in Maps 3.1 to 3.6, there was some degree of regional variation in the proportions married, with the highest levels of nuptiality found in the Lowlands and parts of the north-East. Significantly, this general pattern persisted throughout the period.

But the overall stability of nuptiality stood in marked contrast to the decline of marital fertility which occurred throughout the country. It is true, (as was illustrated in Maps 4.1 to 4.3 in terms of I_g, the index of marital fertility), that there were still quite a few places in 1901 which retained levels of marital fertility above 0.700, the level at which 'no deliberate control' of fertility within marriage is reckoned to take place. Yet the analysis done in chapter four showed that in the majority of even these high fertility places, marital fertility declined, in some cases by well over 10 per cent. Because the tendency was as much for marital fertility to fall in those places which retained I_g above 0.700 as it was in places which can be described as 'definitely limiting' their marital fertility by the end of the century, the overall degree of heterogeneity which pertained in 1881, pertained in 1901. It is apparent then, that it was persistent differences between various individual and clusters of parishes which recorded similar experiences that set the overall consistent pattern of decline.

In contrast to that for marital fertility, the pattern described by extra-marital fertility was found to be regionally distinct. It was relatively

high in the central Lowlands, and, more especially, in the north-East, though even in these areas were many places with very low illegitimacy. Nevertheless, regional differentials were maintained through the period as I_h fell everywhere. But even in the north-East the contribution of extra-marital fertility to overall fertility was fairly negligible, and in most cases was 'overwhelmed' by the contributions of nuptiality and marital fertility. Thus, given the general stability of I_m, it was clearly the decline of marital fertility which set the overall pattern of fertility decline in Scotland from 1881 on.

What then determined the overall pattern of the decline in marital fertility? According to classical theory, urbanisation has a significant role to play. The more urbanised a country, the lower is its fertility likely to be. The Princeton studies of the decline of fertility in Europe have called this connection into question, though they did find that fertility was in generally lower, and fell first and faster in urban than rural areas. Moreover, it is also the case, and more often, that nuptiality was lower in cities than in the countryside.[208] According to the civil parish data, this was not the case in Scotland. There was no significant difference apparent in this country between urban and rural areas in terms of levels of nuptiality, or in terms of levels and rates of decline in marital fertility. That the pattern of fertility decline was set locally was as true for urban parishes as it was for rural parishes

Differential employment opportunities for women offered more in the way of answers. There are good reasons from elsewhere for believing that employment opportunities did play an important role in determining whether women had fewer children. But although there were indications

that this was also the case in Scotland, at least in the burghs (the only places below the county level for which data on occupation are available) the argument could not be satisfactorily sustained by this data. As is to be expected, it was evident that the opportunities for employment outside the home which were available to women in the burghs were very much determined by local factors. Less to be expected, perhaps, is that the fact of a high participation rate by females in, for example, textile factories, could not be taken as a certain indicator of the likelihood of the preferred family size in that area being small. This suggested that it is necessary to take into account a much wider range of locally operating variables than employment opportunities.

The only useable series of data available on factors other than employment concerned church membership. It was felt initially that a positive association between 'church' and fertility would show, indicating that where church membership was high, then fertility was also likely to be high. In fact, the relationship between the two, was, to say the least, difficult to interpret. What relationship there was was inverse: in areas with high church membership there was a slight tendency for fertility to be lower, and vice versa. This was in accord with the relationship between church membership and the female occupation rate. Where the female occupation rate was high, church membership tended to be relatively high. But no clear indication of the impact of perceived church attitudes to family size could be inferred from this.

Finally, in order to demonstrate that local studies are more likely to contribute to a clearer understanding of the decline of fertility in

Scotland than summary analyses, a fairly detailed investigation of the 'rural' county of East Lothian was done. Here, it was made evident that county level indicators of fertility can be very misleading. Although at the county level East Lothian limited its marital fertility fairly early on, at the civil parish level a much more complex mosaic of experience pertained. Three 'mining parishes' retained very high fertility throughout the period; indeed, in Ormiston marital fertility increased. Equally as important, there were some places where marital fertility declined from relatively high levels at the beginning of the period, to well below the point at which 'transition' is generally reckoned to have occurred, and thus substantially below the level for the county as a whole.

As for Scotland as a whole, there are no official data published on occupation for the civil parishes of East Lothian, but the qualitative data used here suggested strongly the likelihood of a clear relationship between employment and fertility in the five communities concentrated upon. In the mining parishes of Ormiston, Tranent, and Prestonpans, marital fertility remained high. Indeed, fertility increased in Ormiston between 1881 and 1901. In the 'middle class resort and commuter' parishes of North Berwick and Dirleton, marital fertility declined sharply over the period. The inverse relationship between church membership was borne out in four of these five places also: in North Berwick and Dirleton, church membership was high and fertility was low. In Tranent and Prestonpans, church membership was low, and fertility was high. On the other hand, in the mining parish of Ormiston, where marital fertility increased between 1881 and 1901, church membership was high. It was suggested that one reason behind this may have been that it was Tranent and Prestonpans which received the bulk of the

'newcomers' who were migrating into the area in search of work in the expanding mining industry. Consequently, the population of Ormiston probably remained more solidly traditional in its attitudes to church, in an area reputed traditionally to have high church membership.

The detailed study of East Lothian may be put down as informative, but it is not satisfactory. Partly, this is due to the paucity of non-demographic data available. Nevertheless, the civil parish data set has certainly revealed how complex the patterns of fertility behaviour adopted at the local level during the decline of fertility in Scotland were. It is the data available to explain these patterns which are lacking.

In demonstrating that the need for more locally focussed, detailed research, is likely to be the most valuable, if not the only route, by which some clear answers to the 'why' of fertility decline in Scotland are likely to be obtained, this thesis has consistently pointed out the immense variability in the pattern of decline throughout Scotland. The main argument has been, therefore, that it is locally, as opposed to nationally, operating variables which determine responses in small areas. Yet, it must be borne in mind that the framework within which these local scenes were set was one of fertility decline over the whole continent of Europe - indeed, over the whole 'European world'. There was, therefore, an underlying trend at work: it is, then, the way in which this trend was responded to locally that lies at the heart of this study. Thus, bearing in mind that, 'what is actual is actual only for one time and only for one place', is true at many different levels, this study has sought to emphasise the importance of observing and analysing the decline of fertility in Scotland from a 'local' perspective, in the hope of adding to

the knowledge that has already been gained from the different perspectives offered by others.

The civil parish data and the wider debate

How does the Scottish civil parish data presented here inform our understanding of how and why the decline of fertility occurred?

It is clear from the Scottish data that the classical theory of transition is inadequate, and this echoes the findings of others. For Teitelbaum, although classical theory "provides some useful concepts and insights for interpreting the decline in marital fertility in Britain, as a predictive theory it clearly fails."[1] Woods concurs: "The secular decline of marital fertility in England and Wales was *not* directly related to..... the development of an urban-industrial society."[2] And Knodel and van de Walle, in reviewing the evidence for Europe as a whole, assert that, "although a high level of social and economic development..... may often accompany a fall in fertility, it is clearly not a precondition."[3] Thus, so far as classical transition theory maintains that fertility decline is determined in general by 'modernisation', and, in particular, by urban-industrial development, the causal link is, at best, over-stated.

How then, can the decline of fertility be accounted for? Coale has argued that there are three conditions which have to be met before fertility transition can come about: (1) fertility must be within the calculus of

---

1. Teitelbaum (1984), p.227.

2. Woods (1987), p.309.

3. Knodel & van de Walle (1986), p.399

conscious choice; (2) effective techniques of fertility reduction must be known and available; and (3) reduced fertility must be perceived as advantageous.[1] Carlsson has argued that there are two possible routes by which such conditions can be met - through a process of innovation, or through a process of adjustment. In the first instance, although couples may not consider unlimited fertility as desirable, neither adequate contraceptive methods nor the knowledge required to apply them successfully and consistently is generally available; in the second instance, knowledge of contraception, and adequate contraceptive techniques, are known and available, but the motivation to apply them is lacking, presumably because large family size is in some way advantageous.

There is little evidence from Europe and elsewhere to suggest pre-industrial populations saw uncontrolled fertility as advantageous, but in a climate of fatalism and with no adequate knowledge of the means to consistently control fertility, family limitation behaviour was not practiced by more than a few, isolated, and generally privileged groups.[2] It is probable, then, that "the conscious exercise of birth control within marriage in its modern parity-specific form is..... absent in most traditional societies."[3] A point made emphatically by the work of the Cambridge Group in England, and by Knodel in his reconstitution of fourteen German villages which provide no indication of deliberate and consistent control of marital

---

1. Coale (1965).

2. See especially, Knodel & van de Walle (1986).

3. Cleland & Wilson (1987), p.27.

fertility before the nineteenth century.[1] There is no evidence to suggest that Scotland was any different in this respect,[2] and, therefore, it is unlikely that fertility decline here was a part of a continuing process of adjustment, but rather was made possible by the adoption of new behaviour.

If the decline of fertility in Scotland was brought about by innovatory behaviour, then a general diffusion of knowledge would have to have occurred, throughout the country, of techniques such as *coitus interruptus*, the douche, the sponge, and abstention. It is not likely that the condom was generally available throughout Scotland towards the end of the 1870s, and in any case, its price would have been prohibitive.[3]

Teitelbaum argues that appliances such as *coitus interruptus*, the douche, and the sponge, did become widely available, and that information on their effective use was widely broadcast, mainly by pamphlet, from before the middle of the nineteenth century. Such knowledge, he suggests, was eagerly taken up by a significant proportion of the population. He insists that the dissemination of this knowledge, despite, or, more likely, because of determined opposition by the authorities, and the bringing to trial of principal disseminators such as Besant and Bradlaugh,[4] "contributed

---

1. On the work of the Cambridge Group, see Wilson (1984); Knodel (1978); Knodel (1987).

2. See, Flinn et al (1978), p.341 et seq.

3. Condom is used here to mean a rubber sheath. Sheaths made of skin, silk, or other materials are known to have been used before the vulcanisation of rubber in 1845 made the production of condoms possible. See, Peel (1963); Himes (1963); Noonan (1965); and Teitelbaum (1984), p.198.

4. Manvell (1976).

importantly to the ability of couples to implement their desires for fewer children"[1] Thus, "From a macrohistorical point of view, the diffusion of knowledge about effective forms of contraception during the nineteenth and twentieth centuries must rank as one of the most profound examples of the results of such diffusion upon the average person's life."[2]

Unfortunately, although his conclusion is that the dissemination of knowledge and availability of effective contraception "is likely to have contributed significantly to the British experience",[3] Teitelbaum's evidence and analysis is restricted to England (and the United States of America). However, the argument put by Teitelbaum for Britain is echoed for the rest of Europe by Knodel and van de Walle in the Princeton summary volume. "The European experience", they conclude, "suggests that there was an important innovation-diffusion dimension to the reproductive revolution dimension that swept the continent."[4]

Woods, on the other hand, agrees with Banks that there is little evidence to show that any effective appliances were generally available before the turn of the century, and which were priced low enough, to have made a significant contribution to the decline of fertility in England and Wales.[5] This being so, the only means available with which to restrict family size

---

1. Teitelbaum (1984), p.218.

2. Teitelbaum (1984), p.200.

3. Teitelbaum (1984), p.219.

4. Knodel & van de Walle (1986), p.417.

5. Woods (1987); Banks (1968).

would have been "sexual abstinence, *coitus interruptus*, anal intercourse, and abortion".[1]

If this were the case then we might expect geographical evidence of the spread of knowledge and contraceptive techniques to be reflected by the civil parish data. Teitelbaum's county-level demographic data do suggest that there was a geographical diffusion of family limitation in Scotland - from south-east to north-west. In 1881, "there is the appearance of a decline in I_g in the counties bordering England."[2] By 1901, however, "virtually all counties show a decline in I_g, with pockets of relatively high fertility continuing..... especially in the Highlands and western coast of Scotland."[3] The civil parish data, on the other hand, show clearly that the onset of fertility decline was represented simultaneously in all parts of the country, the Highlands and Islands included, and that, conversely, there were laggards - 'pockets of relatively high fertility' - in all parts of the country in 1901. Yet, despite clear evidence of family limitation occurring early on in all parts of the country, and the distinct laggardness of the industrial Western Lowlands, the civil parish data do give some impression of a Lowland - Highland diffusion of decline.

Innovations which impact upon fertility behaviour are not, however, constrained simply to step between contiguous areas. Why then, did some areas adopt family limitation before others? The civil parish data has

---

1. Woods (1987), p.291.

2. Teitelbaum (1984), p.132.

3. Teitelbaum (1984), p.133.

confirmed the findings of others that mining communities, with few opportunities for women to work outside the home, tended to have much higher than average fertility, and were markedly laggard in adopting deliberate limitation. In textile towns, on the other hand, fertility decline was rapid and general. But these are exceptions to a general rule that the correlation between structural change and family limitation is weak at all levels of aggregation in Scotland.[1] Few would argue now that family limitation percolated down from the middle to the working class.[2] But it is likely that new ideas on family size and contraception could be diffused between intermittent small areas by friends and relations, of all classes, as well as propagandists, in such a way as to produce a more complex pattern at the civil parish level than at the level of the county. The degree of receptiveness too, is unlikely to be precisely the same in all communities, and this would also contribute to the complexity of the geographical pattern. If this were so, the adoption of family limitation in a wide variety of parishes, coupled with the absence of a clear correlation between structural change and fertility, may be seen as giving support to the idea that receptiveness to innovatory fertility behaviour was culturally determined.

But just as Scotland cannot be described as an homogeneous entity in economic or social terms during the onset of fertility decline, neither was it culturally homogeneous. The 'high-farming' Borders and eastern Lowlands were English- and Lallans-speaking, while the Far North and the Gaelic-

---

1. See especially, Coale & Watkins (1987) (the Princeton summary volume); Woods (various dates); and Knodel (1987).

2. See, for example, Woods (1987).

speaking western Highlands were for the most part engaged in crofting and were relatively disadvantaged economically. The central belt, encompassed within the triangle formed by the firths of Tay, Clyde, and Forth, was ensconced in the international economy (Glasgow considered itself the 'second city of the Empire'), and contained practically all of the population, heavy industry, and commercial wealth of the country. As has been shown in this study, fertility decline at the civil parish level does not correlate at all with the proportion of the population in church membership. But there is some evidence to suggest that something all the regions of Scotland did have in common was a high level of literacy.

As was suggested in Chapter 1, it is probable that, in non-industrial, rural communities, "schooling was practically universal between the ages of seven and eleven", while in the non-industrial towns outside Glasgow, "the record of attendance was hardly inferior". In Glasgow itself, and in the western industrial counties, "briefer periods of school attendance and a lower overall level [of education]" were experienced.[1] Although parish-level data on literacy are not available for the period covering the onset of fertility decline, it seems probable that rural areas were, at least, as likely to have attained high literacy levels as the urban areas, and this in turn opens up the possibility that the lack of a general differential between the two is to be expected.

Overall then, it is clear that the simple 'modernisation' / fertility decline scenario posited by classical demographic transition theory is inadequate. What is left is the argument posited here that it is a complex of locally, as

1. Anderson (1983), pp.530, 531.

opposed to nationally, operating variables that determined the complex nature of the onset of fertility decline in this country. It seems more likely that cultural, as opposed to structural variables hold the key to the understanding of the decline of fertility. But despite the clarion call for new theories, and new approaches to the theory of transition,[1] in the absence of sufficiently detailed data on economic, social, and cultural variables to match against the demographic data contained in the civil parish data base, it is not possible to go any further at present in the search for explanations of the decline of fertility, at least so far as Scotland is concerned. What small-area level data such as those contained in the civil parish data base do provide, is a clear indication of where to begin to look for answers. In this light, the data presented in this study should be regarded as a starting point.

Future uses of the civil parish data set

The Scottish civil parish data produced for this present study represent the first plank in a proposed multi-level investigation into the demographic transition in this country. As discussed in Chapter 2, it is unfortunate that the published data for censuses previous to 1881 do not allow the computation of the Coale indices of marital and extra-marital fertility to be done at the civil parish level. Indeed, 1911 is the only other Scottish census for which an exercise identical to that done with 1881, 1891, and 1901, can be undertaken. It is intended that this be completed in the near future. Contingent with this, the data contained in the civil parish data base will be used to identify a number of parishes for which reconstitutions will

1. Kreager (1986); Woods (1987)

be done. These parishes will be chosen to represent a broad spectrum of experience - from 'laggards' to 'limiters'.

Reconstitution studies have already been produced for most of the countries of Europe. Usually these studies cover very long periods of time, and extend back well beyond the initiation of the secular decline of fertility, but the proportion of total population covered by such studies is extremely small in every case.[1] The results from the reconstitutions to be undertaken for Scotland will be directly comparable to existing studies from other parts of Europe, though it is not envisaged that they will extend back beyond the 1860s. They will of course be unique studies in their own right, but the data collected and produced - particularly that on variables such as infant mortality, employment, and (by derivation) social class - will also be incorporated into the civil parish aggregates. In time, it is hoped that a near-complete multi-level picture of the demographic transition in this country will be produced.

1. Knodel & van de Walle (1986), p.391.

Table A1.1

I_m, Scotland - Civil Parishes

Shetland - I_m

Civil Parish	CP No.	1881	1891	1901
Bressay	869	0.315	0.310	0.287
Delting	870	0.300	0.256	0.234
Dunrossness	871	0.326	0.313	0.366
Fetlar	874	0.269	0.251	0.290
Lerwick	875	0.297	0.337	0.364
Yell	891	0.254	0.300	0.280
Nesting	877	0.284	0.271	0.303
Northmavine	880	0.250	0.249	0.266
Sandsting & Aithsting	881	0.252	0.282	0.215
Tingwall	883	0.261	0.326	0.323
Unst	886	0.261	0.245	0.335
Walls	887	0.245	0.235	0.258
Shetland		0.279	0.292	0.308

Orkney - I_m

Civil Parish	CP No.	1881	1891	1901
Birsay	614	0.264	0.282	0.260
St Andrews	622	0.334	0.348	0.310
Eday & Pharay	610	0.399	0.425	0.411
Evie & Rendall	616	0.337	0.298	0.364
Firth	618	0.342	0.390	0.322
Stennes	625	0.342	0.390	0.370
Holm & Paplay	619	0.417	0.386	0.343
Hoy & Graemsay	611	0.355	0.353	0.335
Kirkwall & St Ola	620	0.406	0.338	0.340

Cross & Burness	628	0.476	0.326	0.318
Orphir	621	0.427	0.400	0.387
Rousay & Egilshay	627	0.456	0.343	0.354
Lady	629	0.341	0.326	0.318
Sandwick	624	0.298	0.301	0.301
Shapinshay	630	0.436	0.331	0.425
South Ronaldshay & Burray	631	0.386	0.347	0.367
Stromness	626	0.364	0.302	0.345
Stronsay	632	0.378	0.459	0.502
Flotta	612	0.433	0.339	0.309
Papa-Westray	633	0.455	0.403	0.406
Westray	634	0.435	0.453	0.387
Orkney		0.379	0.349	0.348

Caithness - I_m

Civil Parish	CP No.	1881	1891	1901
Bower	280	0.284	0.276	0.329
Wick	284	0.373	0.382	0.396
Dunnet	285	0.317	0.318	0.348
Halkirk	287	0.358	0.347	0.327
Latheron	286	0.313	0.311	0.324
Olrig	281	0.356	0.331	0.311
Reay	288	0.285	0.309	0.289
Thurso	289	0.414	0.347	0.330
Watten	282	0.307	0.363	0.287
Caithness		0.356	0.349	0.355

Sutherland - I_m

Civil Parish	CP No.	1881	1891	1901
Assynt	828	0.269	0.308	0.355
Clyne	836	0.331	0.354	0.370
Creich	829	0.307	0.307	0.274
Dornoch	830	0.343	0.336	0.361
Durness	831	0.273	0.312	0.334
Edrachillis	832	0.303	0.305	0.366
Farr	839	0.331	0.309	0.388
Golspie	833	0.314	0.297	0.356
Kildonan	837	0.325	0.353	0.312
Lairg	834	0.363	0.264	0.247

Loth	838	0.361	0.297	0.204
Rogart	835	0.367	0.336	0.252
Tongue	840	0.304	0.367	0.396
Sutherland		0.318	0.323	0.337

Ross and Cromarty - I_m

Civil Parish	CP No.	1881	1891	1901
Alness	739	0.325	0.289	0.300
Applecross	758	0.300	0.333	0.345
Avoch	736	0.464	0.450	0.440
Contin	760	0.327	0.311	0.278
Cromarty	746	0.386	0.429	0.414
Dingwall	740	0.306	0.300	0.329
Edderton	766	0.330	0.255	0.351
Fearn	743	0.316	0.336	0.384
Fodderty	741	0.279	0.300	0.302
Gairloch Northern	749	0.323	0.333	0.345
Glenshiel	763	0.354	0.304	0.271
Killearnan	737	0.307	0.317	0.363
Kilmuir-Easter	750	0.300	0.282	0.370
Kiltearn	742	0.318	0.328	0.313
Kincardine	767	0.311	0.276	0.295
Kintail	764	0.224	0.341	0.301
Knockbain	738	0.361	0.300	0.334
Lochalsh	765	0.282	0.270	0.326
Lochbroom	757	0.358	0.356	0.294
Lochcarron	759	0.360	0.333	0.327
Logie-Easter	751	0.287	0.333	0.330
Nigg	744	0.334	0.329	0.412
Resolis	747	0.298	0.241	0.288
Rosemarkie	748	0.335	0.294	0.319
Rosskeen	752	0.342	0.322	0.342
Tain	768	0.295	0.305	0.285
Tarbat	745	0.329	0.351	0.335
Urquhart & Logie-Wester	761	0.287	0.286	0.276
Urray	762	0.325	0.311	0.278
Barvas	753	0.378	0.341	0.365
Lochs	754	0.410	0.341	0.365
Stornoway	755	0.351	0.356	0.359
Uig	756	0.323	0.341	0.365
Ross and Cromarty		0.339	0.331	0.342

Inverness - I_m

Civil Parish	CP No.	1881	1891	1901
Abernethy & Kincardine	438	0.260	0.241	0.274
Alvie	439	0.291	0.261	0.257
Ardersier	445	0.526	0.555	0.477
Boleskine	433	0.251	0.318	0.408
Croy & Dalcross	608	0.301	0.334	0.345
Daviot & Dunlichty	447	0.271	0.342	0.339
Dores	448	0.317	0.318	0.325
Duthil	440	0.274	0.355	0.326
Glenelg	453	0.285	0.263	0.286
Inverness	449	0.378	0.334	0.348
Kilmonivaig	455	0.283	0.302	0.302
Kilmorack	434	0.313	0.311	0.290
Kiltarlity	435	0.262	0.311	0.290
Kingussie & Insh	441	0.313	0.310	0.308
Kirkhill	436	0.304	0.298	0.366
Laggan	442	0.340	0.310	0.247
Moy & Dalarossie	450	0.259	0.328	0.409
Petty	451	0.394	0.315	0.413
Urquhart	437	0.286	0.280	0.285
Barra	443	0.395	0.340	0.381
Bracadale	458	0.203	0.264	0.317
Duirnish	459	0.336	0.327	0.323
Harris	444	0.371	0.316	0.322
Kilmuir	460	0.393	0.307	0.340
North Uist	457	0.331	0.310	0.300
Portree	461	0.353	0.337	0.296
Sleat	462	0.388	0.357	0.338
Small Isles	456	0.358	0.312	0.305
Snizort	463	0.317	0.307	0.340
South Uist	465	0.301	0.286	0.299
Strath	464	0.350	0.357	0.350
Inverness		0.340	0.325	0.333

Nairn - I_m

Civil Parish	CP No.	1881	1891	1901
Ardclach	605	0.304	0.283	0.333
Auldearn	606	0.318	0.337	0.438
Cawdor	607	0.374	0.328	0.334
Nairn	609	0.343	0.328	0.323
Nairn		0.339	0.305	0.339

Elgin - I_m

Civil Parish	CP No.	1881	1891	1901
Alves	590	0.488	0.456	0.473
Bellie	594	0.404	0.441	0.460
Birnie	591	0.346	0.453	0.397
Boharm	237	0.376	0.384	0.368
Cromdale &Advie	586	0.301	0.355	0.342
Dallas	597	0.296	0.337	0.351
Drainie	587	0.497	0.468	0.452
Duffus	588	0.461	0.369	0.436
Dyke	598	0.346	0.293	0.376
Edinkillie	599	0.386	0.283	0.378
Elgin	592	0.320	0.369	0.346
New Spynie	589	0.331	0.369	0.346
Forres	600	0.379	0.331	0.336
Kinloss	601	0.372	0.384	0.379
Knockando	603	0.339	0.329	0.385
Rafford	602	0.359	0.375	0.328
Rothes	604	0.398	0.383	0.412
St Andrews-Lhanbryde	593	0.358	0.369	0.346
Speymouth	595	0.439	0.413	0.378
Urquhart	596	0.374	0.306	0.312
Elgin		0.374	0.394	0.399

Banff - I_m

Civil Parish	CP No.	1881	1891	1901
Aberlour	232	0.354	0.349	0.415
Alvah	224	0.293	0.350	0.363
Banff	225	0.406	0.324	0.354
Botriphnie	238	0.327	0.304	0.380

Boyndie	226	0.461	0.437	0.404
Cullen	229	0.418	0.441	0.460
Deskford	230	0.357	0.315	0.312
Fordyce	231	0.414	0.401	0.410
Forglen	220	0.380	0.367	0.383
Gamrie	227	0.406	0.404	0.402
Grange	239	0.391	0.330	0.371
Inveravon	234	0.310	0.333	0.396
Inverkeithny	221	0.375	0.325	0.373
Keith	240	0.408	0.405	0.391
Kirkmichael	235	0.228	0.267	0.360
Marnoch	222	0.392	0.378	0.414
Mortlach	236	0.362	0.349	0.415
Ordiquhill	223	0.322	0.325	0.310
Rathven	228	0.489	0.441	0.460
Rothiemay	241	0.370	0.396	0.437
St Fergus	35	0.416	0.419	0.432
Banff		0.406	0.370	0.391

Aberdeen - I_m

Civil Parish	CP No.	1881	1891	1901
ABERDEEN	1	0.483	0.480	0.424
Old Machar (Abrdn)	10	0.371	0.320	0.356
Aberdour	25	0.451	0.394	0.389
Aboyne	38	0.419	0.334	0.368
Alford	13	0.396	0.410	0.418
Auchindoir	14	0.385	0.410	0.416
Auchterless	79	0.395	0.359	0.389
Belhelvie	2	0.405	0.353	0.427
Birse	39	0.362	0.334	0.439
Bourtie	57	0.277	0.302	0.305
Cabrach	233	0.323	0.403	0.357
Cairney	72	0.379	0.405	0.368
Chapel of Garioch	58	0.431	0.348	0.379
Clatt	15	0.318	0.319	0.412
Cluny	40	0.385	0.386	0.374
Coull	41	0.337	0.382	0.354
Crathie & Braemar	42	0.296	0.197	0.298
Cruden	49	0.466	0.438	0.389
Culsamond	59	0.364	0.367	0.405
Daviot	60	0.361	0.286	0.314
Drumblade	73	0.326	0.370	0.328

Drumoak	3	0.347	0.306	0.437
Dyce	4	0.498	0.465	0.446
Echt	5	0.385	0.354	0.404
Ellon	50	0.396	0.394	0.389
Fintray	6	0.396	0.408	0.331
Forgue	74	0.409	0.359	0.389
Foveran	51	0.501	0.465	0.459
Fraserburgh	27	0.474	0.394	0.468
Fyvie	80	0.339	0.376	0.371
Gartly	75	0.321	0.346	0.351
Glass	76	0.310	0.278	0.351
Glenbucket	16	0.308	0.292	0.335
Glenmuick	43	0.372	0.326	0.342
Huntly	77	0.391	0.371	0.370
Insch	61	0.403	0.344	0.328
Inverurie	62	0.431	0.370	0.423
Keig	17	0.440	0.377	0.313
Keithhall	63	0.320	0.237	0.445
Kemnay	64	0.570	0.514	0.546
Kildrummy	18	0.340	0.322	0.368
Kincardine O'Neil	44	0.360	0.337	0.389
King Edward	81	0.415	0.350	0.318
Kinnellar	7	0.383	0.368	0.372
Kinnethmont	19	0.374	0.407	0.436
Kintore	65	0.460	0.430	0.443
Leochel-Cushnie	20	0.387	0.299	0.350
Leslie	66	0.382	0.271	0.367
Logie-Buchan	52	0.445	0.429	0.579
Logie-Coldstone & Cromar.	45	0.372	0.326	0.342
Lumphanan	46	0.348	0.426	0.427
Methlic	53	0.317	0.394	0.338
Midmar	47	0.395	0.386	0.361
Monquhitter	82	0.427	0.376	0.371
Monymusk	68	0.441	0.310	0.474
New Deer	30	0.335	0.394	0.389
Newhills	8	0.415	0.335	0.359
New Machar	9	0.445	0.380	0.386
Old Deer	31	0.409	0.394	0.389
Old Meldrum	67	0.455	0.403	0.385
Oyne	69	0.408	0.365	0.328
Peterculter	11	0.360	0.301	0.327
Peterhead	32	0.523	0.464	0.456
Pitsligo	33	0.511	0.470	0.484
Premnay	70	0.444	0.428	0.393
Rathen	34	0.401	0.440	0.433

Rayne	71	0.350	0.330	0.389
Rhynie	78	0.402	0.425	0.428
Skene	12	0.338	0.320	0.327
Slains	54	0.354	0.329	0.435
Strathdon	21	0.314	0.326	0.290
Tarland	48	0.359	0.326	0.436
Tarves	55	0.409	0.394	0.389
Tough	22	0.404	0.378	0.392
Towie	23	0.370	0.326	0.375
Tullynessle & Forbes	24	0.396	0.442	0.378
Turriff	83	0.390	0.369	0.357
Tyrie	37	0.429	0.394	0.389
Udny	56	0.447	0.380	0.388
Aberdeen		0.418	0.382	0.411

Kincardine - I_m

Civil Parish	CP No.	1881	1891	1901
Arbuthnot	474	0.439	0.427	0.439
Banchory-Devenick	471	0.360	0.301	0.305
Banchory-Ternan	482	0.377	0.323	0.374
Benholm	475	0.491	0.466	0.442
Bervie	476	0.429	0.434	0.386
Dunnottar	478	0.498	0.507	0.489
Durris	483	0.442	0.330	0.386
Fettercairn	466	0.357	0.415	0.391
Fetteresso	479	0.386	0.346	0.338
Fordoun	467	0.438	0.417	0.415
Garvock	468	0.496	0.444	0.537
Glenbervie	480	0.459	0.357	0.394
Kinneff & Catterline	481	0.538	0.406	0.491
Laurencekirk	469	0.470	0.393	0.384
Maryculter	472	0.339	0.301	0.305
Marykirk	470	0.465	0.447	0.451
Nigg	473	0.468	0.474	0.417
St Cyrus	477	0.453	0.455	0.416
Strachan	484	0.357	0.385	0.337
Kincardine		0.423	0.411	0.389

Forfar - I_m

Civil Parish	CP No.	1881	1891	1901
Aberlemno	99	0.516	0.405	0.421
Airlie	110	0.535	0.457	0.489
Arbirlot	93	0.452	0.488	0.478
Arbroath	94	0.398	0.373	0.387
Auchterhouse	119	0.487	0.466	0.523
Barry	95	0.369	0.368	0.419
Brechin	84	0.339	0.320	0.310
Carmylie	96	0.495	0.473	0.525
Careston	85	0.397	0.434	0.451
Cortachy & Clova	111	0.433	0.351	0.396
Coupar-Angus	669	0.393	0.360	0.370
Craig	130	0.542	0.453	0.355
Dun	86	0.434	0.459	0.423
DUNDEE	120	0.400	0.384	0.380
Dunnichen	100	0.524	0.428	0.421
Eassie & Nevay	101	0.487	0.551	0.566
Edzell	87	0.422	0.415	0.387
Farnell	131	0.463	0.453	0.454
Fearn	112	0.498	0.500	0.443
Forfar	102	0.393	0.355	0.323
Glamis	103	0.421	0.432	0.399
Glenisla	113	0.392	0.371	0.408
Guthrie	104	0.448	0.428	0.500
Inverarity	105	0.458	0.428	0.392
Inverkeillor	132	0.517	0.472	0.453
Kettins	122	0.432	0.319	0.457
Kingoldrum	114	0.531	0.375	0.394
Kinnell	133	0.439	0.473	0.523
Kinnettles	106	0.382	0.416	0.473
Kirkden	107	0.526	0.428	0.458
Kirriemuir	115	0.374	0.351	0.343
Lethnott & Navar	88	0.335	0.435	0.426
Liff, Benvie, etc.	123	0.438	0.384	0.380
Lintrathen	116	0.381	0.420	0.408
Lochlee	89	0.265	0.354	0.372
Logie-Pert	90	0.395	0.330	0.352
Lunan	134	0.410	0.473	0.554
Lundie	124	0.586	0.521	0.499
Mains	125	0.455	0.397	0.380
Marytown	135	0.382	0.473	0.446
Menmuir	91	0.498	0.360	0.398
Monifieth	126	0.398	0.383	0.377

Monikie	97	0.466	0.462	0.501
Montrose	136	0.383	0.351	0.355
Murroes	127	0.549	0.384	0.579
Newtyle	128	0.473	0.432	0.363
Oathlaw	108	0.479	0.455	0.500
Panbride	98	0.359	0.373	0.347
Rescobie	109	0.392	0.444	0.407
Ruthven	117	0.484	0.356	0.383
Stracathro	92	0.471	0.380	0.424
Tannadice	118	0.468	0.453	0.406
Teeling	129	0.539	0.466	0.466
Kincardine		0.402	0.411	0.389

Perth - I_m

Civil Parish	CP No.	1881	1891	1901
Aberdalgie	685	0.497	0.382	0.377
Dull	677	0.327	0.319	0.314
Aberfoyle	711	0.285	0.446	0.499
Abernethy	686	0.354	0.368	0.311
Abernyte	687	0.425	0.456	0.527
Alyth	662	0.379	0.339	0.318
Ardoch	712	0.349	0.319	0.351
Auchterarder	649	0.315	0.284	0.288
Auchtergaven	689	0.347	0.319	0.340
Bendochy	663	0.450	0.339	0.404
Blackford	650	0.438	0.319	0.421
Blair-Atholl	676	0.347	0.319	0.314
Blairgowrie	664	0.335	0.339	0.318
Callander	714	0.365	0.271	0.278
Caputh	665	0.408	0.319	0.327
Cargill	666	0.405	0.319	0.438
Clunie	667	0.316	0.319	0.334
Collace	668	0.345	0.319	0.511
Comrie	651	0.334	0.319	0.354
Crieff	652	0.366	0.319	0.322
Culross	396	0.364	0.331	0.413
Dowally	678	0.374	0.319	0.327
Dron	690	0.499	0.394	0.364
Dunbarney	691	0.358	0.363	0.324
Dunblane	715	0.404	0.319	0.351
Dunning	653	0.371	0.324	0.339
Errol	692	0.413	0.411	0.421

Findo-Gask	695	0.480	0.552	0.470
Forgandenny	693	0.400	0.433	0.363
Forteviot	694	0.446	0.433	0.442
Fortingall	679	0.257	0.323	0.345
Fowlis-Easter	121	0.601	0.508	0.522
Fowlis-Wester	654	0.338	0.319	0.377
Glendevon	655	0.308	0.313	0.327
Inchture	696	0.481	0.406	0.444
Kenmore	680	0.292	0.319	0.314
Killin	716	0.308	0.319	0.314
Kilmadock	717	0.295	0.335	0.300
Kilspindie	697	0.546	0.484	0.446
Kincardine	718	0.424	0.335	0.352
Kinfauns	699	0.418	0.368	0.450
Kinloch-Rannoch	670	0.320	0.319	0.323
Kinnaird	700	0.554	0.416	0.473
Kinnoul	701	0.438	0.368	0.355
Kirkmichael	671	0.296	0.339	0.318
Lethendy	672	0.289	0.319	0.323
Little Dunkeld	681	0.364	0.319	0.340
Logie	806	0.286	0.396	0.268
Logialmond	656	0.422	0.319	0.340
Logierait	682	0.334	0.319	0.314
Longforgan	702	0.449	0.390	0.419
Madderty	657	0.366	0.324	0.359
Meigle	673	0.451	0.360	0.370
Methven	703	0.335	0.319	0.340
Moneydie	704	0.288	0.319	0.288
Monzievaird & Strowan	658	0.281	0.319	0.301
Moulin	683	0.307	0.319	0.314
Muckart	659	0.355	0.333	0.318
Muthil	660	0.362	0.319	0.358
Perth	705	0.409	0.368	0.355
Port of Montieth	719	0.371	0.347	0.341
Rattray	674	0.307	0.283	0.258
Rhynd	707	0.377	0.464	0.432
St Madoes	708	0.425	0.368	0.449
St Martins	675	0.385	0.368	0.432
Scone	709	0.365	0.368	0.343
Tibbermore	710	0.386	0.368	0.328
Trinity-Gask	661	0.365	0.323	0.346
Tulliallan	402	0.432	0.426	0.388
Weem	684	0.390	0.319	0.333
Perth		0.370	0.355	0.345

Fife - I_m

Civil Parish	CP No.	1881	1891	1901
Abdie	374	0.472	0.368	0.331
Aberdour	394	0.542	0.423	0.459
Anstruther	416	0.394	0.344	0.342
Arngask	688	0.422	0.348	0.425
Auchterderran	403	0.650	0.589	0.664
Auchtermuchty	375	0.329	0.303	0.296
Auchtertool	404	0.564	0.632	0.612
Ballingry	405	0.654	0.589	0.697
Balmerino	376	0.443	0.474	0.368
Beath	406	0.729	0.659	0.646
Burntisland	407	0.544	0.569	0.519
Cameron	417	0.464	0.376	0.519
Carnbee	418	0.481	0.395	0.416
Carnock	395	0.360	0.421	0.530
Ceres	377	0.441	0.400	0.389
Collessie	378	0.465	0.443	0.392
Crail	419	0.486	0.415	0.401
Creich	379	0.468	0.479	0.468
Cults	380	0.506	0.443	0.381
Cupar	381	0.331	0.300	0.326
Dairsie	382	0.442	0.381	0.387
Dalgetty	397	0.542	0.557	0.505
Dunbog	383	0.543	0.519	0.499
Dunfermline	398	0.404	0.385	0.383
Kirkcaldy & Dysart	411	0.412	0.411	0.461
Elie	421	0.317	0.365	0.298
Falkland	384	0.251	0.246	0.244
Ferry-Port-on-Craig	422	0.390	0.324	0.360
Flisk	385	0.480	0.519	0.499
Forgan	423	0.301	0.258	0.252
Inverkeithing	399	0.545	0.385	0.417
Kemback	386	0.277	0.320	0.344
Kennoway	408	0.356	0.363	0.482
Kettle	387	0.403	0.382	0.395
Kilconquhar	424	0.427	0.365	0.378
Kilmany	388	0.348	0.387	0.381
Kilrenny	425	0.515	0.433	0.467
Kinghorn	409	0.417	0.423	0.405
Kinglassie	410	0.352	0.589	0.520
Kingsbarns	426	0.511	0.415	0.393

Largo	427	0.414	0.422	0.420
Largo	412	0.304	0.288	0.310
Leslie	428	0.471	0.447	0.421
Logie	389	0.477	0.431	0.378
Markinch	413	0.427	0.533	0.461
Monimail	390	0.478	0.415	0.390
Moonzie	391	0.461	0.436	0.572
Newburgh	392	0.437	0.368	0.420
Newburn	429	0.531	0.311	0.249
Pittenweem	430	0.541	0.492	0.459
St Andrews & St Leonards	431	0.337	0.308	0.267
St Monance (Abercrombie)	432	0.514	0.462	0.482
Saline	400	0.368	0.426	0.468
Scoonie	414	0.447	0.459	0.498
Strathmiglo	393	0.359	0.368	0.326
Torryburn	401	0.437	0.426	0.442
Wemyss	415	0.496	0.533	0.601
Fife		0.425	0.421	0.436

Kinross - I_m

Civil Parish	CP No.	1881	1891	1901
Cleish	485	0.368	0.385	0.471
Fossoway & Tulliebole	486	0.365	0.313	0.430
Kinross	487	0.364	0.371	0.408
Orwell	488	0.324	0.349	0.455
Portmoak	489	0.402	0.589	0.494
Kinross		0.358	0.361	0.438

Clackmannan - I_m

Civil Parish	CP No.	1881	1891	1901
Alloa	290	0.467	0.396	0.436
Clackmannan	291	0.484	0.396	0.397
Dollar	293	0.255	0.231	0.262
Tillicoultry	294	0.360	0.359	0.340
Clackmannan		0.421	0.323	0.385

Stirling - I_m

Civil Parish	CP No.	1881	1891	1901
Airth	812	0.554	0.417	0.492
Alva	292	0.437	0.396	0.322
Baldernock	826	0.318	0.290	0.297
Balfron	820	0.347	0.320	0.302
Grangemouth	815	0.597	0.561	0.556
Buchanan	818	0.328	0.258	0.246
Campsie	827	0.404	0.373	0.390
Denny	809	0.559	0.524	0.538
Drymen	819	0.295	0.334	0.315
Dunnipace	810	0.500	0.510	0.523
Falkirk	814	0.590	0.561	0.556
Fintry	821	0.364	0.373	0.394
Gargunnock	822	0.340	0.311	0.372
Killearn	823	0.376	0.330	0.258
Kilsyth	811	0.558	0.556	0.561
Kippen	824	0.357	0.295	0.339
Larbert	813	0.555	0.530	0.501
Muiravonside	816	0.553	0.603	0.630
Stirling	807	0.439	0.395	0.406
Slamannan	817	0.719	0.664	0.621
Strathblane	825	0.362	0.359	0.376
Stirling		0.511	0.490	0.489

Dunbarton - I_m

Civil Parish	CP No.	1881	1891	1901
Bonhill	346	0.367	0.355	0.375
Cardross	347	0.388	0.478	0.508
Cumbernauld	338	0.554	0.517	0.527
Dumbarton	344	0.542	0.478	0.508
Kilmaronock	348	0.317	0.274	0.280
Kirkintilloch	342	0.470	0.448	0.456
Luss	349	0.374	0.213	0.274
Bearsden	343	0.485	0.432	0.405
Clydebank	345	0.582	0.582	0.508
Roseneath	341	0.326	0.261	0.265
Rhu	340	0.316	0.300	0.284
Dunbarton		0.439	0.436	0.438

Argyll - I_m

Civil Parish	CP No.	1881	1891	1901
Ardchattan	169	0.346	0.346	0.302
Ardnamurchan	138	0.344	0.268	0.303
Arisaig	452	0.284	0.268	0.303
Ballachulish & Ardgour	137	0.302	0.310	0.334
Campbeltown	152	0.446	0.448	0.370
Craignish	158	0.352	0.254	0.305
Cumlodden & Minnard	159	0.408	0.345	0.324
Dunoon & Kilmun	140	0.331	0.294	0.332
Glenorchy	171	0.345	0.346	0.302
Inverary	160	0.351	0.345	0.324
Inverchaolain	141	0.347	0.327	0.253
Kilbrandon & Kilchattan	172	0.388	0.304	0.330
Kilcalmonell	154	0.311	0.345	0.324
Dalavich	173	0.381	0.346	0.302
Kilfinan	142	0.438	0.376	0.304
Killean & Kilchenzie	155	0.280	0.258	0.238
Kilmallie	454	0.294	0.310	0.334
Kilmartin	161	0.265	0.321	0.311
Kilmodan	143	0.372	0.372	0.252
Kilmore & Kilbride	174	0.403	0.336	0.297
Kilninver	175	0.362	0.254	0.290
Lismore	170	0.364	0.310	0.334
Lochgoilhead	144	0.379	0.304	0.330
Morvern	139	0.286	0.295	0.297
North Knapdale	162	0.277	0.277	0.253
Saddell & Skipness	156	0.438	0.345	0.324
Southend	157	0.368	0.295	0.254
South Knapdale	163	0.223	0.345	0.324
Stralachlan	146	0.389	0.284	0.194
Strachur	145	0.384	0.290	0.259
Bowmore (Kilarrow)	149	0.335	0.317	0.327
Gigha	153	0.343	0.425	0.407
Jura	148	0.309	0.304	0.330
Colonsay	147	0.310	0.347	0.175
Kilchoman	150	0.333	0.293	0.299
Kildalton & Oa	151	0.351	0.330	0.306
Kilfinichen & Kilvickeon.	165	0.380	0.316	0.343
Kilninian & Kilmore	166	0.311	0.299	0.348
Kinlochspelvie	167	0.207	0.299	0.348
Tyree	168	0.328	0.258	0.244
Coll	164	0.398	0.296	0.267
Argyll		0.363	0.331	0.321

Bute - I_m

Civil Parish	CP No.	1881	1891	1901
Cumbrae	279	0.376	0.434	0.296
Kilbride	274	0.273	0.285	0.288
Kilmory	275	0.277	0.285	0.288
Kingarth	276	0.431	0.304	0.317
North Bute	277	0.304	0.351	0.307
Rothesay	278	0.370	0.351	0.334
Bute		0.347	0.377	0.317

Renfrew - I_m

Civil Parish	CP No.	1881	1891	1901
Paisley	725	0.416	0.410	0.410
Cathcart(Glasgow ptn.)	553	0.354	0.331	0.352
Cathcart(Ldwd.)	720	0.354	0.331	0.394
Eaglesham	721	0.323	0.291	0.352
Eastwood	722	0.420	0.421	0.416
Erskine	726	0.327	0.327	0.340
Greenock	732	0.560	0.495	0.455
Houston & Killellan	729	0.376	0.357	0.372
Inchinnan	727	0.299	0.373	0.370
Inverkip	733	0.392	0.374	0.353
Kilbarchan	730	0.426	0.387	0.372
Kilmalcolm	734	0.329	0.305	0.274
Lochwinnoch	731	0.334	0.335	0.419
Mearns	723	0.303	0.324	0.345
Neilston	724	0.296	0.410	0.410
Port-Glasgow	735	0.532	0.495	0.482
Renfrew	728	0.551	0.410	0.496
Renfrew		0.452	0.421	0.417

Ayr - I_m

Civil Parish	CP No.	1881	1891	1901
Old Ardrossan	216	0.493	0.434	0.409
Auchinleck	185	0.664	0.635	0.607
Ayr	176	0.426	0.425	0.424
Ballantrae	193	0.442	0.390	0.336
Barr	194	0.297	0.342	0.322
Beith	201	0.463	0.477	0.431
Colmonell	195	0.338	0.345	0.324
Coylton	182	0.639	0.539	0.532
Craigie	177	0.202	0.228	0.304
Dailly	196	0.526	0.440	0.415
Dalmellington	183	0.690	0.425	0.424
Dalry	202	0.452	0.371	0.388
Dalrymple	184	0.442	0.425	0.424
Dreghorn	198	0.627	0.602	0.576
Dundonald	178	0.421	0.490	0.465
Dunlop	204	0.405	0.381	0.400
Fenwick	205	0.261	0.254	0.266
Galston	214	0.504	0.491	0.460
Girvan	197	0.419	0.392	0.369
Irvine	199	0.553	0.490	0.465
Kilbirnie	203	0.373	0.354	0.442
Kilmarnock	206	0.496	0.459	0.461
Kilmaurs	207	0.551	0.597	0.544
Kilwinning	200	0.524	0.507	0.543
Maybole	212	0.427	0.425	0.424
Largs	217	0.377	0.332	0.309
Loudoun	215	0.422	0.408	0.414
Mauchline	186	0.436	0.405	0.433
Monkton & Prestwick	179	0.409	0.336	0.354
Muirkirk	187	0.661	0.604	0.588
New Cumnock	188	0.499	0.519	0.552
Ochiltree	189	0.329	0.493	0.467
Old Cumnock	190	0.516	0.443	0.453
Riccarton	208	0.605	0.491	0.553
Sorn	191	0.377	0.399	0.431
Stair	192	0.498	0.493	0.518
Stevenston	218	0.576	0.577	0.589
Stewarton	209	0.362	0.347	0.306
Straiton	213	0.452	0.425	0.424
Symington	180	0.330	0.211	0.276

Tarbolton	181	0.534	0.479	0.509
West Kilbride	219	0.428	0.434	0.409
Ayr		0.480	0.450	0.450

Lanark - I_m

Civil Parish	CP No.	1881	1891	1901
Avondale	538	0.394	0.320	0.347
Biggar	518	0.386	0.353	0.343
Blantyre	543	0.571	0.638	0.643
Bothwell	545	0.581	0.560	0.607
Cadder	552	0.499	0.515	0.493
Cambusnethan	546	0.615	0.584	0.566
Cambuslang	549	0.588	0.570	0.543
Carluke	531	0.557	0.471	0.457
Carmichael	519	0.440	0.310	0.507
Carmunnock	550	0.275	0.269	0.265
Carnwath	532	0.557	0.539	0.542
Carstairs	533	0.544	0.484	0.425
Covington & Thankerton	520	0.371	0.405	0.332
Crawford	521	0.544	0.451	0.428
Crawfordjohn	522	0.295	0.303	0.299
Culter	523	0.240	0.240	0.301
Dalserf	539	0.618	0.563	0.607
Dalziel	547	0.716	0.587	0.607
Dolphinton	534	0.375	0.325	0.379
Douglas	529	0.465	0.448	0.500
Dunsyre	535	0.303	0.372	0.483
East Kilbride	544	0.356	0.331	0.319
GLASGOW	554	0.488	0.475	0.463
Glassford	540	0.360	0.344	0.417
Hamilton	541	0.574	0.587	0.607
Lanark	536	0.377	0.332	0.341
Lesmahagow	530	0.543	0.481	0.475
Libberton	524	0.272	0.237	0.335
Airdrie	556	0.584	0.598	0.571
Coatbridge	557	0.603	0.598	0.579
Pettinain	525	0.327	0.262	0.389
Rutherglen	551	0.491	0.499	0.493
Shotts	548	0.656	0.584	0.566
Stonehouse	542	0.507	0.403	0.406
Symington	526	0.286	0.304	0.290
Walston	537	0.335	0.320	0.294

Wandell & Lamington	527	0.344	0.351	0.355
Wiston & Roberton	528	0.254	0.306	0.356
Lanark		0.505	0.493	0.487

Linlithgow - I_m

Civil Parish	CP No.	1881	1891	1901
Abercorn	843	0.413	0.426	0.433
Bathgate	846	0.589	0.575	0.594
Bo'ness	841	0.585	0.569	0.544
Carriden	844	0.524	0.389	0.528
Ecclesmachen	848	0.436	0.389	0.591
Kirkliston	559	0.505	0.389	0.509
Linlithgow	842	0.475	0.389	0.521
Livingstone	850	0.530	0.553	0.643
Torphicen	847	0.465	0.448	0.573
Uphall	849	0.701	0.672	0.644
Whitburn	851	0.620	0.546	0.610
Linlithgow		0.566	0.402	0.575

Edinburgh - I_m

Civil Parish	CP No.	1881	1891	1901
Borthwick	563	0.483	0.375	0.516
Carrington	573	0.523	0.460	0.425
Cockpen	574	0.465	0.375	0.516
EDINBURGH	579	0.413	0.389	0.385
Cranston	564	0.425	0.371	0.383
Crichton	565	0.441	0.371	0.335
Currie	558	0.379	0.447	0.379
Dalkeith	575	0.436	0.447	0.416
Fala & Soutra	566	0.390	0.366	0.407
Glencorse	577	0.517	0.472	0.449
Heriot	567	0.545	0.375	0.319
Inveresk	571	0.459	0.389	0.385
Kirknewton & East Calder.	561	0.609	0.447	0.616
Lasswade	570	0.484	0.481	0.430
Mid-Calder	562	0.525	0.634	0.618
Newbattle	576	0.502	0.375	0.516
Newton	572	0.495	0.481	0.477
Penicuik	578	0.478	0.437	0.430

Ratho	560	0.544	0.430	0.439
Stow	568	0.447	0.375	0.319
Temple	569	0.448	0.425	0.415
West-Calder	585	0.713	0.617	0.576
Edinburgh		0.425	0.424	0.393

Haddington - I_m

Civil Parish	CP No.	1881	1891	1901
Aberlady	365	0.301	0.394	0.351
Athelstaneford	357	0.358	0.334	0.337
Bolton	358	0.374	0.324	0.317
Dirleton	366	0.337	0.359	0.369
Dunbar	350	0.397	0.380	0.392
Garvald	359	0.447	0.403	0.410
Gladsmuir	370	0.457	0.430	0.454
Haddington	360	0.404	0.355	0.366
Humbie	361	0.399	0.366	0.330
Innerwick	351	0.333	0.373	0.339
Morham	362	0.335	0.437	0.496
North Berwick	367	0.363	0.311	0.279
Oldhamstocks	352	0.339	0.387	0.410
Ormiston	371	0.507	0.513	0.486
Pencaitland	372	0.464	0.409	0.491
Prestonkirk	353	0.355	0.334	0.343
Prestonpans	369	0.570	0.481	0.589
Salton	363	0.380	0.355	0.295
Spott	354	0.325	0.292	0.353
Stenton	355	0.276	0.292	0.351
Tranent	373	0.569	0.535	0.507
Whitekirk & Tynninghame	368	0.303	0.266	0.307
Whittinghame	356	0.325	0.388	0.336
Yester	364	0.345	0.417	0.348
Haddington		0.414	0.393	0.398

Berwick - I_m

Civil Parish	CP No.	1881	1891	1901
Abbey St Bathans	242	0.536	0.371	0.504
Ayton	243	0.381	0.357	0.352
Bunkle & Preston	244	0.287	0.299	0.295
Channelkirk	265	0.521	0.459	0.371
Chirnside	245	0.408	0.392	0.351
Cockburnpath	246	0.420	0.366	0.369
Coldingham	247	0.407	0.387	0.336
Coldstream	252	0.362	0.339	0.341
Cranshaws	253	0.231	0.371	0.510
Duns	254	0.339	0.322	0.302
Earlston	266	0.362	0.375	0.365
Eccles	255	0.295	0.288	0.327
Edrom	256	0.312	0.301	0.352
Eyemouth	248	0.458	0.387	0.435
Fogo	257	0.271	0.380	0.317
Foulden	249	0.191	0.228	0.308
Gordon	267	0.352	0.415	0.348
Greenlaw	258	0.401	0.318	0.323
Hume	268	0.338	0.296	0.260
Hutton	250	0.330	0.293	0.350
Ladykirk	259	0.316	0.314	0.330
Langton	260	0.283	0.361	0.323
Lauder	269	0.393	0.375	0.363
Legerwood	270	0.409	0.333	0.392
Longformacus	261	0.428	0.371	0.262
Merton	271	0.310	0.331	0.303
Mordington	251	0.334	0.281	0.381
Nenthorn	272	0.359	0.296	0.341
Polwarth	262	0.255	0.278	0.329
Swinton	263	0.414	0.337	0.354
Westruther	273	0.316	0.350	0.381
Whitsome	264	0.293	0.203	0.302
Berwick		0.368	0.331	0.346

Peebles - I_m

Civil Parish	CP No.	1881	1891	1901
Drumelzier	636	0.451	0.381	0.420
Eddlestone	644	0.443	0.427	0.400
Innerleithen	639	0.363	0.375	0.319
Kilbucho, Broughton, etc.	635	0.352	0.240	0.316
Kirkurd	641	0.445	0.284	0.308
Lyne	645	0.488	0.437	0.492
Manor	646	0.503	0.453	0.402
Newlands	642	0.374	0.398	0.413
Peebles	647	0.367	0.330	0.299
Skirling	637	0.316	0.277	0.384
Stobo	648	0.511	0.512	0.441
Traquair	640	0.373	0.375	0.323
Tweedsmuir	638	0.358	0.322	0.504
West Linton	643	0.351	0.319	0.343
Peebles		0.378	0.348	0.330

Selkirk - I_m

Civil Parish	CP No.	1881	1891	1901
Caddonfoot	799	0.386	0.375	0.319
Ettrick	803	0.329	0.386	0.383
Galashiels	800	0.446	0.375	0.324
Kirkhope	804	0.446	0.364	0.364
Roberton	772	0.410	0.258	0.443
Selkirk	801	0.389	0.375	0.292
Yarrow	805	0.464	0.375	0.432
Selkirk		0.427	0.332	0.318

Roxburgh - I_m

Civil Parish	CP No.	1881	1891	1901
Ancrum	774	0.411	0.408	0.333
Ashkirk	802	0.322	0.375	0.363
Bedrule	775	0.290	0.253	0.313
Bowden	793	0.344	0.312	0.262
Castleton	769	0.482	0.427	0.373
Cavers	770	0.419	0.371	0.382
Crailing	776	0.296	0.255	0.257

Eckford	782	0.347	0.252	0.249
Ednam	783	0.318	0.247	0.216
Hawick	771	0.429	0.371	0.306
Hobkirk	777	0.328	0.345	0.344
Hownam	784	0.451	0.451	0.443
Jedburgh	778	0.410	0.365	0.337
Kelso	785	0.370	0.329	0.324
Lilliesleaf	794	0.436	0.352	0.296
Linton	786	0.281	0.274	0.247
Makerston	787	0.359	0.286	0.254
Maxton	795	0.364	0.375	0.352
Melrose	796	0.345	0.375	0.296
Minto	779	0.372	0.286	0.300
Morebattle	788	0.366	0.354	0.332
Oxnam	780	0.419	0.365	0.381
Roxburgh	797	0.390	0.329	0.350
St Boswells	798	0.345	0.314	0.261
Smailholm	789	0.338	0.276	0.350
Southdean	781	0.369	0.365	0.337
Sprouston	790	0.300	0.300	0.266
Stitchel	791	0.303	0.230	0.272
Teviothead	773	0.433	0.371	0.359
Yetholm	792	0.395	0.368	0.342
Roxburgh		0.394	0.354	0.314

Dumfries - I_m

Civil Parish	CP No.	1881	1891	1901
Annan	295	0.396	0.383	0.412
Applegarth	318	0.336	0.336	0.384
Canonbie	313	0.409	0.368	0.349
Carlaverock	298	0.362	0.346	0.284
Closeburn	330	0.372	0.366	0.380
Cummertrees	296	0.305	0.383	0.412
Dalton	299	0.309	0.321	0.326
Dornock	297	0.356	0.388	0.363
Dryfesdale	319	0.381	0.376	0.330
Dumfries	300	0.375	0.364	0.367
Dunscore	331	0.328	0.325	0.229
Durrisdeer	332	0.416	0.379	0.355
Eskdalemuir	314	0.299	0.410	0.289
Ewes	315	0.352	0.370	0.428
Glencairn	333	0.368	0.339	0.288

Gretna	309	0.405	0.373	0.374
Halfmorton	310	0.300	0.299	0.339
Hoddom	320	0.355	0.383	0.412
Holywood	305	0.378	0.319	0.306
Hutton	321	0.343	0.367	0.406
Johnstone	322	0.339	0.305	0.333
Keir	334	0.415	0.317	0.296
Kirkconnel	328	0.436	0.448	0.506
Kirkmahoe	306	0.384	0.326	0.377
Kirkmichael	307	0.408	0.347	0.378
Kirkpatrick-Fleming	311	0.382	0.388	0.471
Kirkpatrick-Juxta	325	0.377	0.343	0.385
Langholm	316	0.386	0.304	0.315
Lochmaben	301	0.398	0.381	0.414
Middlebie	312	0.368	0.369	0.343
Moffat	326	0.289	0.274	0.276
Morton	335	0.402	0.317	0.377
Mouswald	302	0.259	0.261	0.327
Penmont	336	0.407	0.385	0.348
Ruthwell	303	0.351	0.355	0.371
St Mungo	323	0.281	0.295	0.289
Sanquhar	329	0.424	0.423	0.422
Tinwald	308	0.363	0.362	0.394
Torthorwald	304	0.363	0.357	0.366
Tundergarth	324	0.272	0.316	0.360
Tynron	337	0.379	0.354	0.282
Wamphray	327	0.409	0.291	0.231
Westerkirk	317	0.356	0.455	0.402
Dumfries		0.372	0.356	0.362

Kirkcudbright - I_m

Civil Parish	CP No.	1881	1891	1901
Anwoth	494	0.330	0.397	0.381
Balmaclellan	508	0.283	0.272	0.323
Balmaghie	490	0.338	0.324	0.376
Borgue	513	0.353	0.377	0.351
Buittle	498	0.392	0.366	0.399
Carsphairn	509	0.400	0.307	0.386
Colvend	499	0.342	0.335	0.378
Crossmichael	491	0.353	0.349	0.306
Dalbeattie	502	0.496	0.430	0.425
Dalry	510	0.282	0.334	0.297

Girthon	495	0.356	0.395	0.421
Irongray	504	0.351	0.325	0.285
Kells	511	0.338	0.358	0.385
Kelton	492	0.372	0.365	0.343
Kirkbean	503	0.371	0.386	0.393
Kirkcudbright	514	0.368	0.368	0.336
Kirkgunzeon	500	0.421	0.356	0.391
Kirkmabreck	496	0.493	0.484	0.445
Kirkpatrick-Durham	493	0.318	0.272	0.323
Lochrutton	501	0.346	0.364	0.354
Minnigaff	497	0.429	0.352	0.347
New Abbey	505	0.335	0.372	0.396
Parton	512	0.312	0.272	0.323
Rerrick	515	0.344	0.322	0.347
Terregles	506	0.283	0.319	0.306
Tongland	516	0.353	0.333	0.357
Troqueer	507	0.400	0.364	0.346
Twynholm	517	0.291	0.299	0.354
Kirkcudbright		0.382	0.363	0.361

Wigtown - I_m

Civil Parish	CP No.	1881	1891	1901
Glasserton	852	0.395	0.396	0.406
Inch	860	0.351	0.370	0.353
Kirkcolm	861	0.328	0.375	0.288
Kirkcowan	853	0.369	0.331	0.295
Kirkinner	854	0.395	0.360	0.377
Kirkmaiden	862	0.414	0.361	0.341
Leswalt	863	0.362	0.370	0.353
Mochrum	855	0.363	0.355	0.358
New Luce	864	0.496	0.356	0.307
Old Luce (or Glenluce)	865	0.325	0.357	0.343
Penninghame	856	0.358	0.352	0.347
Portpatrick	866	0.309	0.305	0.382
Sorbie	857	0.391	0.420	0.405
Stoneykirk	867	0.360	0.342	0.330
Stranraer	868	0.415	0.370	0.353
Whithorn	858	0.376	0.338	0.341
Wigtown	859	0.344	0.283	0.364
Wigtown		0.373	0.356	0.349

	1881	1891	1901
Scotland - I_m	0.438	0.420	0.425

Table A1.2

"I_g, Scotland - Civil Parishes"

Shetland - I_g

Civil Parish	CP No.	1881	1891	1901
Bressay	869	0.905	0.807	0.695
Delting	870	0.710	0.677	0.701
Dunrossness	871	0.715	0.659	0.609
Fetlar	874	0.844	0.835	0.764
Lerwick	875	0.717	0.690	0.612
Yell	891	0.930	0.698	0.719
Nesting	877	0.841	0.761	0.648
Northmavine	880	0.796	0.732	0.646
Sandsting & Aithsting	881	0.800	0.750	0.720
Tingwall	883	0.750	0.750	0.697
Unst	886	0.780	0.855	0.669
Walls	887	0.798	0.758	0.626
Shetland		0.782	0.724	0.651

Orkney - I_g

Civil Parish	CP No.	1881	1891	1901
Birsay	614	0.855	0.752	0.634
St Andrews	622	0.722	0.638	0.643
Eday & Pharay	610	0.608	0.559	0.513
Evie & Rendall	616	0.654	0.513	0.599
Firth	618	0.701	0.634	0.792
Stennes	625	0.701	0.634	0.626
Holm & Paplay	619	0.649	0.607	0.570
Hoy & Graemsay	611	0.823	0.722	0.633
Kirkwall & St Ola	620	0.657	0.665	0.558
Cross & Burness	628	0.651	0.631	0.619
Orphir	621	0.668	0.577	0.582
Rousay & Egilshay	627	0.653	0.447	0.591

Lady	629	0.724	0.631	0.619
Sandwick	624	0.696	0.646	0.624
Shapinshay	630	0.544	0.448	0.484
South Ronaldshay & Burray	631	0.737	0.690	0.618
Stromness	626	0.631	0.814	0.573
Stronsay	632	0.638	0.618	0.565
Flotta	612	0.776	0.668	0.638
Papa-Westray	633	0.615	0.541	0.630
Westray	634	0.629	0.615	0.449
Orkney		0.682	0.649	0.596

Caithness - I_g

Civil Parish	CP No.	1881	1891	1901
Bower	280	0.786	0.772	0.740
Wick	284	0.798	0.769	0.727
Dunnet	285	0.803	0.817	0.644
Halkirk	287	0.834	0.729	0.895
Latheron	286	0.847	0.831	0.820
Olrig	281	0.746	0.743	0.716
Reay	288	0.851	0.793	0.718
Thurso	289	0.724	0.729	0.710
Watten	282	0.830	0.711	0.777
Caithness		0.793	0.768	0.745

Sutherland - I_g

Civil Parish	CP No.	1881	1891	1901
Assynt	828	0.824	0.805	0.744
Clyne	836	0.841	0.829	0.668
Creich	829	0.803	0.810	0.663
Dornoch	830	0.757	0.686	0.634
Durness	831	0.818	0.880	0.842
Edrachillis	832	0.829	0.905	0.695
Farr	839	0.794	0.793	0.691
Golspie	833	0.718	0.778	0.607
Kildonan	837	0.827	0.827	0.765
Lairg	834	0.884	0.885	0.758
Loth	838	0.682	0.743	0.729
Rogart	835	0.709	0.686	0.725
Tongue	840	0.789	0.784	0.724
Sutherland		0.796	0.795	0.694

Ross - I_g

Civil Parish	CP No.	1881	1891	1901
Alness	739	0.814	0.743	0.731
Applecross	758	0.714	0.741	0.679
Avoch	736	0.803	0.873	0.789
Contin	760	0.584	0.719	0.631
Cromarty	746	0.848	0.720	0.670
Dingwall	740	0.769	0.782	0.640
Edderton	766	0.660	0.794	0.558
Fearn	743	0.701	0.702	0.721
Fodderty	741	0.724	0.782	0.610
Gairloch Northern	749	0.850	0.741	0.679
Glenshiel	763	0.559	0.761	0.520
Killearnan	737	0.773	0.738	0.662
Kilmuir-Easter	750	0.771	0.696	0.634
Kiltearn	742	0.813	0.869	0.565
Kincardine	767	0.765	0.813	0.589
Kintail	764	0.690	0.698	0.549
Knockbain	738	0.662	0.782	0.650
Lochalsh	765	0.703	0.592	0.731
Lochbroom	757	0.754	0.742	0.663
Lochcarron	759	0.670	0.741	0.682
Logie-Easter	751	0.758	0.730	0.669
Nigg	744	0.831	0.783	0.640
Resolis	747	0.868	0.789	0.688
Rosemarkie	748	0.722	0.803	0.636
Rosskeen	752	0.727	0.665	0.659
Tain	768	0.670	0.637	0.630
Tarbat	745	0.754	0.763	0.743
Urquhart & Logie-Wester	761	0.726	0.720	0.684
Urray	762	0.703	0.719	0.631
Barvas	753	0.853	0.859	0.840
Lochs	754	0.874	0.859	0.840
Stornoway	755	0.852	0.870	0.766
Uig	756	0.859	0.859	0.840
Ross & Cromarty		0.783	0.785	0.725

Inverness - I_g

Civil Parish	CP No.	1881	1891	1901
Abernethy & Kincardine	438	0.856	0.640	0.682
Alvie	439	1.076	0.526	0.657
Ardersier	445	0.751	0.641	0.685
Boleskine	433	0.897	0.783	0.645
Croy & Dalcross	608	0.791	0.706	0.648
Daviot & Dunlichty	447	0.839	0.738	0.713
Dores	448	0.752	0.783	0.712
Duthil	440	0.850	0.729	0.594
Glenelg	453	0.853	0.934	0.674
Inverness	449	0.713	0.706	0.630
Kilmonivaig	455	0.816	0.807	0.575
Kilmorack	434	0.776	0.719	0.679
Kiltarlity	435	0.799	0.719	0.679
Kingussie & Insh	441	0.815	0.671	0.675
Kirkhill	436	0.750	0.809	0.655
Laggan	442	0.847	0.671	0.664
Moy & Dalarossie	450	0.680	0.634	0.486
Petty	451	0.722	0.809	0.705
Urquhart	437	0.802	0.801	0.689
Barra	443	0.779	0.861	0.865
Bracadale	458	0.839	0.736	0.656
Duirnish	459	0.903	0.777	0.771
Harris	444	0.758	0.836	0.797
Kilmuir	460	0.822	0.863	0.832
North Uist	457	0.783	0.847	0.871
Portree	461	0.782	0.792	0.724
Sleat	462	0.792	0.846	0.777
Small Isles	456	0.693	0.747	0.720
Snizort	463	0.757	0.863	0.832
South Uist	465	0.799	0.772	0.779
Strath	464	0.803	0.846	0.697
Inverness		0.774	0.750	0.691

Nairn - I_g

Civil Parish	CP No.	1881	1891	1901
Ardclach	605	0.809	0.658	0.641
Auldearn	606	0.829	0.670	0.633
Cawdor	607	0.781	0.634	0.567
Nairn	609	0.749	0.634	0.642
Nairn		0.770	0.663	0.633

Elgin - I_g

Civil Parish	CP No.	1881	1891	1901
Alves	590	0.799	0.808	0.668
Bellie	594	0.724	0.710	0.637
Birnie	591	0.890	0.831	0.865
Boharm	237	0.815	0.911	0.570
Cromdale &Advie	586	0.807	0.729	0.594
Dallas	597	0.759	0.814	0.643
Drainie	587	0.711	0.734	0.708
Duffus	588	0.779	0.705	0.657
Dyke	598	0.701	0.821	0.670
Edinkillie	599	0.749	0.658	0.604
Elgin	592	0.761	0.705	0.638
New Spynie	589	0.660	0.705	0.638
Forres	600	0.696	0.778	0.595
Kinloss	601	0.706	0.763	0.720
Knockando	603	0.828	0.759	0.630
Rafford	602	0.893	0.862	0.796
Rothes	604	0.821	0.957	0.659
St Andrews-Lhanbryde	593	0.764	0.705	0.638
Speymouth	595	0.705	0.741	0.802
Urquhart	596	0.785	0.674	0.651
Elgin		0.758	0.738	0.647

Banff - I_g

Civil Parish	CP No.	1881	1891	1901
Aberlour	232	0.761	0.772	0.685
Alvah	224	0.746	0.729	0.708
Banff	225	0.760	0.762	0.682
Botriphnie	238	0.915	1.003	0.745
Boyndie	226	0.790	0.825	0.730
Cullen	229	0.779	0.710	0.637
Deskford	230	0.694	0.670	0.641
Fordyce	231	0.806	0.792	0.708
Forglen	220	0.766	0.884	0.660
Gamrie	227	0.760	0.754	0.670
Grange	239	0.798	0.766	0.715
Inveravon	234	0.893	0.777	0.656
Inverkeithny	221	0.859	0.738	0.770
Keith	240	0.742	0.796	0.670

Kirkmichael	235	0.841	0.568	0.612
Marnoch	222	0.811	0.778	0.673
Mortlach	236	0.797	0.772	0.685
Ordiquhill	223	0.689	0.710	0.754
Rathven	228	0.709	0.710	0.637
Rothiemay	241	0.801	0.752	0.710
St Fergus	35	0.773	0.817	0.702
Banff		0.763	0.772	0.683

Aberdeen - I_g

Civil Parish	CP No.	1881	1891	1901
ABERDEEN	1	0.688	0.671	0.616
Old Machar (Abrdn)	10	0.719	0.705	0.723
Aberdour	25	0.691	0.778	0.700
Aboyne	38	0.673	0.800	0.632
Alford	13	0.748	0.730	0.725
Auchindoir	14	0.781	0.831	0.704
Auchterless	79	0.759	0.768	0.699
Belhelvie	2	0.827	0.623	0.750
Birse	39	0.730	0.800	0.659
Bourtie	57	0.935	0.520	0.526
Cabrach	233	0.820	0.862	0.729
Cairney	72	0.767	0.796	0.793
Chapel of Garioch	58	0.783	0.846	0.720
Clatt	15	0.744	0.522	0.818
Cluny	40	0.854	0.761	0.702
Coull	41	0.838	0.667	0.744
Crathie & Braemar	42	0.743	0.673	0.604
Cruden	49	0.798	0.746	0.700
Culsamond	59	0.728	0.734	0.631
Daviot	60	0.662	0.647	0.643
Drumblade	73	0.754	0.651	0.617
Drumoak	3	0.748	0.724	0.557
Dyce	4	0.779	0.697	0.664
Echt	5	0.744	0.733	0.617
Ellon	50	0.861	0.778	0.700
Fintray	6	0.753	0.827	0.726
Forgue	74	0.819	0.768	0.699
Foveran	51	0.784	0.853	0.735
Fraserburgh	27	0.897	0.778	0.712
Fyvie	80	0.761	0.768	0.683
Gartly	75	0.774	0.941	0.715
Glass	76	0.946	0.860	0.717

Glenbucket	16	0.797	0.704	0.876
Glenmuick	43	0.757	0.772	0.654
Huntly	77	0.754	0.793	0.653
Insch	61	0.707	0.781	0.794
Inverurie	62	0.717	0.721	0.791
Keig	17	0.821	0.705	0.833
Keithhall	63	0.775	0.886	0.663
Kemnay	64	0.783	0.814	0.608
Kildrummy	18	0.832	0.524	0.660
Kincardine O'Neil	44	0.690	0.665	0.640
King Edward	81	0.787	0.729	0.708
Kinnellar	7	0.812	0.682	0.698
Kinnethmont	19	0.754	0.610	0.636
Kintore	65	0.714	0.742	0.652
Leochel-Cushnie	20	0.795	0.782	0.683
Leslie	66	0.862	0.902	0.683
Logie-Buchan	52	0.865	0.903	0.583
Logie-Coldstone & Cromar	45	0.712	0.772	0.654
Lumphanan	46	0.740	0.782	0.658
Methlic	53	0.891	0.778	0.753
Midmar	47	0.733	0.761	0.747
Monquhitter	82	0.735	0.768	0.683
Monymusk	68	0.744	0.973	0.690
New Deer	30	0.803	0.778	0.700
Newhills	8	0.728	0.752	0.699
New Machar	9	0.765	0.774	0.638
Old Deer	31	0.798	0.778	0.700
Old Meldrum	67	0.731	0.660	0.734
Oyne	69	0.641	0.733	0.682
Peterculter	11	0.694	0.692	0.542
Peterhead	32	0.808	0.756	0.739
Pitsligo	33	0.789	0.746	0.745
Premnay	70	0.858	0.851	0.621
Rathen	34	0.839	0.696	0.672
Rayne	71	0.827	0.961	0.689
Rhynie	78	0.797	0.623	0.729
Skene	12	0.657	0.660	0.664
Slains	54	0.844	1.029	0.710
Strathdon	21	0.824	0.772	0.706
Tarland	48	0.675	0.772	0.654
Tarves	55	0.739	0.778	0.700
Tough	22	0.746	0.712	0.632
Towie	23	0.814	0.772	0.652
Tullynessle & Forbes	24	0.833	0.782	0.687
Turriff	83	0.752	0.804	0.680

Tyrie	37	0.828	0.778	0.700
Udny	56	0.789	0.774	0.747
Aberdeen		0.747	0.727	0.651

Kincardine - I_g

Civil Parish	CP No.	1881	1891	1901
Arbuthnot	474	0.720	0.694	0.664
Banchory-Devenick	471	0.741	0.692	0.750
Banchory-Ternan	482	0.742	0.746	0.526
Benholm	475	0.837	0.875	0.667
Bervie	476	0.826	0.771	0.644
Dunnottar	478	0.752	0.819	0.672
Durris	483	0.723	0.628	0.735
Fettercairn	466	0.891	0.650	0.718
Fetteresso	479	0.780	0.659	0.659
Fordoun	467	0.749	0.585	0.703
Garvock	468	0.695	0.860	0.534
Glenbervie	480	0.776	0.892	0.657
Kinneff & Catterline	481	0.692	0.792	0.781
Laurencekirk	469	0.695	0.697	0.621
Maryculter	472	0.819	0.692	0.555
Marykirk	470	0.704	0.721	0.678
Nigg	473	0.794	0.687	0.702
St Cyrus	477	0.752	0.829	0.632
Strachan	484	0.734	0.830	0.749
Kincardine		0.765	0.727	0.655

Forfar - I_g

Civil Parish	CP No.	1881	1891	1901
Aberlemno	99	0.741	0.788	0.660
Airlie	110	0.747	0.849	0.640
Arbirlot	93	0.809	0.797	0.610
Arbroath	94	0.704	0.653	0.588
Auchterhouse	119	0.704	0.811	0.600
Barry	95	0.761	0.627	0.553
Brechin	84	0.694	0.625	0.570
Carmylie	96	0.879	0.692	0.647
Careston	85	1.153	0.841	0.712
Cortachy & Clova	111	0.851	0.712	0.595
Coupar-Angus	669	0.677	0.609	0.618
Craig	130	0.709	0.690	0.580

Dun	86	0.756	0.612	0.562
DUNDEE	120	0.676	0.638	0.585
Dunnichen	100	0.767	0.824	0.620
Eassie & Nevay	101	0.800	0.672	0.766
Edzell	87	0.806	0.650	0.480
Farnell	131	0.636	0.698	0.667
Fearn	112	0.700	0.791	0.660
Forfar	102	0.716	0.665	0.640
Glamis	103	0.823	0.713	0.572
Glenisla	113	0.655	0.695	0.666
Guthrie	104	0.808	0.824	0.743
Inverarity	105	0.875	0.824	0.794
Inverkeillor	132	0.729	0.641	0.698
Kettins	122	0.744	0.635	0.582
Kingoldrum	114	0.815	0.653	0.816
Kinnell	133	0.868	0.673	0.646
Kinnettles	106	0.710	0.884	0.782
Kirkden	107	0.765	0.824	0.584
Kirriemuir	115	0.694	0.712	0.584
Lethnott & Navar	88	0.892	0.840	0.670
Liff, Benvie, etc.	123	0.775	0.638	0.585
Lintrathen	116	0.758	0.487	0.666
Lochlee	89	0.819	0.636	0.661
Logie-Pert	90	0.698	0.914	0.734
Lunan	134	0.868	0.673	0.676
Lundie	124	0.762	0.641	0.889
Mains	125	0.745	0.654	0.585
Marytown	135	0.788	0.673	0.714
Menmuir	91	0.787	0.562	0.626
Monifieth	126	0.745	0.671	0.578
Monikie	97	0.666	0.652	0.673
Montrose	136	0.704	0.651	0.580
Murroes	127	0.854	0.638	0.638
Newtyle	128	0.865	0.622	0.704
Oathlaw	108	0.810	0.687	0.464
Panbride	98	0.689	0.653	0.595
Rescobie	109	0.760	0.743	0.565
Ruthven	117	0.607	0.274	0.590
Stracathro	92	0.974	0.677	0.661
Tannadice	118	0.724	0.689	0.593
Teeling	129	0.627	0.811	0.770
Forfar		0.697	0.650	0.591

Perth - I_g

Civil Parish	CP No.	1881	1891	1901
Aberdalgie	685	0.760	0.762	0.570
Dull	677	0.761	0.635	0.598
Aberfoyle	711	1.045	0.626	0.629
Abernethy	686	0.753	0.606	0.666
Abernyte	687	0.662	0.781	0.552
Alyth	662	0.700	0.584	0.619
Ardoch	712	0.758	0.635	0.599
Auchterarder	649	0.689	0.604	0.622
Auchtergaven	689	0.738	0.635	0.580
Bendochy	663	0.806	0.584	0.577
Blackford	650	0.676	0.635	0.538
Blair-Atholl	676	0.750	0.635	0.598
Blairgowrie	664	0.642	0.584	0.619
Callander	714	0.654	0.544	0.553
Caputh	665	0.680	0.635	0.532
Cargill	666	0.772	0.635	0.587
Clunie	667	0.995	0.635	0.783
Collace	668	0.847	0.635	0.570
Comrie	651	0.683	0.635	0.578
Crieff	652	0.656	0.635	0.564
Culross	396	0.752	0.683	0.653
Dowally	678	0.629	0.635	0.532
Dron	690	0.668	1.102	0.801
Dunbarney	691	0.725	0.603	0.512
Dunblane	715	0.688	0.635	0.599
Dunning	653	0.719	0.773	0.665
Errol	692	0.778	0.695	0.679
Findo-Gask	695	0.655	0.664	0.662
Forgandenny	693	0.670	0.603	0.628
Forteviot	694	0.698	0.603	0.554
Fortingall	679	0.845	0.666	0.567
Fowlis-Easter	121	0.678	0.648	0.648
Fowlis-Wester	654	0.757	0.635	0.498
Glendevon	655	0.818	0.640	0.340
Inchture	696	0.794	0.600	0.635
Kenmore	680	0.878	0.635	0.598
Killin	716	0.669	0.635	0.598
Kilmadock	717	0.747	0.667	0.633
Kilspindie	697	0.773	0.687	0.796
Kincardine	718	0.649	0.667	0.652
Kinfauns	699	0.627	0.629	0.601
Kinloch-Rannoch	670	0.813	0.635	0.615

Kinnaird	700	0.914	1.110	0.419
Kinnoul	701	0.641	0.629	0.573
Kirkmichael	671	0.714	0.584	0.619
Lethendy	672	0.887	0.635	0.615
Little Dunkeld	681	0.606	0.635	0.580
Logie	806	0.611	0.689	0.474
Logiealmond	656	0.713	0.635	0.580
Logierait	682	0.647	0.635	0.598
Longforgan	702	0.681	0.678	0.611
Madderty	657	0.600	0.665	0.656
Meigle	673	0.733	0.609	0.618
Methven	703	0.694	0.635	0.580
Moneydie	704	0.851	0.635	0.548
Monzievaird & Strowan	658	0.719	0.635	0.611
Moulin	683	0.762	0.635	0.598
Muckart	659	0.673	0.355	0.661
Muthil	660	0.748	0.635	0.627
Perth	705	0.663	0.629	0.573
Port of Montieth	719	0.701	0.604	0.543
Rattray	674	0.652	0.670	0.652
Rhynd	707	0.615	0.951	0.660
St Madoes	708	0.773	0.629	0.605
St Martins	675	0.765	0.629	0.635
Scone	709	0.698	0.629	0.554
Tibbermore	710	0.715	0.629	0.580
Trinity-Gask	661	0.700	0.804	0.673
Tullialian	402	0.732	0.655	0.662
Weem	684	0.781	0.635	0.673
Perth	0.692	0.646	0.591	

Fife - I_g

Civil Parish	CP No.	1881	1891	1901
Abdie	374	0.707	0.606	0.575
Aberdour	394	0.696	0.678	0.577
Anstruther	416	0.631	0.545	0.634
Arngask	688	0.582	0.664	0.603
Auchterderran	403	0.789	0.753	0.748
Auchtermuchty	375	0.629	0.580	0.639
Auchtertool	404	0.902	0.757	0.765
Ballingry	405	0.796	0.753	0.654
Balmerino	376	0.789	0.605	0.653
Beath	406	0.780	0.800	0.740
Burntisland	407	0.771	0.684	0.488

Cameron	417	0.646	0.716	0.614
Carnbee	418	0.704	0.483	0.559
Carnock	395	0.998	0.792	0.710
Ceres	377	0.643	0.666	0.593
Collessie	378	0.705	0.709	0.580
Crail	419	0.682	0.622	0.604
Creich	379	0.780	0.590	0.361
Cults	380	0.738	0.709	0.605
Cupar	381	0.653	0.520	0.502
Dairsie	382	0.601	0.626	0.531
Dalgetty	397	0.803	0.781	0.652
Dunbog	383	0.692	0.574	0.630
Dunfermline	398	0.736	0.691	0.577
Kirkcaldy & Dysart	411	0.755	0.675	0.564
Elie	421	0.627	0.511	0.459
Falkland	384	0.674	0.672	0.613
Ferry-Port-on-Craig	422	0.721	0.623	0.543
Flisk	385	0.673	0.574	0.630
Forgan	423	0.692	0.575	0.411
Inverkeithing	399	0.809	0.691	0.698
Kemback	386	0.714	0.645	0.867
Kennoway	408	0.734	0.718	0.609
Kettle	387	0.716	0.693	0.505
Kilconquhar	424	0.725	0.511	0.574
Kilmany	388	0.825	0.724	0.529
Kilrenny	425	0.766	0.628	0.521
Kinghorn	409	0.814	0.678	0.572
Kinglassie	410	0.874	0.753	0.588
Kingsbarns	426	0.698	0.622	0.676
Largo	427	0.796	0.693	0.567
Largo	412	0.732	0.682	0.630
Leslie	428	0.701	0.637	0.580
Logie	389	0.631	0.334	0.591
Markinch	413	0.759	0.740	0.564
Monimail	390	0.690	0.539	0.520
Moonzie	391	0.601	1.144	0.657
Newburgh	392	0.791	0.606	0.662
Newburn	429	0.519	0.550	0.502
Pittenweem	430	0.804	0.784	0.655
St Andrews & St Leonards	431	0.673	0.621	0.550
St Monance (Abercrombie)	432	0.764	0.664	0.478
Saline	400	0.818	0.640	0.747
Scoonie	414	0.740	0.759	0.583
Strathmiglo	393	0.645	0.606	0.552
Torryburn	401	0.946	0.640	0.674

Wemyss	415	0.834	0.740	0.670
Fife		0.743	0.687	0.606

Kinross - I_g

Civil Parish	CP No.	1881	1891	1901
Cleish	485	0.819	0.691	0.726
Fossoway & Tulliebole	486	0.691	0.640	0.583
Kinross	487	0.743	0.650	0.531
Orwell	488	0.671	0.778	0.565
Portmoak	489	0.677	0.753	0.604
Kinross		0.711	0.703	0.574

Clackmannan - I_g

Civil Parish	CP No.	1881	1891	1901
Alloa	290	0.796	0.689	0.599
Clackmannan	291	0.852	0.689	0.685
Dollar	293	0.682	0.553	0.481
Tillicoultry	294	0.744	0.695	0.655
Clackmannan		0.789	0.667	0.605

Stirling - I_g

Civil Parish	CP No.	1881	1891	1901
Airth	812	0.805	0.620	0.632
Alva	292	0.756	0.689	0.583
Baldernock	826	0.767	0.614	0.566
Balfron	820	0.658	0.597	0.758
Grangemouth	815	0.803	0.718	0.613
Buchanan	818	0.821	0.704	0.573
Campsie	827	0.765	0.744	0.684
Denny	809	0.730	0.758	0.693
Drymen	819	0.769	0.714	0.628
Dunnipace	810	0.726	0.808	0.710
Falkirk	814	0.729	0.718	0.613
Fintry	821	0.738	0.541	0.548
Gargunnock	822	0.828	0.716	0.491
Killearn	823	0.729	0.728	0.610
Kilsyth	811	0.858	0.815	0.787
Kippen	824	0.878	0.806	0.626
Larbert	813	0.738	0.715	0.659

Muiravonside	816	0.910	0.808	0.717
Stirling	807	0.705	0.651	0.643
Slamannan	817	0.864	0.832	0.746
Strathblane	825	0.662	0.642	0.652
Stirling		0.759	0.724	0.650

Dunbarton - I_g

Civil Parish	CP No.	1881	1891	1901
Arrochar	339	0.728	0.409	0.555
Bonhill	346	0.729	0.709	0.657
Cardross	347	0.690	0.723	0.683
Cumbernauld	338	0.815	0.719	0.766
Dumbarton	344	0.816	0.723	0.683
Kilmaronock	348	0.683	0.669	0.570
Kirkintilloch	342	0.750	0.787	0.723
Luss	349	0.659	0.978	0.488
Bearsden	343	0.754	0.676	0.635
Clydebank	345	0.759	0.741	0.683
Roseneath	341	0.543	0.505	0.432
Rhu	340	0.661	0.585	0.548
Dunbarton		0.745	0.711	0.668

Argyll - I_g

Civil Parish	CP No.	1881	1891	1901
Ardchattan	169	0.790	0.657	0.607
Ardnamurchan	138	0.797	0.876	0.618
Arisaig	452	0.784	0.876	0.618
Ballachulish & Ardgour	137	0.715	0.730	0.611
Campbeltown	152	0.792	0.732	0.716
Craignish	158	0.645	0.820	0.919
Cumlodden & Minnard	159	0.722	0.730	0.655
Dunoon & Kilmun	140	0.623	0.556	0.486
Glenorchy	171	0.787	0.657	0.607
Inverary	160	0.739	0.730	0.655
Inverchaolain	141	0.765	0.716	0.553
Kilbrandon & Kilchattan	172	0.767	0.881	0.786
Kilcalmonell	154	0.867	0.730	0.655
Dalavich	173	0.734	0.657	0.607
Kilfinan	142	0.764	0.660	0.661
Killean & Kilchenzie	155	0.896	0.768	0.700
Kilmallie	454	0.778	0.730	0.611

Kilmartin	161	0.932	0.620	0.709
Kilmodan	143	0.765	0.783	0.603
Kilmore & Kilbride	174	0.671	0.731	0.644
Kilninver	175	0.697	0.820	0.612
Lismore	170	0.798	0.730	0.611
Lochgoilhead	144	0.647	0.567	0.594
Morvern	139	0.759	0.928	0.725
North Knapdale	162	0.771	0.708	0.752
Saddell	156	0.797	0.730	0.655
Southend	157	0.646	0.659	0.801
South Knapdale	163	0.728	0.730	0.655
Stralachlan	146	0.863	0.609	0.728
Strachur	145	0.730	0.472	0.589
Bowmore (Kilarrow)	149	0.823	0.696	0.781
Gigha	153	0.942	0.670	0.756
Jura	148	0.849	0.881	0.786
Colonsay	147	0.968	0.867	0.787
Kilchoman	150	0.847	0.813	0.776
Kildalton & Oa	151	0.738	0.658	0.722
Kilfinichen & Kilvickeon	165	0.782	0.702	0.766
Kilninian & Kilmore	166	0.684	0.669	0.605
Kinlochspelvie	167	0.925	0.669	0.605
Tyree	168	0.763	0.858	0.683
Coll	164	0.780	0.592	0.723
Argyll		0.752	0.709	0.643

Bute - I_g

Civil Parish	CP No.	1881	1891	1901
Cumbrae	279	0.728	0.684	0.488
Kilbride	274	0.671	0.667	0.593
Kilmory	275	0.796	0.667	0.593
Kingarth	276	0.588	0.630	0.591
North Bute	277	0.705	0.551	0.472
Rothesay	278	0.671	0.551	0.565
Bute		0.682	0.634	0.556

Renfrew - I_g

Civil Parish	CP No.	1881	1891	1901
Paisley	725	0.744	0.715	0.640
Cathcart(Glasgow ptn.)	553	0.680	0.622	0.448
Cathcart(Ldwd.)	720	0.680	0.622	0.546

Eaglesham	721	0.767	0.624	0.618
Eastwood	722	0.751	0.664	0.617
Erskine	726	0.660	0.548	0.568
Greenock	732	0.708	0.704	0.642
Houston & Killellan	729	0.750	0.609	0.619
Inchinnan	727	1.029	1.061	0.738
Inverkip	733	0.608	0.518	0.489
Kilbarchan	730	0.818	0.678	0.619
Kilmalcolm	734	0.669	0.604	0.512
Lochwinnoch	731	0.728	0.736	0.586
Mearns	723	0.689	0.730	0.620
Neilston	724	0.736	0.715	0.640
Port-Glasgow	735	0.800	0.704	0.713
Renfrew	728	0.766	0.715	0.648
Renfrew		0.730	0.694	0.621

Ayr - I_g

Civil Parish	CP No.	1881	1891	1901
Old Ardrossan	216	0.723	0.684	0.611
Auchinleck	185	0.868	0.810	0.744
Ayr	176	0.739	0.724	0.657
Ballantrae	193	0.734	0.625	0.612
Barr	194	0.767	0.700	0.670
Beith	201	0.826	0.691	0.649
Colmonell	195	0.787	0.762	0.644
Coylton	182	0.744	0.852	0.792
Craigie	177	0.692	0.801	0.672
Dailly	196	0.820	0.853	0.782
Dalmellington	183	0.825	0.724	0.657
Dalry	202	0.741	0.751	0.752
Dalrymple	184	0.834	0.724	0.657
Dreghorn	198	0.798	0.816	0.772
Dundonald	178	0.685	0.713	0.703
Dunlop	204	0.698	0.740	0.677
Fenwick	205	0.826	0.658	0.583
Galston	214	0.845	0.810	0.626
Girvan	197	0.708	0.770	0.566
Irvine	199	0.817	0.713	0.703
Kilbirnie	203	0.787	0.788	0.691
Kilmarnock	206	0.718	0.670	0.595
Kilmaurs	207	0.884	0.748	0.759
Kilwinning	200	0.856	0.805	0.766
Maybole	212	0.786	0.724	0.657

Largs	217	0.647	0.591	0.540
Loudoun	215	0.793	0.718	0.619
Mauchline	186	0.752	0.747	0.653
Monkton & Prestwick	179	0.709	0.667	0.550
Muirkirk	187	0.821	0.822	0.684
New Cumnock	188	1.043	0.798	0.777
Ochiltree	189	0.973	0.762	0.736
Old Cumnock	190	0.747	0.678	0.683
Riccarton	208	0.815	0.810	0.677
Sorn	191	0.784	0.760	0.660
Stair	192	0.829	0.762	0.702
Stevenston	218	0.800	0.756	0.688
Stewarton	209	0.736	0.664	0.623
Straiton	213	0.766	0.724	0.657
Symington	180	0.755	0.637	0.603
Tarbolton	181	0.839	0.793	0.798
West Kilbride	219	0.726	0.684	0.611
Ayr		0.778	0.735	0.665

Lanark - I_g

Civil Parish	CP No.	1881	1891	1901
Avondale	538	0.703	0.711	0.670
Biggar	518	0.708	0.621	0.564
Blantyre	543	0.793	0.801	0.777
Bothwell	545	0.798	0.782	0.720
Cadder	552	0.807	0.665	0.668
Cambusnethan	546	0.822	0.790	0.731
Cambuslang	549	0.769	0.760	0.728
Carluke	531	0.805	0.814	0.716
Carmichael	519	0.626	0.613	0.517
Carmunnock	550	0.599	0.734	0.691
Carnwath	532	0.875	0.826	0.683
Carstairs	533	0.727	0.604	0.641
Covington & Thankerton	520	0.628	0.673	0.631
Crawford	521	0.785	0.741	0.649
Crawfordjohn	522	0.652	0.829	0.627
Culter	523	0.669	0.566	0.632
Dalserf	539	0.853	0.844	0.720
Dalziel	547	0.800	0.786	0.720
Dolphinton	534	0.582	0.757	0.708
Douglas	529	0.760	0.700	0.678
Dunsyre	535	0.796	0.737	0.698
East Kilbride	544	0.835	0.622	0.639

GLASGOW	554	0.717	0.653	0.617
Glassford	540	0.866	0.903	0.681
Hamilton	541	0.778	0.786	0.720
Lanark	536	0.696	0.624	0.608
Lesmahagow	530	0.828	0.781	0.711
Libberton	524	0.801	0.817	0.716
Airdrie	556	0.840	0.805	0.713
Coatbridge	557	0.839	0.805	0.729
Pettinain	525	0.703	0.668	0.570
Rutherglen	551	0.728	0.726	0.646
Shotts	548	0.795	0.790	0.731
Stonehouse	542	0.757	0.827	0.683
Symington	526	0.792	0.523	0.557
Walston	537	0.744	0.881	0.808
Wandell & Lamington	527	0.759	0.609	0.530
Wiston & Roberton	528	0.749	0.679	0.547
Lanark		0.740	0.689	0.646

Linlithgow - I_g

Civil Parish	CP No.	1881	1891	1901
Abercorn	843	0.713	0.830	0.650
Bathgate	846	0.876	0.829	0.754
Bo'ness	841	0.776	0.798	0.717
Carriden	844	0.776	0.637	0.685
Ecclesmachen	848	0.875	0.637	0.675
Kirkliston	559	0.808	0.637	0.715
Linlithgow	842	0.720	0.637	0.661
Livingstone	850	0.765	0.815	0.703
Torphicen	847	0.819	0.791	0.692
Uphall	849	0.790	0.828	0.743
Whitburn	851	0.767	0.804	0.706
Linlithgow		0.794	0.655	0.717

Edinburgh - I_g

Civil Parish	CP No.	1881	1891	1901
Borthwick	563	0.819	0.647	0.684
Carrington	573	0.734	0.639	0.623
Cockpen	574	0.692	0.647	0.684
EDINBURGH	579	0.661	0.637	0.554
Cranston	564	0.775	0.742	0.591
Crichton	565	0.800	0.742	0.649

Currie	558	0.771	0.629	0.577
Dalkeith	575	0.770	0.711	0.584
Fala & Soutra	566	0.721	0.595	0.451
Glencorse	577	0.760	0.681	0.637
Heriot	567	0.645	0.647	0.553
Inveresk	571	0.741	0.637	0.554
Kirknewton & East Calder	561	0.802	0.629	0.692
Lasswade	570	0.776	0.749	0.641
Mid-Calder	562	0.760	0.812	0.773
Newbattle	576	0.733	0.647	0.684
Newton	572	0.797	0.648	0.778
Penicuik	578	0.683	0.650	0.641
Ratho	560	0.758	0.740	0.643
Stow	568	0.669	0.647	0.553
Temple	569	0.856	0.715	0.669
West-Calder	585	0.809	0.773	0.716
Edinburgh		0.678	0.681	0.567

Haddington - I_g

Civil Parish	CP No.	1881	1891	1901
Aberlady	365	0.845	0.563	0.557
Athelstaneford	357	0.720	0.585	0.524
Bolton	358	0.645	0.295	0.649
Dirleton	366	0.633	0.647	0.488
Dunbar	350	0.691	0.647	0.598
Garvald	359	0.717	0.668	0.602
Gladsmuir	370	0.721	0.671	0.663
Haddington	360	0.638	0.585	0.555
Humbie	361	0.728	0.595	0.502
Innerwick	351	0.721	0.562	0.520
Morham	362	0.598	0.435	0.640
North Berwick	367	0.734	0.582	0.492
Oldhamstocks	352	0.705	0.736	0.625
Ormiston	371	0.713	0.769	0.797
Pencaitland	372	0.862	0.707	0.653
Prestonkirk	353	0.775	0.585	0.558
Prestonpans	369	0.817	0.733	0.710
Salton	363	0.848	0.685	0.683
Spott	354	0.769	0.616	0.582
Stenton	355	0.810	0.616	0.566
Tranent	373	0.804	0.763	0.738
Whitekirk & Tynninghame	368	0.629	0.760	0.581
Whittinghame	356	0.683	0.755	0.676

Yester	364	0.774	0.509	0.507
Haddington		0.732	0.670	0.618

Berwick - I_g

Civil Parish	CP No.	1881	1891	1901
Abbey St Bathans	242	0.521	0.520	0.474
Ayton	243	0.760	0.674	0.589
Bunkle & Preston	244	0.786	0.585	0.674
Channelkirk	265	0.602	0.689	0.655
Chirnside	245	0.724	0.624	0.491
Cockburnpath	246	0.674	0.755	0.588
Coldingham	247	0.730	0.736	0.563
Coldstream	252	0.693	0.580	0.544
Cranshaws	253	0.663	0.520	0.516
Duns	254	0.720	0.621	0.540
Earlston	266	0.732	0.647	0.481
Eccles	255	0.680	0.787	0.550
Edrom	256	0.626	0.780	0.470
Eyemouth	248	0.778	0.736	0.699
Fogo	257	0.667	0.632	0.615
Foulden	249	0.750	0.854	0.576
Gordon	267	0.809	0.716	0.469
Greenlaw	258	0.710	0.563	0.539
Hume	268	0.635	0.581	0.768
Hutton	250	0.694	0.738	0.573
Ladykirk	259	0.658	0.582	0.737
Langton	260	0.793	0.436	0.558
Lauder	269	0.694	0.647	0.510
Legerwood	270	0.694	0.705	0.571
Longformacus	261	0.676	0.520	0.512
Merton	271	0.716	0.612	0.520
Mordington	251	0.873	1.032	0.648
Nenthorn	272	0.719	0.581	0.527
Polwarth	262	1.119	0.662	0.664
Swinton	263	0.598	0.652	0.588
Westruther	273	0.805	0.527	0.657
Whitsome	264	0.712	0.634	0.585
Berwick		0.715	0.652	0.565

Peebles - I_g

Civil Parish	CP No.	1881	1891	1901
Drumelzier	636	0.727	0.502	0.460
Eddlestone	644	0.681	0.738	0.616
Innerleithen	639	0.684	0.647	0.553
Kilbucho, Broughton, etc.	635	0.629	0.566	0.582
Kirkurd	641	0.668	0.540	0.727
Lyne	645	0.786	0.227	0.491
Manor	646	0.632	0.666	0.638
Newlands	642	0.671	0.443	0.595
Peebles	647	0.693	0.609	0.547
Skirling	637	0.697	0.353	0.541
Stobo	648	0.762	0.456	0.498
Traquair	640	0.786	0.647	0.559
Tweedsmuir	638	0.649	0.893	0.609
West Linton	643	0.784	0.574	0.598
Peebles		0.699	0.586	0.564

Selkirk - I_g

Civil Parish	CP No.	1881	1891	1901
Caddonfoot	799	0.819	0.647	0.553
Ettrick	803	0.709	0.807	0.499
Galashiels	800	0.600	0.647	0.556
Kirkhope	804	0.673	0.595	0.569
Roberton	772	0.614	0.758	0.565
Selkirk	801	0.708	0.647	0.564
Yarrow	805	0.717	0.647	0.654
Selkirk		0.656	0.713	0.560

Roxburgh - I_g

Civil Parish	CP No.	1881	1891	1901
Ancrum	774	0.695	0.642	0.620
Ashkirk	802	0.819	0.647	0.525
Bedrule	775	0.804	0.474	0.376
Bowden	793	0.750	0.670	0.607
Castleton	769	0.671	0.739	0.559
Cavers	770	0.715	0.623	0.528
Crailing	776	0.822	0.472	0.439
Eckford	782	0.684	0.613	0.520
Ednam	783	0.611	0.747	0.630

Hawick	771	0.681	0.623	0.572
Hobkirk	777	0.598	0.666	0.488
Hownam	784	0.639	0.647	0.531
Jedburgh	778	0.714	0.575	0.558
Kelso	785	0.670	0.583	0.539
Lilliesleaf	794	0.677	0.566	0.668
Linton	786	0.553	0.486	0.573
Makerston	787	0.711	0.427	0.581
Maxton	795	0.828	0.496	0.520
Melrose	796	0.645	0.647	0.518
Minto	779	0.653	0.742	0.535
Morebattle	788	0.710	0.610	0.459
Oxnam	780	0.699	0.575	0.426
Roxburgh	797	0.605	0.517	0.451
St Boswells	798	0.801	0.673	0.438
Smailholm	789	0.827	0.509	0.470
Southdean	781	0.692	0.575	0.558
Sprouston	790	0.742	0.659	0.531
Stitchel	791	0.561	0.861	0.702
Teviothead	773	0.695	0.623	0.468
Yetholm	792	0.766	0.514	0.622
Roxburgh		0.687	0.614	0.550

Dumfries - I_g

Civil Parish	CP No.	1881	1891	1901
Annan	295	0.688	0.599	0.582
Applegarth	318	0.734	0.675	0.623
Canonbie	313	0.771	0.807	0.709
Carlaverock	298	0.610	0.696	0.704
Closeburn	330	0.830	0.804	0.660
Cummertrees	296	0.756	0.599	0.582
Dalton	299	0.593	0.449	0.438
Dornock	297	0.725	0.619	0.639
Dryfesdale	319	0.762	0.714	0.597
Dumfries	300	0.702	0.674	0.612
Dunscore	331	0.764	0.500	0.762
Durrisdeer	332	0.759	0.747	0.619
Eskdalemuir	314	0.821	0.733	0.580
Ewes	315	0.656	0.611	0.519
Glencairn	333	0.768	0.987	0.633
Gretna	309	0.695	0.793	0.656
Halfmorton	310	0.672	0.882	0.540
Hoddom	320	0.770	0.599	0.582

Holywood	305	0.731	0.618	0.679
Hutton	321	0.735	0.756	0.589
Johnstone	322	0.874	0.625	0.700
Keir	334	0.667	0.466	0.520
Kirkconnel	328	0.842	0.883	0.698
Kirkmahoe	306	0.686	0.731	0.635
Kirkmichael	307	0.722	0.712	0.702
Kirkpatrick-Fleming	311	0.785	0.619	0.680
Kirkpatrick-Juxta	325	0.737	0.676	0.587
Langholm	316	0.646	0.689	0.485
Lochmaben	301	0.674	0.717	0.666
Middlebie	312	0.702	0.671	0.561
Moffat	326	0.662	0.547	0.496
Morton	335	0.683	0.744	0.585
Mouswald	302	0.780	0.606	0.597
Penmont	336	0.662	0.857	0.695
Ruthwell	303	0.710	0.649	0.443
St Mungo	323	0.594	0.576	0.422
Sanquhar	329	0.688	0.689	0.590
Tinwald	308	0.753	0.541	0.531
Torthorwald	304	0.670	0.727	0.460
Tundergarth	324	0.759	0.725	0.598
Tynron	337	0.656	0.796	0.641
Wamphray	327	0.818	0.611	0.522
Westerkirk	317	0.653	0.651	0.586
Dumfries		0.712	0.680	0.601

Kirkcudbright - I_g

Civil Parish	CP No.	1881	1891	1901
Anwoth	494	0.778	0.609	0.537
Balmaclellan	508	0.863	0.627	0.544
Balmaghie	490	0.675	0.645	0.614
Borgue	513	0.785	0.689	0.637
Buittle	498	0.856	0.665	0.517
Carsphairn	509	0.690	0.824	0.589
Colvend	499	0.813	0.661	0.491
Crossmichael	491	0.676	0.637	0.621
Dalbeattie	502	0.640	0.683	0.586
Dalry	510	0.752	0.814	0.590
Girthon	495	0.785	0.642	0.522
Irongray	504	0.676	0.493	0.628
Kells	511	0.768	0.909	0.636
Kelton	492	0.703	0.571	0.563

Kirkbean	503	0.704	0.819	0.695
Kirkcudbright	514	0.688	0.670	0.572
Kirkgunzeon	500	0.586	0.481	0.542
Kirkmabreck	496	0.662	0.599	0.638
Kirkpatrick-Durham	493	0.713	0.627	0.544
Lochrutton	501	0.751	0.603	0.726
Minnigaff	497	0.669	0.715	0.628
New Abbey	505	0.865	0.728	0.548
Parton	512	0.608	0.627	0.544
Rerrick	515	0.674	0.749	0.532
Terregles	506	0.627	0.618	0.679
Tongland	516	0.733	0.660	0.714
Troqueer	507	0.667	0.662	0.625
Twynholm	517	0.749	0.615	0.599
Kirkcudbright		0.698	0.666	0.594

Wigtown - I_g

Civil Parish	**CP No.**	**1881**	**1891**	**1901**
Glasserton	852	0.820	0.677	0.711
Inch	860	0.727	0.721	0.661
Kirkcolm	861	0.850	0.796	0.817
Kirkcowan	853	0.778	0.604	0.694
Kirkinner	854	0.762	0.655	0.676
Kirkmaiden	862	0.734	0.586	0.582
Leswalt	863	0.813	0.721	0.661
Mochrum	855	0.795	0.743	0.734
New Luce	864	0.793	0.717	0.658
Old Luce (or Glenluce)	865	0.796	0.742	0.644
Penninghame	856	0.778	0.715	0.628
Portpatrick	866	0.709	0.724	0.635
Sorbie	857	0.704	0.647	0.659
Stoneykirk	867	0.791	0.756	0.746
Stranraer	868	0.667	0.721	0.661
Whithorn	858	0.733	0.589	0.666
Wigtown	859	0.693	0.701	0.605
Wigtown		0.746	0.698	0.672

	1881	1891	1901
Scotland - I_g	0.732	0.691	0.631

Table A1.3

"I_h, Scotland - Civil Parishes"

Shetland - I_h

Civil Parish	CP No.	1881	1891	1901
Bressay	869	0.008	0.010	0.010
Delting	870	0.025	0.022	0.009
Dunrossness	871	0.012	0.014	0.007
Fetlar	874	0.010	0.000	0.009
Lerwick	875	0.022	0.016	0.020
Yell	891	0.028	0.009	0.013
Nesting	877	0.024	0.016	0.012
Northmavine	880	0.007	0.007	0.011
Sandsting & Aithsting	881	0.013	0.008	0.013
Tingwall	883	0.017	0.013	0.010
Unst	886	0.014	0.010	0.015
Walls	887	0.015	0.015	0.008
Shetland		0.016	0.013	0.013

Orkney - I_h

Civil Parish	CP No.	1881	1891	1901
Birsay	614	0.014	0.010	0.005
St Andrews	622	0.014	0.011	0.016
Eday & Pharay	610	0.027	0.013	0.007
Evie & Rendall	616	0.022	0.013	0.019
Firth	618	0.026	0.029	0.014
Stennes	625	0.026	0.029	0.016
Holm & Paplay	619	0.009	0.050	0.030
Hoy & Graemsay	611	0.021	0.017	0.018
Kirkwall & St Ola	620	0.042	0.036	0.023
Cross & Burness	628	0.014	0.024	0.018
Orphir	621	0.021	0.010	0.014
Rousay & Egilshay	627	0.024	0.009	0.018

Lady	629	0.019	0.024	0.018
Sandwick	624	0.030	0.029	0.012
Shapinshay	630	0.018	0.029	0.024
South Ronaldshay & Burray	631	0.049	0.006	0.024
Stromness	626	0.027	0.021	0.018
Stronsay	632	0.023	0.025	0.029
Flotta	612	0.037	0.024	0.025
Papa-Westray	633	0.027	0.000	0.032
Westray	634	0.018	0.027	0.013
Orkney		0.028	0.022	0.020

Caithness - I_h

Civil Parish	CP No.	1881	1891	1901
Wick	284	0.054	0.048	0.052
Dunnet	285	0.041	0.045	0.056
Halkirk	287	0.047	0.056	0.053
Latheron	286	0.063	0.053	0.059
Olrig	281	0.045	0.068	0.050
Reay	288	0.038	0.036	0.035
Thurso	289	0.056	0.056	0.043
Watten	282	0.058	0.036	0.061
Caithness		0.053	0.050	0.051

Sutherland - I_h

Civil Parish	CP No.	1881	1891	1901
Assynt	828	0.010	0.004	0.007
Clyne	836	0.035	0.058	0.020
Creich	829	0.031	0.038	0.027
Dornoch	830	0.024	0.020	0.018
Durness	831	0.035	0.020	0.027
Edrachillis	832	0.026	0.039	0.019
Farr	839	0.029	0.036	0.020
Golspie	833	0.024	0.021	0.019
Kildonan	837	0.029	0.005	0.024
Lairg	834	0.025	0.007	0.014
Loth	838	0.016	0.033	0.031
Rogart	835	0.052	0.020	0.024
Tongue	840	0.030	0.016	0.027
Sutherland		0.027	0.022	0.020

Ross and Cromarty - I_h

Civil Parish	CP No.	1881	1891	1901
Alness	739	0.032	0.057	0.038
Applecross	758	0.020	0.011	0.015
Avoch	736	0.027	0.006	0.040
Contin	760	0.015	0.023	0.014
Cromarty	746	0.026	0.042	0.027
Dingwall	740	0.026	0.023	0.026
Edderton	766	0.034	0.012	0.020
Fearn	743	0.020	0.042	0.024
Fodderty	741	0.023	0.023	0.024
Gairloch Northern	749	0.011	0.011	0.015
Glenshiel	763	0.019	0.022	0.020
Killearnan	737	0.017	0.039	0.036
Kilmuir-Easter	750	0.019	0.023	0.022
Kiltearn	742	0.039	0.034	0.038
Kincardine	767	0.023	0.011	0.013
Kintail	764	0.014	0.014	0.010
Knockbain	738	0.037	0.023	0.025
Lochalsh	765	0.021	0.008	0.022
Lochbroom	757	0.017	0.020	0.015
Lochcarron	759	0.018	0.011	0.009
Logie-Easter	751	0.034	0.020	0.040
Nigg	744	0.012	0.018	0.017
Resolis	747	0.023	0.016	0.028
Rosemarkie	748	0.032	0.041	0.023
Rosskeen	752	0.025	0.036	0.021
Tain	768	0.018	0.039	0.021
Tarbat	745	0.010	0.021	0.021
Urquhart & Logie-Wester	761	0.040	0.027	0.026
Urray	762	0.024	0.023	0.014
Barvas	753	0.008	0.007	0.013
Lochs	754	0.019	0.007	0.013
Stornoway	755	0.016	0.011	0.011
Uig	756	0.004	0.007	0.013
Ross and Cromarty		0.020	0.019	0.018

Inverness - I_h

Civil Parish	CP No.	1881	1891	1901
Abernethy & Kincardine	438	0.104	0.099	0.069
Alvie	439	0.072	0.037	0.046
Ardersier	445	0.056	0.032	0.039
Boleskine	433	0.019	0.019	0.013
Croy & Dalcross	608	0.051	0.029	0.025
Daviot & Dunlichty	447	0.022	0.017	0.031
Dores	448	0.027	0.019	0.010
Duthil	440	0.087	0.070	0.061
Glenelg	453	0.029	0.000	0.022
Inverness	449	0.036	0.029	0.031
Kilmonivaig	455	0.018	0.017	0.010
Kilmorack	434	0.021	0.023	0.021
Kiltarlity	435	0.032	0.023	0.021
Kingussie & Insh	441	0.056	0.046	0.041
Kirkhill	436	0.025	0.031	0.019
Laggan	442	0.051	0.046	0.028
Moy & Dalarossie	450	0.023	0.039	0.013
Petty	451	0.066	0.037	0.040
Urquhart	437	0.016	0.021	0.021
Barra	443	0.020	0.026	0.020
Bracadale	458	0.032	0.009	0.023
Duirnish	459	0.031	0.009	0.026
Harris	444	0.028	0.023	0.026
Kilmuir	460	0.040	0.025	0.032
North Uist	457	0.030	0.026	0.031
Portree	461	0.032	0.018	0.015
Sleat	462	0.035	0.013	0.018
Small Isles	456	0.007	0.000	0.000
Snizort	463	0.028	0.025	0.032
South Uist	465	0.021	0.038	0.027
Strath	464	0.029	0.013	0.020
Inverness		0.034	0.030	0.028

Nairn - I_h

Civil Parish	CP No.	1881	1891	1901
Ardclach	605	0.026	0.049	0.026
Auldearn	606	0.066	0.033	0.048
Cawdor	607	0.034	0.039	0.026
Nairn	609	0.049	0.039	0.035
Nairn		0.047	0.043	0.035

Elgin - I_h

Civil Parish	CP No.	1881	1891	1901
Alves	590	0.059	0.028	0.061
Bellie	594	0.080	0.066	0.052
Birnie	591	0.058	0.156	0.061
Boharm	237	0.143	0.167	0.091
Cromdale &Advie	586	0.083	0.070	0.040
Dallas	597	0.130	0.118	0.057
Drainie	587	0.084	0.084	0.059
Duffus	588	0.060	0.057	0.044
Dyke	598	0.055	0.025	0.045
Edinkillie	599	0.047	0.049	0.031
Elgin	592	0.076	0.057	0.063
New Spynie	589	0.158	0.057	0.063
Forres	600	0.080	0.067	0.053
Kinloss	601	0.039	0.019	0.041
Knockando	603	0.115	0.088	0.075
Rafford	602	0.059	0.071	0.054
Rothes	604	0.152	0.095	0.084
St Andrews-Lhanbryde	593	0.065	0.057	0.063
Speymouth	595	0.129	0.033	0.067
Urquhart	596	0.091	0.061	0.061
Elgin		0.082	0.067	0.056

Banff - I_h

Civil Parish	CP No.	1881	1891	1901
Aberlour	232	0.090	0.070	0.065
Alvah	224	0.072	0.105	0.049
Banff	225	0.086	0.050	0.056
Botriphnie	238	0.052	0.059	0.043
Boyndie	226	0.104	0.100	0.072
Cullen	229	0.062	0.066	0.052
Deskford	230	0.107	0.131	0.054
Fordyce	231	0.120	0.095	0.083
Forglen	220	0.118	0.050	0.057
Gamrie	227	0.086	0.061	0.067
Grange	239	0.106	0.094	0.100
Inveravon	234	0.100	0.116	0.071
Inverkeithny	221	0.098	0.083	0.098
Keith	240	0.131	0.105	0.075

Kirkmichael	235	0.090	0.144	0.087
Marnoch	222	0.172	0.166	0.139
Mortlach	236	0.110	0.070	0.065
Ordiquhill	223	0.082	0.076	0.056
Rathven	228	0.082	0.066	0.052
Rothiemay	241	0.148	0.133	0.125
St Fergus	35	0.142	0.121	0.122
Banff		0.102	0.090	0.075

Aberdeen - I_h

Civil Parish	CP No.	1881	1891	1901
ABERDEEN	1	0.092	0.086	0.041
Old Machar (Abrdn)	10	0.041	0.033	0.037
Aberdour	25	0.122	0.093	0.088
Aboyne	38	0.082	0.051	0.044
Alford	13	0.091	0.134	0.063
Auchindoir	14	0.169	0.099	0.164
Auchterless	79	0.119	0.131	0.093
Belhelvie	2	0.096	0.056	0.060
Birse	39	0.088	0.051	0.079
Bourtie	57	0.074	0.000	0.067
Cabrach	233	0.118	0.113	0.104
Cairney	72	0.132	0.105	0.106
Chapel of Garioch	58	0.076	0.121	0.053
Clatt	15	0.053	0.038	0.029
Cluny	40	0.127	0.085	0.104
Coull	41	0.159	0.170	0.076
Crathie & Braemar	42	0.042	0.034	0.018
Cruden	49	0.108	0.071	0.088
Culsamond	59	0.111	0.118	0.071
Daviot	60	0.096	0.072	0.041
Drumblade	73	0.082	0.109	0.069
Drumoak	3	0.062	0.050	0.038
Dyce	4	0.125	0.047	0.036
Echt	5	0.098	0.067	0.052
Ellon	50	0.097	0.093	0.088
Fintray	6	0.117	0.098	0.043
Forgue	74	0.125	0.131	0.093
Foveran	51	0.144	0.068	0.100
Fraserburgh	27	0.087	0.093	0.065
Fyvie	80	0.078	0.087	0.103
Gartly	75	0.090	0.039	0.075
Glass	76	0.132	0.125	0.071

Glenbucket	16	0.109	0.089	0.103
Glenmuick	43	0.079	0.069	0.049
Huntly	77	0.126	0.119	0.087
Insch	61	0.144	0.111	0.075
Inverurie	62	0.122	0.110	0.120
Keig	17	0.091	0.013	0.067
Keithhall	63	0.057	0.055	0.089
Kemnay	64	0.106	0.086	0.099
Kildrummy	18	0.058	0.117	0.065
Kincardine O'Neil	44	0.080	0.048	0.035
King Edward	81	0.165	0.105	0.124
Kinnellar	7	0.069	0.092	0.039
Kinnethmont	19	0.110	0.099	0.080
Kintore	65	0.098	0.109	0.070
Leochel-Cushnie	20	0.122	0.102	0.071
Leslie	66	0.117	0.112	0.094
Logie-Buchan	52	0.146	0.045	0.145
Logie-Coldstone & Cromar.	45	0.092	0.069	0.049
Lumphanan	46	0.151	0.070	0.098
Methlic	53	0.106	0.093	0.090
Midmar	47	0.139	0.085	0.075
Monquhitter	82	0.187	0.087	0.103
Monymusk	68	0.102	0.089	0.068
New Deer	30	0.111	0.093	0.088
Newhills	8	0.061	0.059	0.033
New Machar	9	0.160	0.093	0.061
Old Deer	31	0.107	0.093	0.088
Old Meldrum	67	0.153	0.127	0.120
Oyne	69	0.133	0.154	0.103
Peterculter	11	0.052	0.050	0.022
Peterhead	32	0.083	0.071	0.072
Pitsligo	33	0.103	0.084	0.084
Premnay	70	0.166	0.170	0.102
Rathen	34	0.067	0.075	0.064
Rayne	71	0.109	0.069	0.111
Rhynie	78	0.140	0.178	0.153
Skene	12	0.073	0.081	0.065
Slains	54	0.100	0.073	0.124
Strathdon	21	0.083	0.069	0.049
Tarland	48	0.081	0.069	0.076
Tarves	55	0.110	0.093	0.088
Tough	22	0.109	0.075	0.068
Towie	23	0.122	0.069	0.091
Tullynessle & Forbes	24	0.081	0.076	0.075
Turriff	83	0.093	0.094	0.083

Tyrie	37	0.102	0.093	0.088
Udny	56	0.128	0.093	0.084
Aberdeen		0.086	0.068	0.057

Kincardine - I_h

Civil Parish	CP No.	1881	1891	1901
Arbuthnot	474	0.076	0.028	0.069
Banchory-Devenick	471	0.073	0.050	0.062
Banchory-Ternan	482	0.060	0.030	0.041
Benholm	475	0.078	0.061	0.059
Bervie	476	0.050	0.056	0.044
Dunnottar	478	0.105	0.159	0.087
Durris	483	0.112	0.080	0.064
Fettercairn	466	0.040	0.073	0.052
Fetteresso	479	0.082	0.075	0.058
Fordoun	467	0.076	0.077	0.042
Garvock	468	0.130	0.093	0.044
Glenbervie	480	0.100	0.034	0.044
Kinneff & Catterline	481	0.115	0.087	0.057
Laurencekirk	469	0.116	0.108	0.053
Maryculter	472	0.055	0.050	0.035
Marykirk	470	0.140	0.124	0.073
Nigg	473	0.069	0.068	0.089
St Cyrus	477	0.087	0.115	0.068
Strachan	484	0.103	0.076	0.067
Kincardine		0.080	0.075	0.057

Forfar - I_h

Civil Parish	CP No.	1881	1891	1901
Aberlemno	99	0.060	0.044	0.049
Airlie	110	0.040	0.032	0.045
Arbirlot	93	0.048	0.122	0.032
Arbroath	94	0.045	0.037	0.028
Auchterhouse	119	0.062	0.082	0.036
Barry	95	0.029	0.011	0.021
Brechin	84	0.068	0.043	0.037
Carmylie	96	0.065	0.121	0.052
Careston	85	0.110	0.099	0.047
Cortachy & Clova	111	0.022	0.069	0.017
Coupar-Angus	669	0.068	0.025	0.036
Craig	130	0.043	0.062	0.034

Dun	86	0.061	0.040	0.057
DUNDEE	120	0.053	0.043	0.034
Dunnichen	100	0.140	0.064	0.063
Eassie & Nevay	101	0.072	0.094	0.066
Edzell	87	0.058	0.073	0.031
Farnell	131	0.081	0.018	0.023
Fearn	112	0.055	0.000	0.058
Forfar	102	0.059	0.043	0.036
Glamis	103	0.073	0.075	0.043
Glenisla	113	0.070	0.085	0.036
Guthrie	104	0.083	0.064	0.060
Inverarity	105	0.070	0.064	0.061
Inverkeilor	132	0.080	0.044	0.058
Kettins	122	0.030	0.030	0.069
Kingoldrum	114	0.097	0.091	0.006
Kinnell	133	0.111	0.093	0.078
Kinnettles	106	0.046	0.000	0.047
Kirkden	107	0.093	0.064	0.069
Kirriemuir	115	0.059	0.069	0.030
Lethnott & Navar	88	0.090	0.043	0.017
Liff, Benvie, etc.	123	0.039	0.043	0.034
Lintrathen	116	0.069	0.053	0.036
Lochlee	89	0.063	0.054	0.016
Logie-Pert	90	0.054	0.074	0.049
Lunan	134	0.081	0.093	0.104
Lundie	124	0.088	0.041	0.028
Mains	125	0.046	0.022	0.034
Marytown	135	0.045	0.093	0.068
Menmuir	91	0.021	0.060	0.041
Monifieth	126	0.030	0.025	0.017
Monikie	97	0.062	0.052	0.054
Montrose	136	0.038	0.029	0.034
Murroes	127	0.063	0.043	0.081
Newtyle	128	0.053	0.039	0.045
Oathlaw	108	0.047	0.000	0.052
Panbride	98	0.030	0.037	0.014
Rescobie	109	0.031	0.080	0.043
Ruthven	117	0.124	0.101	0.028
Stracathro	92	0.072	0.044	0.058
Tannadice	118	0.053	0.033	0.038
Teeling	129	0.037	0.082	0.041
Forfar		0.052	0.042	0.034

Perth - I_h

Civil Parish	CP No.	1881	1891	1901
Aberdalgie	685	0.056	0.000	0.014
Dull	677	0.053	0.030	0.023
Aberfoyle	711	0.061	0.000	0.008
Abernethy	686	0.053	0.047	0.024
Abernyte	687	0.029	0.000	0.011
Alyth	662	0.072	0.053	0.038
Ardoch	712	0.054	0.030	0.022
Auchterarder	649	0.066	0.040	0.034
Auchtergaven	689	0.037	0.030	0.029
Bendochy	663	0.077	0.053	0.068
Blackford	650	0.046	0.030	0.031
Blair-Atholl	676	0.029	0.030	0.023
Blairgowrie	664	0.049	0.053	0.038
Callander	714	0.020	0.014	0.016
Caputh	665	0.028	0.030	0.015
Cargill	666	0.059	0.030	0.051
Clunie	667	0.065	0.030	0.037
Collace	668	0.039	0.030	0.071
Comrie	651	0.039	0.030	0.020
Crieff	652	0.046	0.030	0.019
Culross	396	0.048	0.056	0.027
Dowally	678	0.037	0.030	0.015
Dron	690	0.058	0.098	0.065
Dunbarney	691	0.042	0.010	0.024
Dunblane	715	0.052	0.030	0.022
Dunning	653	0.076	0.027	0.042
Errol	692	0.045	0.037	0.029
Findo-Gask	695	0.077	0.123	0.046
Forgandenny	693	0.070	0.039	0.021
Forteviot	694	0.069	0.039	0.047
Fortingall	679	0.046	0.016	0.025
Fowlis-Easter	121	0.124	0.000	0.040
Fowlis-Wester	654	0.041	0.030	0.024
Glendevon	655	0.010	0.039	0.029
Inchture	696	0.029	0.031	0.049
Kenmore	680	0.035	0.030	0.023
Killin	716	0.027	0.030	0.023
Kilmadock	717	0.028	0.020	0.016
Kilspindie	697	0.073	0.074	0.078
Kincardine	718	0.066	0.020	0.047
Kinfauns	699	0.015	0.031	0.027
Kinloch-Rannoch	670	0.051	0.030	0.028

Kinnaird	700	0.094	0.000	0.094
Kinnoul	701	0.058	0.031	0.023
Kirkmichael	671	0.053	0.053	0.038
Lethendy	672	0.025	0.030	0.028
Little Dunkeld	681	0.037	0.030	0.029
Logie	806	0.017	0.031	0.007
Logialmond	656	0.043	0.030	0.029
Logierait	682	0.046	0.030	0.023
Longforgan	702	0.037	0.055	0.023
Madderty	657	0.032	0.000	0.027
Meigle	673	0.048	0.025	0.036
Methven	703	0.043	0.030	0.029
Moneydie	704	0.073	0.030	0.018
Monzievaird & Strowan	658	0.008	0.030	0.010
Moulin	683	0.016	0.030	0.023
Muckart	659	0.019	0.030	0.022
Muthil	660	0.042	0.030	0.042
Perth	705	0.041	0.031	0.023
Port of Montieth	719	0.037	0.016	0.017
Rattray	674	0.046	0.046	0.038
Rhynd	707	0.039	0.051	0.058
St Madoes	708	0.006	0.031	0.032
St Martins	675	0.050	0.031	0.048
Scone	709	0.041	0.031	0.024
Tibbermore	710	0.033	0.031	0.015
Trinity-Gask	661	0.033	0.021	0.037
Tulliallan	402	0.039	0.027	0.034
Weem	684	0.023	0.030	0.031
Perth		0.042	0.033	0.027

Fife - I_h

Civil Parish	CP No.	1881	1891	1901
Abdie	374	0.055	0.047	0.019
Aberdour	394	0.058	0.028	0.013
Anstruther	416	0.042	0.014	0.020
Arngask	688	0.050	0.046	0.042
Auchterderran	403	0.087	0.062	0.054
Auchtermuchty	375	0.062	0.045	0.022
Auchtertool	404	0.085	0.107	0.046
Ballingry	405	0.099	0.062	0.072
Balmerino	376	0.051	0.054	0.029
Beath	406	0.116	0.078	0.035
Burntisland	407	0.049	0.039	0.040

Cameron	417	0.046	0.042	0.024
Carnbee	418	0.046	0.048	0.036
Carnock	395	0.037	0.042	0.024
Ceres	377	0.059	0.060	0.027
Collessie	378	0.034	0.030	0.032
Crail	419	0.046	0.032	0.042
Creich	379	0.030	0.034	0.024
Cults	380	0.076	0.030	0.030
Cupar	381	0.037	0.027	0.016
Dairsie	382	0.056	0.044	0.044
Dalgetty	397	0.039	0.041	0.037
Dunbog	383	0.046	0.021	0.037
Dunfermline	398	0.031	0.023	0.018
Kirkcaldy & Dysart	411	0.028	0.025	0.022
Elie	421	0.012	0.009	0.004
Falkland	384	0.026	0.030	0.020
Ferry-Port-on-Craig	422	0.046	0.023	0.016
Flisk	385	0.083	0.021	0.037
Forgan	423	0.014	0.011	0.005
Inverkeithing	399	0.085	0.023	0.039
Kemback	386	0.026	0.067	0.037
Kennoway	408	0.027	0.076	0.039
Kettle	387	0.057	0.079	0.032
Kilconquhar	424	0.058	0.009	0.027
Kilmany	388	0.029	0.043	0.021
Kilrenny	425	0.039	0.033	0.024
Kinghorn	409	0.071	0.028	0.021
Kinglassie	410	0.030	0.062	0.057
Kingsbarns	426	0.061	0.032	0.039
Largo	427	0.034	0.034	0.023
Largo	412	0.049	0.019	0.020
Leslie	428	0.061	0.057	0.045
Logie	389	0.050	0.000	0.041
Markinch	413	0.049	0.043	0.022
Monimail	390	0.057	0.049	0.021
Moonzie	391	0.094	0.080	0.113
Newburgh	392	0.077	0.047	0.040
Newburn	429	0.040	0.025	0.020
Pittenweem	430	0.067	0.049	0.016
St Andrews & St Leonards	431	0.034	0.017	0.013
St Monance (Abercrombie)	432	0.058	0.034	0.040
Saline	400	0.059	0.038	0.021
Scoonie	414	0.034	0.026	0.026
Strathmiglo	393	0.035	0.047	0.025
Torryburn	401	0.031	0.038	0.040

Wemyss	415	0.030	0.043	0.039
Fife		0.040	0.031	0.024

Kinross - I_h

Civil Parish	CP No.	1881	1891	1901
Cleish	485	0.068	0.023	0.044
Fossoway & Tulliebole	486	0.047	0.039	0.028
Kinross	487	0.047	0.028	0.025
Orwell	488	0.038	0.031	0.032
Portmoak	489	0.043	0.062	0.032
Kinross		0.045	0.029	0.029

Clackmannan - I_h

Civil Parish	CP No.	1881	1891	1901
Alloa	290	0.055	0.031	0.019
Clackmannan	291	0.051	0.031	0.023
Dollar	293	0.022	0.025	0.011
Tillicoultry	294	0.043	0.019	0.016
Clackmannan		0.046	0.021	0.019

Stirling - I_h

Civil Parish	CP No.	1881	1891	1901
Airth	812	0.068	0.074	0.053
Alva	292	0.048	0.031	0.023
Baldernock	826	0.025	0.034	0.034
Balfron	820	0.047	0.020	0.021
Grangemouth	815	0.083	0.045	0.033
Buchanan	818	0.011	0.011	0.015
Campsie	827	0.041	0.045	0.029
Denny	809	0.053	0.048	0.031
Drymen	819	0.031	0.042	0.024
Dunnipace	810	0.079	0.080	0.047
Falkirk	814	0.069	0.045	0.033
Fintry	821	0.073	0.029	0.036
Gargunnock	822	0.024	0.023	0.029
Killearn	823	0.025	0.057	0.011
Kilsyth	811	0.075	0.062	0.041
Kippen	824	0.065	0.044	0.024
Larbert	813	0.057	0.027	0.021

Muiravonside	816	0.078	0.061	0.067
Stirling	807	0.041	0.034	0.031
Slamannan	817	0.117	0.112	0.090
Strathblane	825	0.039	0.018	0.015
Stirling		0.056	0.044	0.031

Dunbarton - I_h

Civil Parish	CP No.	1881	1891	1901
Arrochar	339	0.003	0.022	0.002
Bonhill	346	0.024	0.021	0.017
Cardross	347	0.026	0.041	0.025
Cumbernauld	338	0.092	0.100	0.033
Dumbarton	344	0.049	0.041	0.025
Kilmaronock	348	0.014	0.015	0.014
Kirkintilloch	342	0.050	0.042	0.024
Luss	349	0.022	0.022	0.003
Bearsden	343	0.035	0.031	0.013
Clydebank	345	0.045	0.019	0.025
Roseneath	341	0.011	0.006	0.006
Rhu	340	0.017	0.013	0.013
Dunbarton		0.033	0.029	0.020

Argyll - I_h

Civil Parish	CP No.	1881	1891	1901
Ardchattan	169	0.033	0.021	0.019
Ardnamurchan	138	0.026	0.018	0.021
Arisaig	452	0.028	0.018	0.021
Ballachulish & Ardgour	137	0.030	0.022	0.024
Campbeltown	152	0.057	0.048	0.045
Craignish	158	0.029	0.029	0.061
Cumlodden & Minnard	159	0.029	0.026	0.017
Dunoon & Kilmun	140	0.016	0.010	0.013
Glenorchy	171	0.037	0.021	0.019
Inverary	160	0.027	0.026	0.017
Inverchaolain	141	0.020	0.023	0.003
Kilbrandon & Kilchattan	172	0.031	0.025	0.023
Kilcalmonell	154	0.026	0.026	0.017
Dalavich	173	0.024	0.021	0.019
Kilfinan	142	0.033	0.018	0.009
Killean & Kilchenzie	155	0.019	0.011	0.021
Kilmallie	454	0.030	0.022	0.024

Kilmartin	161	0.020	0.040	0.011
Kilmodan	143	0.011	0.000	0.003
Kilmore & Kilbride	174	0.038	0.033	0.029
Kilninver	175	0.019	0.029	0.010
Lismore	170	0.020	0.022	0.024
Lochgoilhead	144	0.010	0.000	0.007
Morvern	139	0.013	0.049	0.002
North Knapdale	162	0.019	0.010	0.021
Saddell	156	0.028	0.026	0.017
Southend	157	0.052	0.036	0.045
South Knapdale	163	0.021	0.026	0.017
Stralachlan	146	0.027	0.000	0.011
Strachur	145	0.029	0.000	0.013
Bowmore (Kilarrow)	149	0.072	0.066	0.077
Gigha	153	0.062	0.062	0.047
Jura	148	0.026	0.025	0.023
Colonsay	147	0.062	0.027	0.020
Kilchoman	150	0.072	0.063	0.059
Kildalton & Oa	151	0.072	0.050	0.054
Kilfinichen & Kilvickeon.	165	0.052	0.051	0.040
Kilninian & Kilmore	166	0.030	0.009	0.017
Kinlochspelvie	167	0.021	0.009	0.017
Tyree	168	0.036	0.028	0.027
Coll	164	0.037	0.053	0.014
Argyll		0.035	0.028	0.026

Bute - I_h

Civil Parish	CP No.	1881	1891	1901
Cumbrae	279	0.015	0.026	0.007
Kilbride	274	0.015	0.021	0.012
Kilmory	275	0.030	0.021	0.012
Kingarth	276	0.022	0.014	0.011
North Bute	277	0.016	0.027	0.016
Rothesay	278	0.033	0.027	0.020
Bute		0.026	0.025	0.016

Renfrew - I_h

Civil Parish	CP No.	1881	1891	1901
Paisley	725	0.038	0.026	0.022
Cathcart(Glasgow ptn.)	553	0.009	0.008	0.005
Cathcart(Ldwd.)	720	0.009	0.008	0.008

Eaglesham	721	0.032	0.030	0.020
Eastwood	722	0.038	0.026	0.020
Erskine	726	0.022	0.015	0.015
Greenock	732	0.049	0.032	0.026
Houston & Killellan	729	0.045	0.021	0.013
Inchinnan	727	0.022	0.016	0.012
Inverkip	733	0.031	0.026	0.033
Kilbarchan	730	0.030	0.020	0.013
Kilmalcolm	734	0.019	0.025	0.007
Lochwinnoch	731	0.040	0.026	0.018
Mearns	723	0.025	0.028	0.016
Neilston	724	0.045	0.026	0.022
Port-Glasgow	735	0.050	0.032	0.028
Renfrew	728	0.042	0.026	0.015
Renfrew		0.038	0.025	0.020

Ayr - I_h

Civil Parish	CP No.	1881	1891	1901
Old Ardrossan	216	0.039	0.026	0.022
Auchinleck	185	0.122	0.123	0.088
Ayr	176	0.056	0.053	0.037
Ballantrae	193	0.062	0.045	0.044
Barr	194	0.023	0.061	0.011
Beith	201	0.047	0.036	0.023
Colmonell	195	0.053	0.025	0.021
Coylton	182	0.079	0.047	0.076
Craigie	177	0.009	0.020	0.013
Dailly	196	0.101	0.037	0.053
Dalmellington	183	0.127	0.053	0.037
Dalry	202	0.046	0.031	0.025
Dalrymple	184	0.103	0.053	0.037
Dreghorn	198	0.111	0.132	0.077
Dundonald	178	0.043	0.062	0.042
Dunlop	204	0.016	0.029	0.013
Fenwick	205	0.025	0.019	0.014
Galston	214	0.050	0.048	0.025
Girvan	197	0.084	0.044	0.045
Irvine	199	0.097	0.062	0.042
Kilbirnie	203	0.031	0.039	0.026
Kilmarnock	206	0.046	0.029	0.024
Kilmaurs	207	0.082	0.081	0.073
Kilwinning	200	0.084	0.065	0.050
Maybole	212	0.067	0.053	0.037

Largs	217	0.016	0.009	0.010
Loudoun	215	0.040	0.023	0.014
Mauchline	186	0.034	0.034	0.027
Monkton & Prestwick	179	0.052	0.025	0.021
Muirkirk	187	0.140	0.124	0.078
New Cumnock	188	0.108	0.085	0.076
Ochiltree	189	0.046	0.069	0.061
Old Cumnock	190	0.053	0.057	0.036
Riccarton	208	0.075	0.048	0.048
Sorn	191	0.041	0.022	0.030
Stair	192	0.067	0.069	0.070
Stevenston	218	0.080	0.082	0.048
Stewarton	209	0.038	0.022	0.026
Straiton	213	0.063	0.053	0.037
Symington	180	0.046	0.008	0.010
Tarbolton	181	0.084	0.054	0.065
West Kilbride	219	0.055	0.026	0.022
Ayr		0.059	0.046	0.035

Lanark - I_h

Civil Parish	CP No.	1881	1891	1901
Avondale	538	0.037	0.014	0.019
Biggar	518	0.072	0.049	0.018
Blantyre	543	0.058	0.063	0.072
Bothwell	545	0.052	0.046	0.045
Cadder	552	0.035	0.023	0.029
Cambusnethan	546	0.088	0.062	0.042
Cambuslang	549	0.043	0.026	0.031
Carluke	531	0.091	0.052	0.039
Carmichael	519	0.045	0.032	0.053
Carmunnock	550	0.035	0.009	0.007
Carnwath	532	0.148	0.126	0.073
Carstairs	533	0.050	0.053	0.027
Covington & Thankerton	520	0.037	0.121	0.029
Crawford	521	0.088	0.065	0.042
Crawfordjohn	522	0.049	0.038	0.036
Culter	523	0.021	0.028	0.014
Dalserf	539	0.095	0.072	0.045
Dalziel	547	0.102	0.053	0.045
Dolphinton	534	0.005	0.030	0.007
Douglas	529	0.073	0.075	0.067
Dunsyre	535	0.071	0.044	0.059
East Kilbride	544	0.040	0.008	0.034

GLASGOW	554	0.054	0.043	0.035
Glassford	540	0.044	0.033	0.017
Hamilton	541	0.062	0.053	0.045
Lanark	536	0.057	0.045	0.025
Lesmahagow	530	0.080	0.051	0.042
Libberton	524	0.076	0.038	0.022
Airdrie	556	0.063	0.054	0.045
Coatbridge	557	0.066	0.054	0.038
Pettinain	525	0.062	0.024	0.012
Rutherglen	551	0.028	0.022	0.022
Shotts	548	0.085	0.062	0.042
Stonehouse	542	0.063	0.030	0.022
Symington	526	0.072	0.038	0.040
Walston	537	0.047	0.000	0.020
Wandell & Lamington	527	0.033	0.027	0.017
Wiston & Roberton	528	0.050	0.043	0.030
Lanark		0.056	0.044	0.036

Linlithgow - I_h

Civil Parish	CP No.	1881	1891	1901
Abercorn	843	0.064	0.026	0.041
Bathgate	846	0.108	0.093	0.054
Bo'ness	841	0.074	0.057	0.034
Carriden	844	0.071	0.034	0.037
Ecclesmachen	848	0.096	0.034	0.041
Kirkliston	559	0.068	0.034	0.045
Linlithgow	842	0.071	0.034	0.059
Livingstone	850	0.086	0.069	0.058
Torphicen	847	0.070	0.066	0.062
Uphall	849	0.095	0.059	0.056
Whitburn	851	0.109	0.070	0.066
Linlithgow		0.085	0.035	0.051

Edinburgh - I_h

Civil Parish	CP No.	1881	1891	1901
Borthwick	563	0.100	0.028	0.044
Carrington	573	0.107	0.058	0.012
Cockpen	574	0.026	0.028	0.044
EDINBURGH	579	0.039	0.034	0.026
Cranston	564	0.069	0.042	0.025
Crichton	565	0.072	0.042	0.027

Currie	558	0.042	0.031	0.024
Dalkeith	575	0.038	0.035	0.033
Fala & Soutra	566	0.086	0.033	0.038
Glencorse	577	0.032	0.029	0.014
Heriot	567	0.030	0.028	0.022
Inveresk	571	0.054	0.034	0.026
Kirknewton & East Calder	561	0.067	0.031	0.074
Lasswade	570	0.054	0.033	0.021
Mid-Calder	562	0.069	0.086	0.045
Newbattle	576	0.065	0.028	0.044
Newton	572	0.048	0.059	0.032
Penicuik	578	0.041	0.049	0.021
Ratho	560	0.070	0.056	0.035
Stow	568	0.054	0.028	0.022
Temple	569	0.069	0.044	0.010
West-Calder	585	0.116	0.077	0.055
Edinburgh		0.041	0.036	0.027

Haddington - I_h

Civil Parish	CP No.	1881	1891	1901
Aberlady	365	0.026	0.015	0.029
Athelstaneford	357	0.035	0.041	0.030
Bolton	358	0.061	0.028	0.009
Dirleton	366	0.027	0.006	0.022
Dunbar	350	0.047	0.037	0.043
Garvald	359	0.032	0.000	0.024
Gladsmuir	370	0.065	0.058	0.029
Haddington	360	0.035	0.033	0.024
Humbie	361	0.037	0.033	0.012
Innerwick	351	0.017	0.020	0.039
Morham	362	0.039	0.000	0.018
North Berwick	367	0.034	0.026	0.017
Oldhamstocks	352	0.047	0.060	0.022
Ormiston	371	0.044	0.070	0.030
Pencaitland	372	0.052	0.035	0.034
Prestonkirk	353	0.051	0.041	0.024
Prestonpans	369	0.083	0.062	0.057
Salton	363	0.039	0.000	0.016
Spott	354	0.038	0.020	0.031
Stenton	355	0.043	0.020	0.037
Tranent	373	0.064	0.041	0.037
Whitekirk & Tynninghame	368	0.024	0.007	0.026
Whittinghame	356	0.026	0.030	0.017

Yester	364	0.052	0.029	0.032
Haddington		0.044	0.037	0.029

Berwick - I_h

Civil Parish	CP No.	1881	1891	1901
Abbey St Bathans	242	0.036	0.038	0.020
Ayton	243	0.031	0.018	0.028
Bunkle & Preston	244	0.038	0.053	0.032
Channelkirk	265	0.071	0.040	0.063
Chirnside	245	0.047	0.031	0.025
Cockburnpath	246	0.060	0.047	0.036
Coldingham	247	0.064	0.060	0.024
Coldstream	252	0.036	0.044	0.031
Cranshaws	253	0.025	0.038	0.000
Duns	254	0.040	0.017	0.017
Earlston	266	0.055	0.028	0.030
Eccles	255	0.045	0.056	0.050
Edrom	256	0.039	0.043	0.036
Eyemouth	248	0.058	0.060	0.050
Fogo	257	0.067	0.037	0.042
Foulden	249	0.061	0.018	0.010
Gordon	267	0.047	0.046	0.041
Greenlaw	258	0.062	0.044	0.027
Hume	268	0.063	0.042	0.023
Hutton	250	0.041	0.074	0.025
Ladykirk	259	0.023	0.022	0.016
Langton	260	0.061	0.062	0.036
Lauder	269	0.054	0.028	0.031
Legerwood	270	0.047	0.059	0.035
Longformacus	261	0.052	0.038	0.017
Merton	271	0.041	0.012	0.030
Mordington	251	0.051	0.025	0.006
Nenthorn	272	0.034	0.042	0.032
Polwarth	262	0.020	0.073	0.015
Swinton	263	0.076	0.049	0.054
Westruther	273	0.025	0.014	0.040
Whitsome	264	0.042	0.054	0.065
Berwick		0.048	0.038	0.032

Peebles - I_h

Civil Parish	CP No.	1881	1891	1901

Drumelzier	636	0.028	0.000	0.059
Eddlestone	644	0.022	0.107	0.053
Innerleithen	639	0.039	0.028	0.022
Kilbucho, Broughton, etc.	635	0.066	0.028	0.014
Kirkurd	641	0.029	0.027	0.028
Lyne	645	0.036	0.000	0.099
Manor	646	0.044	0.079	0.037
Newlands	642	0.035	0.038	0.025
Peebles	647	0.038	0.016	0.020
Skirling	637	0.042	0.034	0.100
Stobo	648	0.024	0.000	0.063
Traquair	640	0.024	0.028	0.025
Tweedsmuir	638	0.032	0.106	0.062
West Linton	643	0.046	0.015	0.024
Peebles		0.038	0.025	0.026

Selkirk - I_h

Civil Parish	CP No.	1881	1891	1901
Caddonfoot	799	0.024	0.028	0.022
Ettrick	803	0.019	0.022	0.010
Galashiels	800	0.040	0.028	0.023
Kirkhope	804	0.047	0.036	0.026
Roberton	772	0.040	0.000	0.033
Selkirk	801	0.045	0.028	0.015
Yarrow	805	0.057	0.028	0.027
Selkirk		0.043	0.018	0.020

Roxburgh - I_h

Civil Parish	CP No.	1881	1891	1901
Ancrum	774	0.057	0.008	0.042
Ashkirk	802	0.036	0.028	0.033
Bedrule	775	0.069	0.046	0.019
Bowden	793	0.025	0.065	0.026
Castleton	769	0.081	0.040	0.035
Cavers	770	0.059	0.030	0.033
Crailing	776	0.045	0.050	0.040
Eckford	782	0.065	0.064	0.035
Ednam	783	0.071	0.102	0.030
Hawick	771	0.060	0.030	0.021
Hobkirk	777	0.037	0.000	0.020
Hownam	784	0.043	0.000	0.031

Jedburgh	778	0.055	0.030	0.025
Kelso	785	0.043	0.034	0.023
Lilliesleaf	794	0.066	0.014	0.014
Linton	786	0.073	0.031	0.029
Makerston	787	0.059	0.057	0.026
Maxton	795	0.058	0.083	0.056
Melrose	796	0.027	0.028	0.018
Minto	779	0.055	0.015	0.026
Morebattle	788	0.076	0.052	0.039
Oxnam	780	0.041	0.030	0.024
Roxburgh	797	0.051	0.090	0.033
St Boswells	798	0.032	0.027	0.021
Smailholm	789	0.090	0.043	0.033
Southdean	781	0.050	0.030	0.025
Sprouston	790	0.050	0.013	0.041
Stitchel	791	0.032	0.092	0.012
Teviothead	773	0.055	0.030	0.043
Yetholm	792	0.093	0.130	0.051
Annan	295	0.077	0.063	0.052
Roxburgh		0.054	0.036	0.025

Dumfries - I_h

Civil Parish	CP No.	1881	1891	1901
Applegarth	318	0.088	0.027	0.032
Canonbie	313	0.105	0.085	0.077
Carlaverock	298	0.108	0.092	0.085
Closeburn	330	0.064	0.084	0.047
Cummertrees	296	0.049	0.063	0.052
Dalton	299	0.053	0.053	0.027
Dornock	297	0.145	0.076	0.050
Dryfesdale	319	0.064	0.061	0.046
Dumfries	300	0.071	0.049	0.039
Dunscore	331	0.054	0.052	0.031
Durrisdeer	332	0.057	0.034	0.047
Eskdalemuir	314	0.031	0.039	0.031
Ewes	315	0.021	0.051	0.030
Glencairn	333	0.056	0.032	0.013
Gretna	309	0.122	0.066	0.068
Halfmorton	310	0.049	0.114	0.027
Hoddom	320	0.069	0.063	0.052
Holywood	305	0.083	0.036	0.030
Hutton	321	0.057	0.102	0.026
Johnstone	322	0.085	0.066	0.055

Keir	334	0.052	0.048	0.027
Kirkconnel	328	0.063	0.067	0.075
Kirkmahoe	306	0.086	0.104	0.051
Kirkmichael	307	0.143	0.060	0.087
Kirkpatrick-Fleming	311	0.093	0.076	0.099
Kirkpatrick-Juxta	325	0.059	0.053	0.040
Langholm	316	0.041	0.027	0.028
Lochmaben	301	0.130	0.118	0.094
Middlebie	312	0.082	0.028	0.039
Moffat	326	0.026	0.014	0.018
Morton	335	0.084	0.031	0.037
Mouswald	302	0.084	0.000	0.037
Penmont	336	0.052	0.082	0.055
Ruthwell	303	0.090	0.084	0.035
St Mungo	323	0.071	0.033	0.022
Sanquhar	329	0.062	0.044	0.038
Tinwald	308	0.098	0.040	0.081
Torthorwald	304	0.209	0.157	0.098
Tundergarth	324	0.080	0.084	0.055
Tynron	337	0.015	0.044	0.031
Wamphray	327	0.068	0.050	0.021
Westerkirk	317	0.040	0.068	0.027
Dumfries		0.073	0.054	0.044

Kirkcudbright - I_h

Civil Parish	CP No.	1881	1891	1901
Anwoth	494	0.055	0.086	0.038
Balmaclellan	508	0.063	0.048	0.030
Balmaghie	490	0.054	0.048	0.016
Borgue	513	0.063	0.068	0.058
Buittle	498	0.064	0.090	0.037
Carsphairn	509	0.037	0.000	0.028
Colvend	499	0.061	0.074	0.030
Crossmichael	491	0.095	0.085	0.062
Dalbeattie	502	0.099	0.093	0.054
Dalry	510	0.093	0.050	0.044
Girthon	495	0.102	0.075	0.045
Irongray	504	0.071	0.062	0.028
Kells	511	0.039	0.046	0.032
Kelton	492	0.081	0.057	0.044
Kirkbean	503	0.048	0.066	0.042
Kirkcudbright	514	0.069	0.045	0.053
Kirkgunzeon	500	0.063	0.110	0.065

Kirkmabreck	496	0.104	0.099	0.055
Kirkpatrick-Durham	493	0.120	0.048	0.030
Lochrutton	501	0.113	0.049	0.042
Minnigaff	497	0.061	0.049	0.043
New Abbey	505	0.077	0.038	0.069
Parton	512	0.038	0.048	0.030
Rerrick	515	0.079	0.085	0.044
Terregles	506	0.029	0.036	0.030
Tongland	516	0.068	0.052	0.044
Troqueer	507	0.062	0.051	0.030
Twynholm	517	0.057	0.018	0.035
Kirkcudbright		0.074	0.061	0.042

Wigtown - I_h

Civil Parish	CP No.	1881	1891	1901
Glasserton	852	0.106	0.121	0.092
Inch	860	0.055	0.064	0.052
Kirkcolm	861	0.077	0.070	0.043
Kirkcowan	853	0.096	0.056	0.049
Kirkinner	854	0.103	0.070	0.059
Kirkmaiden	862	0.083	0.057	0.060
Leswalt	863	0.077	0.064	0.052
Mochrum	855	0.105	0.107	0.061
New Luce	864	0.131	0.069	0.061
Old Luce (or Glenluce)	865	0.087	0.069	0.063
Penninghame	856	0.065	0.049	0.043
Portpatrick	866	0.075	0.075	0.078
Sorbie	857	0.082	0.072	0.077
Stoneykirk	867	0.102	0.105	0.070
Stranraer	868	0.083	0.064	0.052
Whithorn	858	0.091	0.082	0.061
Wigtown	859	0.066	0.103	0.058
Wigtown		0.084	0.077	0.059

	1881	1891	1901
Scotland - I_h	0.052	0.041	0.059

Table A1.4

"I_f, Scotland - Civil Parishes"

Shetland - I_f

Civil Parish	CP No.	1881	1891	1901
Bressay	869	0.291	0.257	0.207
Delting	870	0.230	0.190	0.171
Dunrossness	871	0.241	0.216	0.228
Fetlar	874	0.234	0.210	0.228
Lerwick	875	0.228	0.243	0.235
Yell	891	0.257	0.216	0.211
Nesting	877	0.255	0.218	0.205
Northmavine	880	0.204	0.187	0.180
Sandsting & Aithsting	881	0.211	0.217	0.165
Tingwall	883	0.208	0.254	0.232
Unst	886	0.214	0.217	0.235
Walls	887	0.207	0.189	0.167
Shetland		0.230	0.220	0.210

Orkney - I_f

Civil Parish	CP No.	1881	1891	1901
Birsay	614	0.236	0.219	0.169
St Andrews	622	0.251	0.229	0.211
Eday & Pharay	610	0.259	0.245	0.215
Evie & Rendall	616	0.236	0.162	0.230
Firth	618	0.257	0.265	0.265
Stennes	625	0.257	0.265	0.241
Holm & Paplay	619	0.276	0.265	0.215
Hoy & Graemsay	611	0.306	0.266	0.224
Kirkwall & St Ola	620	0.292	0.249	0.205
Cross & Burness	628	0.317	0.222	0.209
Orphir	621	0.298	0.237	0.233
Rousay & Egilshay	627	0.311	0.159	0.221

Lady	629	0.260	0.222	0.209
Sandwick	624	0.229	0.275	0.196
Shapinshay	630	0.247	0.168	0.220
South Ronaldshay & Burray	631	0.315	0.244	0.242
Stromness	626	0.247	0.260	0.209
Stronsay	632	0.255	0.298	0.298
Flotta	612	0.357	0.243	0.215
Papa-Westray	633	0.294	0.218	0.274
Westray	634	0.284	0.293	0.182
Orkney		0.276	0.241	0.220

Caitrhness - I_f

Civil Parish	CP No.	1881	1891	1901
Bower	280	0.254	0.253	0.280
Wick	284	0.332	0.323	0.319
Dunnet	285	0.283	0.290	0.261
Halkirk	287	0.328	0.289	0.328
Latheron	286	0.308	0.295	0.305
Olrig	281	0.294	0.291	0.257
Reay	288	0.270	0.270	0.233
Thurso	289	0.333	0.289	0.263
Watten	282	0.295	0.281	0.266
Caithness		0.316	0.300	0.297

Sutherland - I_f

Civil Parish	CP No.	1881	1891	1901
Assynt	828	0.229	0.251	0.269
Clyne	836	0.302	0.331	0.260
Creich	829	0.268	0.275	0.201
Dornoch	830	0.275	0.244	0.240
Durness	831	0.248	0.289	0.299
Edrachillis	832	0.270	0.303	0.266
Farr	839	0.282	0.270	0.280
Golspie	833	0.242	0.246	0.228
Kildonan	837	0.289	0.295	0.255
Lairg	834	0.337	0.239	0.198
Loth	838	0.257	0.244	0.173
Rogart	835	0.293	0.244	0.201
Tongue	840	0.261	0.298	0.303
Sutherland		0.272	0.272	0.248

Ross and Cromarty - I_f

Civil Parish	CP No.	1881	1891	1901
Alness	739	0.286	0.255	0.246
Applecross	758	0.229	0.254	0.244
Avoch	736	0.386	0.397	0.369
Contin	760	0.201	0.240	0.186
Cromarty	746	0.343	0.333	0.293
Dingwall	740	0.253	0.250	0.228
Edderton	766	0.240	0.212	0.209
Fearn	743	0.235	0.263	0.291
Fodderty	741	0.218	0.250	0.201
Gairloch Northern	749	0.282	0.254	0.244
Glenshiel	763	0.210	0.247	0.156
Killearnan	737	0.250	0.261	0.263
Kilmuir-Easter	750	0.245	0.213	0.249
Kiltearn	742	0.285	0.308	0.203
Kincardine	767	0.253	0.233	0.183
Kintail	764	0.165	0.248	0.172
Knockbain	738	0.263	0.250	0.233
Lochalsh	765	0.213	0.166	0.253
Lochbroom	757	0.281	0.277	0.206
Lochcarron	759	0.253	0.254	0.229
Logie-Easter	751	0.242	0.256	0.247
Nigg	744	0.286	0.270	0.273
Resolis	747	0.274	0.203	0.218
Rosemarkie	748	0.263	0.265	0.218
Rosskeen	752	0.265	0.239	0.239
Tain	768	0.211	0.221	0.195
Tarbat	745	0.255	0.281	0.263
Urquhart & Logie-Wester	761	0.237	0.225	0.208
Urray	762	0.245	0.240	0.186
Barvas	753	0.328	0.297	0.315
Lochs	754	0.370	0.297	0.315
Stornoway	755	0.310	0.316	0.282
Uig	756	0.280	0.297	0.315
Ross and Cromarty		0.278	0.272	0.260

Inverness - I_f

Civil Parish	CP No.	1881	1891	1901
Abernethy & Kincardine	438	0.299	0.229	0.237
Alvie	439	0.364	0.165	0.203
Ardersier	445	0.422	0.370	0.347
Boleskine	433	0.240	0.262	0.271
Croy & Dalcross	608	0.273	0.255	0.240
Daviot & Dunlichty	447	0.244	0.263	0.262
Dores	448	0.257	0.262	0.239
Duthil	440	0.296	0.304	0.235
Glenelg	453	0.264	0.246	0.208
Inverness	449	0.292	0.255	0.240
Kilmonivaig	455	0.244	0.256	0.181
Kilmorack	434	0.257	0.240	0.212
Kiltarlity	435	0.234	0.240	0.212
Kingussie & Insh	441	0.293	0.240	0.237
Kirkhill	436	0.245	0.263	0.252
Laggan	442	0.322	0.240	0.186
Moy & Dalarossie	450	0.193	0.234	0.207
Petty	451	0.325	0.280	0.315
Urquhart	437	0.241	0.240	0.212
Barra	443	0.320	0.310	0.342
Bracadale	458	0.196	0.201	0.224
Duirnish	459	0.324	0.261	0.266
Harris	444	0.299	0.280	0.274
Kilmuir	460	0.347	0.283	0.304
North Uist	457	0.279	0.280	0.283
Portree	461	0.297	0.279	0.225
Sleat	462	0.329	0.310	0.274
Small Isles	456	0.252	0.233	0.220
Snizort	463	0.259	0.283	0.304
South Uist	465	0.255	0.248	0.252
Strath	464	0.300	0.310	0.257
Inverness		0.286	0.264	0.248

Nairn - I_f

Civil Parish	CP No.	1881	1891	1901
Ardclach	605	0.263	0.221	0.231
Auldearn	606	0.309	0.248	0.304
Cawdor	607	0.313	0.234	0.207
Nairn	609	0.290	0.234	0.230
Nairn		0.292	0.232	0.237

Elgin - I_f

Civil Parish	CP No.	1881	1891	1901
Alves	590	0.420	0.384	0.348
Bellie	594	0.340	0.350	0.321
Birnie	591	0.346	0.462	0.380
Boharm	237	0.396	0.453	0.267
Cromdale &Advie	586	0.301	0.304	0.230
Dallas	597	0.316	0.353	0.263
Drainie	587	0.396	0.388	0.352
Duffus	588	0.391	0.296	0.312
Dyke	598	0.278	0.258	0.280
Edinkillie	599	0.318	0.221	0.247
Elgin	592	0.295	0.296	0.262
New Spynie	589	0.324	0.296	0.262
Forres	600	0.313	0.302	0.235
Kinloss	601	0.287	0.305	0.298
Knockando	603	0.357	0.309	0.289
Rafford	602	0.358	0.368	0.298
Rothes	604	0.419	0.425	0.321
St Andrews-Lhanbryde	593	0.316	0.296	0.262
Speymouth	595	0.382	0.325	0.345
Urquhart	596	0.350	0.249	0.245
Elgin		0.335	0.331	0.292

Banff - I_f

Civil Parish	CP No.	1881	1891	1901
Alvah	224	0.269	0.324	0.289
Banff	225	0.360	0.281	0.278
Botriphnie	238	0.334	0.346	0.310
Boyndie	226	0.420	0.417	0.338
Cullen	229	0.362	0.350	0.321
Deskford	230	0.317	0.301	0.237
Fordyce	231	0.404	0.375	0.339
Forglen	220	0.364	0.356	0.288
Gamrie	227	0.420	0.341	0.309
Grange	239	0.376	0.315	0.328
Inveravon	234	0.346	0.336	0.303
Inverkeithny	221	0.383	0.296	0.349
Keith	240	0.381	0.385	0.308
Kirkmichael	235	0.261	0.257	0.276

Marnoch	222	0.422	0.397	0.360
Mortlach	236	0.359	0.314	0.322
Ordiquhill	223	0.277	0.283	0.273
Rathven	228	0.388	0.350	0.321
Rothiemay	241	0.389	0.378	0.380
St Fergus	35	0.405	0.413	0.372
Banff		0.370	0.343	0.313

Aberdeen - I_f

Civil Parish	CP No.	1881	1891	1901
ABERDEEN	1	0.380	0.367	0.285
Old Machar (Abrdn)	10	0.292	0.248	0.282
Aberdour	25	0.379	0.363	0.326
Aboyne	38	0.330	0.302	0.260
Alford	13	0.351	0.378	0.340
Auchindoir	14	0.405	0.399	0.389
Auchterless	79	0.371	0.360	0.329
Belhelvie	2	0.392	0.256	0.355
Birse	39	0.320	0.302	0.334
Bourtie	57	0.313	0.157	0.207
Cabrach	233	0.344	0.414	0.327
Cairney	72	0.373	0.385	0.359
Chapel of Garioch	58	0.381	0.373	0.306
Clatt	15	0.272	0.192	0.354
Cluny	40	0.407	0.346	0.327
Coull	41	0.387	0.359	0.313
Crathie & Braemar	42	0.250	0.160	0.193
Cruden	49	0.430	0.367	0.326
Culsamond	59	0.335	0.344	0.298
Daviot	60	0.300	0.236	0.230
Drumblade	73	0.302	0.309	0.249
Drumoak	3	0.300	0.256	0.265
Dyce	4	0.451	0.349	0.316
Echt	5	0.347	0.303	0.280
Ellon	50	0.400	0.363	0.326
Fintray	6	0.369	0.395	0.269
Forgue	74	0.409	0.360	0.329
Foveran	51	0.465	0.433	0.392
Fraserburgh	27	0.471	0.363	0.368
Fyvie	80	0.309	0.343	0.319
Gartly	75	0.309	0.352	0.300
Glass	76	0.384	0.330	0.298
Glenbucket	16	0.321	0.269	0.362

Glenmuick	43	0.331	0.298	0.256
Huntly	77	0.372	0.369	0.297
Insch	61	0.371	0.341	0.311
Inverurie	62	0.379	0.336	0.404
Keig	17	0.412	0.274	0.307
Keithhall	63	0.286	0.252	0.344
Kemnay	64	0.492	0.460	0.377
Kildrummy	18	0.321	0.249	0.284
Kincardine O'Neil	44	0.300	0.256	0.270
King Edward	81	0.423	0.324	0.310
Kinnellar	7	0.354	0.309	0.284
Kinnethmont	19	0.351	0.307	0.322
Kintore	65	0.382	0.381	0.328
Leochel-Cushnie	20	0.382	0.305	0.285
Leslie	66	0.402	0.326	0.310
Logie-Buchan	52	0.466	0.413	0.399
Logie-Coldstone & Cromar	45	0.322	0.298	0.256
Lumphanan	46	0.356	0.373	0.337
Methlic	53	0.355	0.363	0.314
Midmar	47	0.374	0.346	0.318
Monquhitter	82	0.421	0.343	0.319
Monymusk	68	0.385	0.363	0.363
New Deer	30	0.343	0.363	0.326
Newhills	8	0.338	0.292	0.272
New Machar	9	0.429	0.352	0.284
Old Deer	31	0.343	0.363	0.326
Old Meldrum	67	0.416	0.342	0.357
Oyne	69	0.341	0.365	0.293
Peterculter	11	0.283	0.243	0.192
Peterhead	32	0.462	0.389	0.376
Pitsligo	33	0.454	0.395	0.404
Premnay	70	0.473	0.461	0.306
Rathen	34	0.377	0.348	0.327
Rayne	71	0.361	0.363	0.336
Rhynie	78	0.403	0.367	0.400
Skene	12	0.270	0.267	0.261
Slains	54	0.363	0.387	0.379
Strathdon	21	0.316	0.298	0.240
Tarland	48	0.294	0.298	0.328
Tarves	55	0.367	0.363	0.326
Tough	22	0.367	0.316	0.289
Towie	23	0.378	0.298	0.301
Tullynessle & Forbes	24	0.379	0.388	0.306
Turriff	83	0.350	0.356	0.296
Tyrie	37	0.414	0.363	0.326

Udny	56	0.424	0.352	0.342
Aberdeen		0.362	0.319	0.301

Kincardine - I_f

Civil Parish	CP No.	1881	1891	1901
Arbuthnot	474	0.358	0.313	0.330
Banchory-Devenick	471	0.314	0.243	0.272
Banchory-Ternan	482	0.317	0.262	0.222
Benholm	475	0.450	0.440	0.328
Bervie	476	0.383	0.366	0.275
Dunnottar	478	0.427	0.493	0.373
Durris	483	0.382	0.261	0.323
Fettercairn	466	0.344	0.312	0.312
Fetteresso	479	0.351	0.277	0.262
Fordoun	467	0.371	0.288	0.317
Garvock	468	0.410	0.433	0.307
Glenbervie	480	0.410	0.340	0.285
Kinneff & Catterline	481	0.426	0.373	0.413
Laurencekirk	469	0.388	0.340	0.271
Maryculter	472	0.314	0.243	0.194
Marykirk	470	0.402	0.391	0.346
Nigg	473	0.408	0.361	0.345
St Cyrus	477	0.388	0.440	0.302
Strachan	484	0.328	0.367	0.297
Kincardine		0.370	0.343	0.290

Forfar - I_f

Civil Parish	CP No.	1881	1891	1901
Aberlemno	99	0.411	0.345	0.306
Airlie	110	0.418	0.406	0.336
Arbirlot	93	0.392	0.451	0.308
Arbroath	94	0.307	0.267	0.244
Auchterhouse	119	0.375	0.422	0.331
Barry	95	0.299	0.238	0.244
Brechin	84	0.280	0.229	0.202
Carmylie	96	0.468	0.391	0.365
Careston	85	0.524	0.421	0.347
Cortachy & Clova	111	0.382	0.295	0.246
Coupar-Angus	669	0.307	0.235	0.251
Craig	130	0.404	0.346	0.227
Dun	86	0.362	0.303	0.271

DUNDEE	120	0.303	0.272	0.243
Dunnichen	100	0.469	0.389	0.297
Eassie & Nevay	101	0.427	0.412	0.462
Edzell	87	0.373	0.312	0.205
Farnell	131	0.338	0.326	0.316
Fearn	112	0.377	0.395	0.325
Forfar	102	0.317	0.264	0.231
Glamis	103	0.388	0.351	0.254
Glenisla	113	0.300	0.311	0.293
Guthrie	104	0.408	0.389	0.402
Inverarity	105	0.438	0.389	0.348
Inverkeillor	132	0.415	0.326	0.348
Kettins	122	0.338	0.223	0.304
Kingoldrum	114	0.478	0.302	0.325
Kinnell	133	0.443	0.367	0.375
Kinnettles	106	0.299	0.367	0.394
Kirkden	107	0.447	0.389	0.305
Kirriemuir	115	0.297	0.295	0.220
Lethnott & Navar	88	0.359	0.390	0.295
Liff, Benvie, etc.	123	0.361	0.272	0.243
Lintrathen	116	0.332	0.235	0.293
Lochlee	89	0.263	0.260	0.256
Logie-Pert	90	0.308	0.350	0.290
Lunan	134	0.404	0.367	0.420
Lundie	124	0.483	0.354	0.457
Mains	125	0.364	0.273	0.243
Marytown	135	0.329	0.367	0.356
Menmuir	91	0.402	0.241	0.273
Monifieth	126	0.314	0.272	0.229
Monikie	97	0.344	0.329	0.364
Montrose	136	0.293	0.248	0.227
Murroes	127	0.497	0.272	0.404
Newtyle	128	0.437	0.291	0.285
Oathlaw	108	0.412	0.313	0.258
Panbride	98	0.267	0.267	0.216
Rescobie	109	0.317	0.374	0.255
Ruthven	117	0.358	0.163	0.243
Stracathro	92	0.497	0.285	0.314
Tannadice	118	0.367	0.330	0.263
Teeling	129	0.355	0.422	0.380
Forfar		0.312	0.274	0.244

Perth - I_f

Civil Parish	CP No.	1881	1891	1901
Aberdalgie	685	0.406	0.291	0.224
Dull	677	0.284	0.223	0.204
Aberfoyle	711	0.341	0.280	0.318
Abernethy	686	0.301	0.253	0.224
Abernyte	687	0.298	0.356	0.296
Alyth	662	0.310	0.233	0.223
Ardoch	712	0.299	0.223	0.224
Auchterarder	649	0.262	0.200	0.203
Auchtergaven	689	0.280	0.223	0.217
Bendochy	663	0.405	0.233	0.274
Blackford	650	0.322	0.223	0.244
Blair-Atholl	676	0.279	0.223	0.204
Blairgowrie	664	0.248	0.233	0.223
Callander	714	0.252	0.158	0.166
Caputh	665	0.294	0.223	0.184
Cargill	666	0.347	0.223	0.286
Clunie	667	0.359	0.223	0.286
Collace	668	0.318	0.223	0.326
Comrie	651	0.254	0.223	0.218
Crieff	652	0.270	0.223	0.194
Culross	396	0.304	0.264	0.286
Dowally	678	0.259	0.223	0.184
Dron	690	0.362	0.493	0.333
Dunbarney	691	0.286	0.225	0.182
Dunblane	715	0.309	0.223	0.224
Dunning	653	0.314	0.269	0.253
Errol	692	0.348	0.308	0.302
Findo-Gask	695	0.355	0.421	0.336
Forgandenny	693	0.310	0.283	0.241
Forteviot	694	0.350	0.283	0.272
Fortingall	679	0.251	0.226	0.212
Fowlis-Easter	121	0.457	0.329	0.357
Fowlis-Wester	654	0.283	0.223	0.203
Glendevon	655	0.259	0.227	0.131
Inchture	696	0.397	0.263	0.309
Kenmore	680	0.281	0.223	0.204
Killin	716	0.225	0.223	0.204
Kilmadock	717	0.240	0.236	0.201
Kilspindie	697	0.455	0.371	0.398
Kincardine	718	0.314	0.236	0.260
Kinfauns	699	0.271	0.251	0.285
Kinloch-Rannoch	670	0.294	0.223	0.218

Kinnaird	700	0.548	0.462	0.248
Kinnoul	701	0.314	0.251	0.218
Kirkmichael	671	0.249	0.233	0.223
Lethendy	672	0.274	0.223	0.218
Little Dunkeld	681	0.244	0.223	0.217
Logie	806	0.187	0.291	0.132
Logialmond	656	0.325	0.223	0.217
Logierait	682	0.247	0.223	0.204
Longforgan	702	0.326	0.298	0.270
Madderty	657	0.240	0.215	0.253
Meigle	673	0.357	0.235	0.251
Methven	703	0.261	0.223	0.217
Moneydie	704	0.297	0.223	0.171
Monzievaird & Strowan	658	0.208	0.223	0.191
Moulin	683	0.245	0.223	0.204
Muckart	659	0.251	0.138	0.225
Muthil	660	0.297	0.223	0.252
Perth	705	0.296	0.251	0.218
Port of Montieth	719	0.283	0.220	0.196
Rattray	674	0.232	0.223	0.196
Rhynd	707	0.256	0.469	0.319
St Madoes	708	0.332	0.251	0.289
St Martins	675	0.325	0.251	0.302
Scone	709	0.281	0.251	0.206
Tibbermore	710	0.296	0.251	0.200
Trinity-Gask	661	0.277	0.274	0.257
Tulliallan	402	0.338	0.295	0.277
Weem	684	0.318	0.223	0.245
Perth		0.283	0.250	0.222

Fife - I_f

Civil Parish	CP No.	1881	1891	1901
Abdie	374	0.363	0.253	0.204
Aberdour	394	0.404	0.303	0.272
Anstruther	416	0.274	0.196	0.230
Arngask	688	0.274	0.261	0.281
Auchterderran	403	0.543	0.469	0.515
Auchtermuchty	375	0.249	0.207	0.205
Auchtertool	404	0.546	0.518	0.486
Ballingry	405	0.555	0.469	0.478
Balmerino	376	0.378	0.315	0.259
Beath	406	0.600	0.554	0.490
Burntisland	407	0.442	0.405	0.272

Cameron	417	0.324	0.295	0.330
Carnbee	418	0.363	0.220	0.254
Carnock	395	0.383	0.358	0.388
Ceres	377	0.317	0.303	0.247
Collessie	378	0.345	0.331	0.247
Crail	419	0.355	0.276	0.267
Creich	379	0.381	0.300	0.182
Cults	380	0.411	0.331	0.249
Cupar	381	0.241	0.175	0.174
Dairsie	382	0.297	0.266	0.233
Dalgetty	397	0.453	0.453	0.348
Dunbog	383	0.397	0.308	0.333
Dunfermline	398	0.316	0.280	0.232
Kirkcaldy & Dysart	411	0.328	0.292	0.272
Elie	421	0.207	0.192	0.140
Falkland	384	0.189	0.188	0.165
Ferry-Port-on-Craig	422	0.309	0.217	0.206
Flisk	385	0.366	0.308	0.333
Forgan	423	0.218	0.157	0.107
Inverkeithing	399	0.480	0.280	0.314
Kemback	386	0.217	0.252	0.323
Kennoway	408	0.279	0.309	0.314
Kettle	387	0.323	0.314	0.219
Kilconquhar	424	0.342	0.192	0.234
Kilmany	388	0.306	0.307	0.214
Kilrenny	425	0.414	0.290	0.256
Kinghorn	409	0.381	0.303	0.244
Kinglassie	410	0.327	0.469	0.333
Kingsbarns	426	0.386	0.276	0.290
Largo	427	0.349	0.312	0.251
Largo	412	0.256	0.210	0.210
Leslie	428	0.362	0.316	0.270
Logie	389	0.327	0.144	0.249
Markinch	413	0.353	0.414	0.272
Monimail	390	0.360	0.253	0.216
Moonzie	391	0.328	0.544	0.424
Newburgh	392	0.389	0.253	0.301
Newburn	429	0.295	0.188	0.140
Pittenweem	430	0.466	0.411	0.309
St Andrews & St Leonards	431	0.249	0.203	0.156
St Monance (Abercrombie)	432	0.421	0.325	0.251
Saline	400	0.338	0.294	0.361
Scoonie	414	0.349	0.362	0.304
Strathmiglo	393	0.255	0.253	0.197
Torryburn	401	0.431	0.294	0.321

Wemyss	415	0.429	0.414	0.418
Fife		0.339	0.307	0.278

Kinross - I_f

Civil Parish	CP No.	1881	1891	1901
Cleish	485	0.345	0.280	0.366
Fossoway & Tulliebole	486	0.282	0.227	0.267
Kinross	487	0.300	0.258	0.231
Orwell	488	0.243	0.292	0.275
Portmoak	489	0.298	0.469	0.315
Kinross		0.284	0.273	0.268

Clackmannan - I_f

Civil Parish	CP No.	1881	1891	1901
Alloa	290	0.401	0.291	0.272
Clackmannan	291	0.439	0.291	0.286
Dollar	293	0.190	0.148	0.134
Tillicoultry	294	0.295	0.262	0.234
Clackmannan		0.359	0.230	0.244

Stirling - I_f

Civil Parish	CP No.	1881	1891	1901
Airth	812	0.476	0.302	0.338
Alva	292	0.358	0.291	0.204
Baldernock	826	0.261	0.203	0.192
Balfron	820	0.259	0.204	0.244
Grangemouth	815	0.513	0.423	0.355
Buchanan	818	0.277	0.190	0.152
Campsie	827	0.333	0.306	0.284
Denny	809	0.432	0.420	0.387
Drymen	819	0.249	0.266	0.215
Dunnipace	810	0.403	0.452	0.394
Falkirk	814	0.459	0.423	0.355
Fintry	821	0.315	0.220	0.238
Gargunnock	822	0.298	0.238	0.201
Killearn	823	0.290	0.279	0.166
Kilsyth	811	0.512	0.481	0.460
Kippen	824	0.355	0.269	0.228
Larbert	813	0.435	0.391	0.340

Muiravonside	816	0.539	0.511	0.476
Stirling	807	0.333	0.278	0.279
Slamannan	817	0.655	0.591	0.497
Strathblane	825	0.264	0.242	0.255
Stirling		0.415	0.377	0.334

Dunbarton - I_f

Civil Parish	CP No.	1881	1891	1901
Arrochar	339	0.200	0.170	0.199
Bonhill	346	0.283	0.265	0.257
Cardross	347	0.284	0.367	0.359
Cumbernauld	338	0.493	0.367	0.419
Dumbarton	344	0.465	0.367	0.359
Kilmaronock	348	0.226	0.194	0.170
Kirkintilloch	342	0.379	0.376	0.343
Luss	349	0.260	0.225	0.136
Bearsden	343	0.384	0.309	0.265
Clydebank	345	0.460	0.439	0.359
Roseneath	341	0.184	0.136	0.119
Rhu	340	0.220	0.185	0.165
Dunbarton		0.346	0.326	0.304

Argyll - I_f

Civil Parish	CP No.	1881	1891	1901
Ardchattan	169	0.295	0.242	0.197
Ardnamurchan	138	0.291	0.248	0.202
Arisaig	452	0.242	0.248	0.202
Ballachulish & Ardgour	137	0.237	0.242	0.220
Campbeltown	152	0.385	0.355	0.293
Craignish	158	0.246	0.230	0.322
Cumlodden & Minnard	159	0.312	0.269	0.224
Dunoon & Kilmun	140	0.217	0.170	0.170
Glenorchy	171	0.295	0.242	0.197
Inverary	160	0.276	0.269	0.224
Inverchaolain	141	0.278	0.250	0.143
Kilbrandon & Kilchattan	172	0.316	0.285	0.275
Kilcalmonell	154	0.288	0.269	0.224
Dalavich	173	0.295	0.242	0.197
Kilfinan	142	0.353	0.259	0.207
Killean & Kilchenzie	155	0.265	0.206	0.182
Kilmallie	454	0.250	0.242	0.220

Kilmartin	161	0.262	0.226	0.228
Kilmodan	143	0.292	0.292	0.154
Kilmore & Kilbride	174	0.293	0.268	0.211
Kilninver	175	0.264	0.230	0.185
Lismore	170	0.303	0.242	0.220
Lochgoilhead	144	0.251	0.172	0.200
Morvern	139	0.226	0.308	0.217
North Knapdale	162	0.227	0.203	0.206
Saddell & Skipness	156	0.365	0.269	0.224
Southend	157	0.271	0.220	0.237
South Knapdale	163	0.179	0.269	0.224
Stralachlan	146	0.352	0.173	0.150
Strachur	145	0.298	0.137	0.162
Bowmore (Kilarrow)	149	0.324	0.266	0.307
Gigha	153	0.363	0.320	0.335
Jura	148	0.281	0.285	0.275
Colonsay	147	0.343	0.318	0.154
Kilchoman	150	0.330	0.282	0.274
Kildalton & Oa	151	0.306	0.251	0.258
Kilfinichen & Kilvickeon.	165	0.329	0.257	0.289
Kilninian & Kilmore	166	0.233	0.207	0.221
Kinlochspelvie	167	0.208	0.207	0.221
Tyree	168	0.274	0.242	0.187
Coll	164	0.333	0.213	0.203
Argyll		0.295	0.254	0.225

Bute - I_f

Civil Parish	CP No.	1881	1891	1901
Cumbrae	279	0.284	0.312	0.149
Kilbride	274	0.194	0.205	0.180
Kilmory	275	0.242	0.205	0.180
Kingarth	276	0.266	0.201	0.195
North Bute	277	0.225	0.211	0.156
Bute		0.253	0.254	0.187

Renfrew - I_f

Civil Parish	CP No.	1881	1891	1901
Rothesay	278	0.269	0.211	0.202
Paisley	725	0.331	0.309	0.276
Cathcart(Glasgow ptn.)	553	0.247	0.211	0.161
Cathcart(Ldwd.)	720	0.247	0.211	0.220

Eaglesham	721	0.269	0.202	0.231
Eastwood	722	0.338	0.295	0.268
Erskine	726	0.231	0.190	0.203
Greenock	732	0.418	0.365	0.307
Houston & Killellan	729	0.310	0.232	0.238
Inchinnan	727	0.323	0.406	0.281
Inverkip	733	0.257	0.210	0.194
Kilbarchan	730	0.366	0.275	0.238
Kilmalcolm	734	0.233	0.201	0.146
Lochwinnoch	731	0.270	0.264	0.256
Mearns	723	0.227	0.255	0.225
Neilston	724	0.249	0.309	0.276
Port-Glasgow	735	0.449	0.365	0.358
Renfrew	728	0.441	0.309	0.329
Renfrew		0.350	0.307	0.270

Ayr - If

Civil Parish	CP No.	1881	1891	1901
Old Ardrossan	216	0.376	0.312	0.263
Auchinleck	185	0.617	0.559	0.486
Ayr	176	0.347	0.338	0.300
Ballantrae	193	0.359	0.271	0.235
Barr	194	0.244	0.280	0.223
Beith	201	0.408	0.348	0.293
Colmonell	195	0.301	0.279	0.223
Coylton	182	0.504	0.481	0.457
Craigie	177	0.147	0.198	0.213
Dailly	196	0.479	0.396	0.355
Dalmellington	183	0.609	0.338	0.300
Dalry	202	0.360	0.298	0.307
Dalrymple	184	0.426	0.338	0.300
Dreghorn	198	0.542	0.544	0.477
Dundonald	178	0.313	0.381	0.349
Dunlop	204	0.292	0.300	0.279
Fenwick	205	0.234	0.181	0.165
Galston	214	0.451	0.422	0.301
Girvan	197	0.345	0.329	0.237
Irvine	199	0.495	0.381	0.349
Kilbirnie	203	0.313	0.304	0.320
Kilmarnock	206	0.379	0.323	0.287
Kilmaurs	207	0.524	0.480	0.446
Kilwinning	200	0.489	0.440	0.439
Maybole	212	0.374	0.338	0.300

Largs	217	0.254	0.202	0.174
Loudoun	215	0.358	0.307	0.265
Mauchline	186	0.347	0.323	0.298
Monkton & Prestwick	179	0.321	0.240	0.208
Muirkirk	187	0.590	0.546	0.434
New Cumnock	188	0.574	0.455	0.463
Ochiltree	189	0.350	0.411	0.376
Old Cumnock	190	0.411	0.332	0.329
Riccarton	208	0.523	0.422	0.396
Sorn	191	0.321	0.316	0.302
Stair	192	0.446	0.411	0.397
Stevenston	218	0.494	0.471	0.426
Stewarton	209	0.290	0.244	0.209
Straiton	213	0.381	0.338	0.300
Symington	180	0.280	0.141	0.174
Tarbolton	181	0.487	0.408	0.438
West Kilbride	219	0.342	0.312	0.263
Ayr		0.404	0.356	0.318

Lanark - I_f

Civil Parish	CP No.	1881	1891	1901
Avondale	538	0.299	0.237	0.245
Biggar	518	0.317	0.251	0.205
Blantyre	543	0.478	0.534	0.525
Bothwell	545	0.486	0.459	0.455
Cadder	552	0.420	0.354	0.344
Cambusnethan	546	0.539	0.488	0.432
Cambuslang	549	0.470	0.445	0.409
Carluke	531	0.488	0.411	0.348
Carmichael	519	0.301	0.212	0.288
Carmunnock	550	0.190	0.204	0.188
Carnwath	532	0.553	0.503	0.404
Carstairs	533	0.418	0.319	0.288
Covington & Thankerton	520	0.256	0.344	0.229
Crawford	521	0.467	0.370	0.302
Crawfordjohn	522	0.226	0.277	0.213
Culter	523	0.177	0.157	0.200
Dalserf	539	0.563	0.506	0.455
Dalziel	547	0.602	0.484	0.455
Dolphinton	534	0.222	0.266	0.273
Douglas	529	0.392	0.355	0.372
Dunsyre	535	0.291	0.301	0.368
East Kilbride	544	0.323	0.211	0.227

GLASGOW	554	0.377	0.333	0.305
Glassford	540	0.339	0.332	0.294
Hamilton	541	0.473	0.484	0.455
Lanark	536	0.298	0.237	0.223
Lesmahagow	530	0.486	0.402	0.360
Libberton	524	0.274	0.222	0.255
Airdrie	556	0.517	0.503	0.426
Coatbridge	557	0.532	0.503	0.438
Pettinain	525	0.271	0.192	0.229
Rutherglen	551	0.371	0.373	0.330
Shotts	548	0.551	0.488	0.432
Stonehouse	542	0.415	0.351	0.290
Symington	526	0.277	0.185	0.191
Walston	537	0.281	0.281	0.252
Wandell & Lamington	527	0.283	0.231	0.200
Wiston & Roberton	528	0.227	0.238	0.214
Lanark		0.401	0.362	0.333

Linlithgow - I_f

Civil Parish	CP No.	1881	1891	1901
Abercorn	843	0.332	0.369	0.305
Bathgate	846	0.560	0.516	0.470
Bo'ness	841	0.485	0.481	0.405
Carriden	844	0.441	0.268	0.379
Ecclesmachen	848	0.436	0.268	0.416
Kirkliston	559	0.442	0.268	0.386
Linlithgow	842	0.379	0.268	0.372
Livingstone	850	0.446	0.481	0.473
Torphicen	847	0.418	0.391	0.423
Uphall	849	0.582	0.576	0.498
Whitburn	851	0.517	0.470	0.457
Linlithgow		0.486	0.284	0.434

Edinburgh - I_f

Civil Parish	CP No.	1881	1891	1901
Carrington	573	0.435	0.325	0.271
Cockpen	574	0.336	0.260	0.375
EDINBURGH	579	0.296	0.268	0.229
Cranston	564	0.369	0.302	0.242
Crichton	565	0.392	0.302	0.236
Currie	558	0.318	0.298	0.234

Dalkeith	575	0.357	0.336	0.262
Fala & Soutra	566	0.334	0.239	0.206
Glencorse	577	0.409	0.337	0.294
Heriot	567	0.366	0.260	0.191
Inveresk	571	0.369	0.268	0.229
Kirknewton & East Calder.	561	0.515	0.298	0.455
Lasswade	570	0.403	0.378	0.287
Mid-Calder	562	0.432	0.546	0.495
Newbattle	576	0.400	0.260	0.375
Newton	572	0.419	0.343	0.388
Penicuik	578	0.348	0.312	0.287
Ratho	560	0.444	0.351	0.302
Stow	568	0.329	0.260	0.191
Temple	569	0.422	0.329	0.283
West-Calder	585	0.611	0.507	0.436
Edinburgh		0.312	0.309	0.239

Haddington - I_f

Civil Parish	CP No.	1881	1891	1901
Aberlady	365	0.273	0.231	0.215
Athelstaneford	357	0.280	0.222	0.196
Bolton	358	0.279	0.115	0.212
Dirleton	366	0.231	0.236	0.194
Dunbar	350	0.302	0.269	0.260
Garvald	359	0.338	0.269	0.261
Gladsmuir	370	0.365	0.322	0.317
Haddington	360	0.279	0.229	0.218
Humbie	361	0.313	0.239	0.174
Innerwick	351	0.252	0.222	0.202
Morham	362	0.226	0.190	0.327
North Berwick	367	0.288	0.199	0.149
Oldhamstocks	352	0.270	0.322	0.270
Ormiston	371	0.383	0.429	0.403
Pencaitland	372	0.428	0.309	0.338
Prestonkirk	353	0.308	0.222	0.207
Prestonpans	369	0.501	0.384	0.442
Salton	363	0.347	0.243	0.213
Spott	354	0.275	0.193	0.226
Stenton	355	0.255	0.193	0.223
Tranent	373	0.485	0.427	0.392
Whitekirk & Tynninghame	368	0.208	0.207	0.197
Whittinghame	356	0.240	0.311	0.238
Yester	364	0.301	0.229	0.197
Haddington		0.329	0.286	0.264

Berwick - If

Civil Parish	CP No.	1881	1891	1901
Abbey St Bathans	242	0.296	0.217	0.249
Ayton	243	0.308	0.252	0.226
Bunkle & Preston	244	0.253	0.212	0.221
Channelkirk	265	0.348	0.338	0.283
Chirnside	245	0.323	0.264	0.189
Cockburnpath	246	0.318	0.306	0.240
Coldingham	247	0.335	0.322	0.205
Coldstream	252	0.273	0.226	0.206
Cranshaws	253	0.172	0.217	0.263
Duns	254	0.270	0.211	0.175
Earlston	266	0.300	0.260	0.195
Eccles	255	0.233	0.267	0.213
Edrom	256	0.222	0.265	0.189
Eyemouth	248	0.388	0.322	0.332
Fogo	257	0.230	0.263	0.224
Foulden	249	0.193	0.209	0.185
Gordon	267	0.315	0.324	0.190
Greenlaw	258	0.322	0.209	0.192
Hume	268	0.257	0.202	0.216
Hutton	250	0.256	0.268	0.217
Ladykirk	259	0.225	0.198	0.254
Langton	260	0.268	0.197	0.205
Lauder	269	0.305	0.260	0.205
Legerwood	270	0.311	0.274	0.245
Longformacus	261	0.319	0.217	0.147
Merton	271	0.250	0.211	0.179
Mordington	251	0.325	0.308	0.251
Nenthorn	272	0.280	0.202	0.201
Polwarth	262	0.301	0.236	0.228
Swinton	263	0.292	0.252	0.243
Westruther	273	0.271	0.193	0.275
Whitsome	264	0.238	0.172	0.222
Berwick		0.294	0.242	0.216

Peebles - I_f

Civil Parish	CP No.	1881	1891	1901
Drumelzier	636	0.343	0.191	0.227
Eddlestone	644	0.314	0.376	0.278
Innerleithen	639	0.273	0.260	0.191
Kilbucho, Broughton, etc.	635	0.264	0.157	0.194
Kirkurd	641	0.314	0.172	0.243
Lyne	645	0.402	0.099	0.292
Manor	646	0.340	0.345	0.278
Newlands	642	0.273	0.200	0.261
Peebles	647	0.278	0.212	0.177
Skirling	637	0.249	0.122	0.270
Stobo	648	0.400	0.233	0.255
Traquair	640	0.308	0.260	0.197
Tweedsmuir	638	0.253	0.359	0.338
West Linton	643	0.305	0.193	0.221
Peebles		0.288	0.220	0.204

Selkirk - I_f

Civil Parish	CP No.	1881	1891	1901
Caddonfoot	799	0.331	0.260	0.191
Ettrick	803	0.246	0.325	0.197
Galashiels	800	0.290	0.260	0.196
Kirkhope	804	0.326	0.239	0.223
Roberton	772	0.276	0.196	0.269
Selkirk	801	0.303	0.260	0.175
Yarrow	805	0.363	0.260	0.298
Selkirk		0.305	0.248	0.192

Roxburgh - I_f

Civil Parish	CP No.	1881	1891	1901
Ancrum	774	0.319	0.266	0.234
Ashkirk	802	0.288	0.260	0.212
Bedrule	775	0.282	0.154	0.131
Bowden	793	0.274	0.254	0.179
Castleton	769	0.365	0.339	0.231
Cavers	770	0.334	0.250	0.222
Crailing	776	0.275	0.158	0.142
Eckford	782	0.280	0.202	0.156
Ednam	783	0.242	0.262	0.159

Hawick	771	0.326	0.250	0.190
Hobkirk	777	0.221	0.229	0.181
Hownam	784	0.312	0.292	0.253
Jedburgh	778	0.325	0.229	0.205
Kelso	785	0.275	0.215	0.190
Lilliesleaf	794	0.332	0.208	0.207
Linton	786	0.208	0.155	0.163
Makerston	787	0.293	0.163	0.167
Maxton	795	0.338	0.238	0.220
Melrose	796	0.240	0.260	0.166
Minto	779	0.277	0.223	0.178
Morebattle	788	0.308	0.250	0.179
Oxnam	780	0.317	0.229	0.177
Roxburgh	797	0.267	0.231	0.179
St Boswells	798	0.297	0.230	0.130
Smailholm	789	0.339	0.172	0.186
Southdean	781	0.286	0.229	0.205
Sprouston	790	0.258	0.207	0.171
Stitchel	791	0.192	0.268	0.200
Teviothead	773	0.332	0.250	0.196
Yetholm	792	0.359	0.271	0.246
Roxburgh		0.303	0.241	0.190

Dumfries - I_f

Civil Parish	CP No.	1881	1891	1901
Annan	295	0.319	0.268	0.271
Applegarth	318	0.305	0.245	0.259
Canonbie	313	0.378	0.350	0.298
Carlaverock	298	0.289	0.301	0.261
Closeburn	330	0.348	0.347	0.280
Cummertrees	296	0.265	0.268	0.271
Dalton	299	0.220	0.180	0.161
Dornock	297	0.352	0.287	0.264
Dryfesdale	319	0.330	0.307	0.228
Dumfries	300	0.308	0.276	0.249
Dunscore	331	0.287	0.197	0.199
Durrisdeer	332	0.349	0.304	0.250
Eskdalemuir	314	0.267	0.323	0.190
Ewes	315	0.244	0.259	0.239
Glencairn	333	0.318	0.355	0.192
Gretna	309	0.354	0.337	0.288
Halfmorton	310	0.236	0.344	0.201
Hoddom	320	0.318	0.268	0.271

Holywood	305	0.328	0.222	0.228
Hutton	321	0.290	0.342	0.255
Johnstone	322	0.352	0.237	0.270
Keir	334	0.307	0.181	0.173
Kirkconnel	328	0.404	0.433	0.390
Kirkmahoe	306	0.316	0.309	0.271
Kirkmichael	307	0.379	0.287	0.320
Kirkpatrick-Fleming	311	0.358	0.287	0.373
Kirkpatrick-Juxta	325	0.314	0.267	0.251
Langholm	316	0.275	0.228	0.171
Lochmaben	301	0.347	0.346	0.331
Middlebie	312	0.310	0.265	0.218
Moffat	326	0.209	0.160	0.150
Morton	335	0.325	0.257	0.243
Mouswald	302	0.264	0.158	0.220
Penmont	336	0.300	0.380	0.278
Ruthwell	303	0.308	0.285	0.187
St Mungo	323	0.218	0.193	0.138
Sanquhar	329	0.328	0.317	0.271
Tinwald	308	0.335	0.221	0.258
Torthorwald	304	0.377	0.361	0.230
Tundergarth	324	0.265	0.287	0.250
Tynron	337	0.258	0.310	0.203
Wamphray	327	0.375	0.213	0.137
Westerkirk	317	0.259	0.333	0.252
Dumfries		0.310	0.277	0.246

Kirkcudbright - I_f

Civil Parish	CP No.	1881	1891	1901
Anwoth	494	0.294	0.294	0.228
Balmaclellan	508	0.290	0.206	0.196
Balmaghie	490	0.264	0.241	0.241
Borgue	513	0.318	0.302	0.261
Buittle	498	0.375	0.300	0.229
Carsphairn	509	0.298	0.253	0.245
Colvend	499	0.318	0.270	0.204
Crossmichael	491	0.301	0.278	0.233
Dalbeattie	502	0.368	0.346	0.280
Dalry	510	0.279	0.305	0.206
Girthon	495	0.345	0.299	0.246
Irongray	504	0.283	0.202	0.199
Kells	511	0.286	0.355	0.264
Kelton	492	0.312	0.245	0.222

Kirkbean	503	0.291	0.357	0.298
Kirkcudbright	514	0.297	0.275	0.227
Kirkgunzeon	500	0.283	0.242	0.252
Kirkmabreck	496	0.379	0.341	0.315
Kirkpatrick-Durham	493	0.308	0.206	0.196
Lochrutton	501	0.333	0.251	0.284
Minnigaff	497	0.321	0.284	0.246
New Abbey	505	0.341	0.295	0.259
Parton	512	0.216	0.206	0.196
Rerrick	515	0.284	0.299	0.213
Terregles	506	0.198	0.222	0.228
Tongland	516	0.303	0.254	0.283
Troqueer	507	0.304	0.274	0.236
Twynholm	517	0.258	0.197	0.235
Kirkcudbright		0.313	0.280	0.242

Wigtown - I_f

Civil Parish	CP No.	1881	1891	1901
Glasserton	852	0.388	0.341	0.343
Inch	860	0.291	0.307	0.267
Kirkcolm	861	0.331	0.342	0.266
Kirkcowan	853	0.348	0.237	0.239
Kirkinner	854	0.363	0.281	0.292
Kirkmaiden	862	0.353	0.248	0.238
Leswalt	863	0.343	0.307	0.267
Mochrum	855	0.356	0.333	0.302
New Luce	864	0.459	0.299	0.245
Old Luce (or Glenluce)	865	0.317	0.309	0.262
Penninghame	856	0.320	0.284	0.246
Portpatrick	866	0.271	0.273	0.291
Sorbie	857	0.326	0.314	0.313
Stoneykirk	867	0.350	0.328	0.293
Stranraer	868	0.326	0.307	0.267
Whithorn	858	0.332	0.253	0.267
Wigtown	859	0.282	0.272	0.257
Wigtown		0.331	0.298	0.273

	1881	1891	1901
Scotland - I_f	0.331	0.314	0.273

Table A1.5

Civil Parish 'Duplicates' - 1881

An asterisk denotes a parish which was 'duplicated' for mapping purposes only.

Orkney

>618 Firth	»625 Stennes

Caithness

>283 Wick	»284 Canisbay*

Inverness

>446 Croy	»608 Dalcross*

Banff

>225 Banff	»227 Gamrie

Aberdeen

>031 Old Deer	»026 Crimond* »028 Longside* »029 Lonmay* »036 Strichen*

Perth

>689 Auchtergaven	»698 Kinclaven* »706 Redgorton*

>651 Comrie	»713 Balquhidder*

Fife

>419 Crail	»420 Dunino*

Stirling

>807 St. Ninian's	»808 Stirling*

Renfrew

>720 Cathcart (Landward)	»553 Cathcart (Glasgow) [Lanark]

Ayr

>212 Maybole	»210 Kirkmichael* »211 Kirkoswald*

Lanark

>554 GLASGOW	»555 Govan*

Linlithgow

>845 Kirkliston (Linlithgow)	»559 Kirkliston (Edinburgh)*

Table A1.6

Civil Parish 'Duplicates' - 1891

An asterisk denotes a parish which was 'duplicated' for mapping purposes only.

Orkney

>628 Cross & Burness	»629 Lady

Caithness

>283 Wick	»302 Canisbay*
>287 Halkirk	»289 Thurso
>288 Reay	»839 Farr [Sutherland]

Sutherland

>830 Dornoch	»835 Rogart

Ross and Cromarty

>758 Applecross	»749 Gairloch »759 Lochcarron
>760 Contin	»762 Urray »434 Kilmorack »435 Kiltarlity and Convinth
>737 Killearnan	»738 Knockbain
>753 Barvas	»754 Lochs »756 Uig

Inverness

>433 Boleskine and Abertarff	»448 Dores
>449 Inverness	»446 Croy »608 Dalcross*
>440 Duthil	»586 Cromdale [Elgin]
>441 Kingussie and Insh	»442 Laggan
>450 Moy and Dalarossie	»607 Cawdor [Nairn] »609 Nairn [Nairn]
>460 Kilmuir	»463 Snizort
>462 Sleat	»464 Strath

Nairn

>605 Ardclach	»599 Edinkillie [Elgin]

Elgin

>594 Bellie	»229 Cullen [Banff] »228 Rathven [Banff]
>588 Duffus	»592 Elgin »589 New Spynie »593 St Andrews-Lhanbryde

Banff

>232 Aberlour	»236 Mortlach
>224 Alvah	»081 King Edward [Aberdeen]
>240 Keith	»072 Cairney [Aberdeen]

Aberdeen

>025	Aberdour	»026	Crimond*
		»050	Ellon
		»027	Fraserburgh
		»028	Longside*
		»029	Lonmay*
		»053	Methlic
		»030	New Deer
		»031	Old Deer
		»036	Strichen*
		»055	Tarves
		»037	Tyrie
>038	Aboyne	»039	Birse
>079	Auchterless	»074	Forgue
>040	Cluny	»047	Midmar
>080	Fyvie	»082	Monquhitter
>043	Glenmuick, Tulloch, etc	»045	Logie-Coldstone
		»021	Strathdon
		»048	Tarland-Migvie
		»024	Towie
>009	New Machar	»056	Udny
>011	Peterculter	»472	Maryculter [Kincardine]
		»471	Banchory-Devenick [Kincardine]

Kincardine

>466	Fettercairn	»087	Edzell [Forfar]

Forfar

>094 Arbroath

>119 Auchterhouse

>111 Cortachy & Clova

>120 DUNDEE

>100 Dunnichen

>133 Kinnell

>669 Coupar-Angus

»098 Panbride

»129 Tealing

»115 Kirriemuir

»123 Liff, Benvie, and Invergowrie
»127 Murroes

»104 Guthrie
»105 Inverarity
»107 Kirkden

»134 Lunan
»135 Marytown

»673 Meigle [Perth]

Perth

>689 Auchtergaven

»713 Balquhidder*
»650 Blackford
»676 Blair-Athol
»665 Caputh
»666 Cargill
»667 Clunie
»668 Collace
»651 Comrie
»652 Crieff
»677 Dull
»715 Dunblane
»678 (Dunkeld &) Dowally
»654 Fowlis-Wester
»680 Kenmore
»716 Killin
»698 Kinclaven*
»670 Kinloch
»122 Kettins [Forfar]
»672 Lethendy
»681 Little Dunkeld
»682 Logierait
»703 Methven

		»704 Moneydie
		»658 Monzievaird & Strowan
		»683 Moulin
		»660 Muthill
		»706 Redgorton*
		»684 Weem
>686	Abernethy	»374 Abdie [Fife]
		»392 Newburgh [Fife]
		»393 Strathmiglo [Fife]
>662	Alyth	»663 Bendochy
		»664 Blairgowrie
		»671 Kirkmichael
>693	Forgandenny	»694 Forteviot
>655	Glendevon	»486 Fossoway & Tulliebole [Kinross]
>717	Kilmadock	»718 Kincardine
>699	Kinfauns	»701 Kinnoull
		»705 Perth
		»708 St Madoes
		»675 St Martins
		»709 Scone
		»710 Tibbermore
>715	Dunblane and Lecropt	»290 Alloa [Clackmannan]
		»292 Alva [Stirling]
		»291 Clackmannan [Clackmannan]
		»806 Logie

Fife

>394	Aberdour	»409 Kinghorn
		»411 Kirkcaldy and Dysart
>403	Auchterderran	»405 Ballingry
		»410 Knglassie
		»489 Portmoak [Kinross]
>378	Collessie	»380 Cults

>419 Crail	»420 Dunino* »426 Kingsbarns
>383 Dunbog	»385 Flisk
>398 Dunfermline	»399 Inverkeithing »485 Cleish [Kinross]
>421 Elie	»424 Kilconquhar
>413 Markinch	»415 Wemyss
>400 Saline	»401 Torryburn

Stirling

>807 St Ninians	»808 Stirling*

Dunbarton

>347 Cardross	»344 Dumbarton

Argyll

>169 Ardchattan and Muckairn	»171 Glenorchy and Inishail »173 (Kilchrenan &) Dalavich
>158 Craignish	»175 Kilninver and Kilmelford
>159 Cumlodden & Minnard	»160 Inverary »154 Kilcalmonell »156 Saddell and Skipness »163 South Knapdale
>172 Kilbrandon and Kilchattan	»148 Jura
>166 Kilninian & Kilmore	»167 Kinlochspelvie
>454 Kilmallie	»170 Lismore and Appin

Bute

>279 Cumbrae	»216 Ardrossan [Ayr]
	»219 West Kilbride [Ayr]
>274 Kilbride	»277 North Bute
	»278 Rothesay

Renfrew

>725 Paisley	»724 Neilston
	»728 Renfrew
>720 Cathcart	»553 Cathcart [Lanark]
	»544 East Kilbride [Lanark]
>732 Greenock	735 Port Glasgow

Ayr

>176 Ayr	»183 Dalmellington
	»184 Dalrymple
	»210 Kirkmichael*
	»211 Kirkoswald*
	»212 Maybole
	»213 Straiton
>178 Dundonald	»188 Irvine
>214 Galston	»208 Riccarton
>189 Ochiltree	»192 Stair

Lanark

>554 GLASGOW	»555 Govan*
>546 Cambusnethan	»548 Shotts
>523 Culter	»635 Kilbucho, Broughton [Peebles]
>547 Dalziel	»541 Hamilton

>556 Airdrie	»557 Coatbridge

Linlithgow / Edinburgh

>582 EDINBURGH	»844 Carriden »848 Ecclesmachen »559 Kirkliston (Linlithgow) »842 Linlithgow »571 Inveresk »845 Kirkliston (Edinburgh)* »558 Currie »561 Kirknewton
>563 Borthwick	»574 Cockpen »567 Heriot »576 Newbattle »568 Stow »266 Earlston [Berwick] »269 Lauder [Berwick] »639 Innerleithen [Peebles] »640 Traquair [Peebles] »802 Ashkirk [Roxburgh] »800 Galashiels [Selkirk] »801 Selkirk [Selkirk] »805 Yarrow [Selkirk] »796 Melrose [Roxburgh]
>564 Cranston	»565 Crichton
>566 Fala & Soutra	»361 Humbie [Haddington]

Haddington

>357 Athelstaneford	»353 Prestonkirk
>352 Oldhamstocks	»247 Coldingham [Berwick] »248 Eyemouth [Berwick]
>354 Spott	»355 Stenton

Berwick

>242 Abbey St Bathans

>268 Hume

»253 Cranshaws
»261 Longformacus

»272 Nenthorn

Roxburgh

>770 Cavers

>778 Jedburgh

»771 Hawick

»780 Oxnam
»781 Southdean

Dumfries

>295 Annan

>297 Dornock

>305 Hollywood

»296 Cummertrees
»320 Hoddom

»311 Kirkpatrick-Fleming

»506 Terregles [Kirkcudbright]

Kirkcudbright

>508 Balmaclellan

>497 Minnigaff

»493 Kirkpatrick-Durham
»512 Parton

»856 Penninghame [Wigtown]

Wigtown

>852 Glasserton

»863 Leswalt
»868 Stranraer

Table A1.7

Civil Parish 'Duplicates' - 1901

An asterisk denotes a parish which was 'duplicated' for mapping purposes only.

Orkney

>628 Cross & Burness	»629 Lady

Caithness

>283 Wick	»284 Canisbay*

Ross and Cromarty

>758 Applecross	»749 Gairloch
>760 Contin	»762 Urray
>753 Barvas	»754 Lochs
	»756 Uig

Inverness

>434 Cannich	»435 Kiltarlity
>446 Croy	»608 Dalcross*
>460 Kilmuir	»463 Snizort

Elgin

>594 Bellie	»229 Cullen [Banff]
	»228 Rathven [Banff]

>592 Elgin	»589 New Spynie »593 St Andrews-Lhanbryde

Banff

>232 Aberlour	»236 Mortlach

Aberdeen

>025 Aberdour	»026 Crimond* »028 Longside* »029 Lonmay* »030 New Deer »031 Old Deer »036 Strichen* »037 Tyrie »049 Cruden »050 Ellon »055 Tarves
>079 Auchterless	»074 Forgue
>080 Fyvie	»082 Monqhuitter
>043 Glenmuick, Tulloch, etc.	»045 Logie-Coldstone and Cromar

Forfar

>130 Craig	»136 Montrose
>120 DUNDEE	»123 Liff, Benvie, and Invergowrie »125 Mains and Strathmartine
>669 Coupar-Angus	»673 Meigle [Perth]

Perth

>676 Blair-Atholl	»677 Dull
	»680 Kenmore
	»716 Killin
	»682 Logierait
	»683 Moulin
>662 Alyth	»664 Blairgowrie
	»671 Kirkmichael
>712 Ardoch	»715 Dunblane and Lecropt
>689 Auchtergaven	»698 Kinclaven*
	»681 Little Dunkeld
	»656 Logiealmond
	»703 Methven
	»706 Redgorton*
>651 Comrie	»713 Balquhidder
>665 Caputh	»678 Dunkeld and Dowally
>701 Kinnoul	»705 Perth
>670 Kinloch	»672 Lethendy

Fife

>419 Crail	»420 Dunino*
>383 Dunbog	»385 Flisk
>411 Kirkcaldy & Dysart	»413 Markinch

Stirling

>814 Falkirk	»815 Grangemouth
>807 St Ninians	»808 Stirling*

Dunbarton

›347 Cardross

»344 Dumbarton
»345 Clydebank

Argyll

>169 Ardchattan

>137 Ballachulish

>159 Cumlodden and Minnard

>172 Kilbrandon and Kilchattan

>166 Kilninian & Kilmore

>452 Arisaig

»173 (Kilchrenan &) Dalavich

»454 Kilmallie

»170 Lismore and Appin

»160 Inverary

»154 Kilcalmonell

»156 Saddell and Skipness

»163 South Knapdale

»148 Jura

»167 Kinlochspelvie

»138 Ardnamurchan

Bute

>274 Kilbride

»275 Kilmory

Renfrew

>729 Houston & Kilellan

>724 Neilston

»730 Kilbarchan

»725 Paisley

Ayr

>216 Old Ardrossan

>176 Ayr

>178 Dundonald

»219 West Kilbride

»183 Dalmellington

»184 Dalrymple

»210 Kirkmichael*

»211 Kirkoswald*

»212 Maybole

»213 Straiton

»199 Irvine

Lanark

>554 GLASGOW	»555 Govan*
>545 Bothwell	»539 Dalserf »547 Dalziel (Motherwell portion) »541 Hamilton
>546 Calderhead	»548 Shotts

Linlithgow

>845 Kirkliston (Linlithgow)	»559 Kirkliston (Edinburgh)*

Edinburgh

>563 Borthwick	»574 Cockpen »576 Newbattle
>582 EDINBURGH	»571 Inveresk
>567 Heriot	»568 Stow »639 Innerleithen [Peebles] »799 Caddonfoot [Selkirk]
>570 Lasswade	»578 Penicuick

Roxburgh

>778 Jedburgh	»781 Southdean

Dumfries

>295 Annan	»296 Cummertrees »320 Hoddom
>305 Holywood	»506 Terregles [Terregles]

Kirkcudbright

>508 Balmaclellan

>497 Bargrennan (Minnigaff)

»493 Kirkpatrick-Durham
»512 Parton

»856 Penninghame [Wigtown]

Wigtown

>860 Inch

»863 Leswalt
»868 Stranraer

1. 'Theory' in the qualified sense of consisting of a set of hypotheses which are descriptive, rather than predictive.

2. Woods (1982), p.20.

3. c.f. Lesthaeghe (1977)

4. Woods and Smith (1983), p.207.

5. Woods (1982), p.162

6. Thompson (1929); Davis (1945); Notestein (1945).

7. In fact, a distinction is not made in the theory between 'growth' and 'development'.

8. Notestein (1945), p.41

9. Demeny (1972); Letshaeghe (1977); Smith (1977); van de Walle (1979); E. van de Walle and Knodel (1980); F. van de Walle (1986)

10. Demeny (1972), p.172

11. The transition in France may have occurred over 'two stages' - there certainly was something of a 'ski-jump' rise in its fertility, in the 1860s. From the 1880s French fertility declined again, along with the rest of Europe. (see, Wrigley (1985)).

12. See especially, Lesthaeghe (1977); and Lesthaeghe and Wilson (1982 and 1986).

13. The Princeton project has produced monographs on Portugal - Livi-Bacci (1971); Italy - Livi-Bacci (1977); Germany - Knodel (1974); Belgium - Lesthaeghe (1977); France - van de Walle (1974); Britain - Teitelbaum (1984); and Russia - Coale, Anderson, and Härm (1979); and also a summary volume covering the whole of Europe, edited by Coale and Watkins (1986).

14. Watkins(1986), p.448. (Some aspects of the possible relationship between occupation and fertility decline are discussed in chapter seven of the present study.)

15. Exceptions are Lockridge (1983), and the various studies made of the Registration Districts for England and Wales, by: Friedlander (1983);

Woods and Smith (1983); Woods (1986); Woods (1987). Family reconstitution techniques, which have proved invaluable for the pre-nineteenth century period, have been used in a few places for important local studies of the fertility decline (see particularly a series of articles published in Population Studies and elsewhere by Knodel, J. since 1968).

16. Teitelbaum (1984)

17. In Scotland, the number of Gaelic speakers, from 1881.

18. These are: Im (nuptiality); I_g (marital fertility); Ih (extra-marital fertility); and If (overall fertility). They are described in chapter 2, but see the following footnote for a brief description of the significance of various levels of I_g.

19. I_g is the Coale index of marital fertility. Briefly, an I_g of 0.700 or more indicates 'little or no deliberate control' of fertility within marriage, values between 0.600 and 0.700 suggest some parity limitation, and values of less than 0.600 are reckoned indicate definite control of the number of births occurring within marriage. Also, when a population records an I_g of below 0.600, marital fertility decline is not likely to be reversed. But see chapters 2 (methodology), and chapter 4 (The onset of fertility decline), below, for a full explanation of this and the Coale fertility indices.

20. Teitelbaum (1984), p.139.

21. Teitelbaum (1984), p.7

22. Woods and Smith (1983), p.225

23. The methodology used in the construction of the Scottish civil parish data base is fully described in chapter 2, below.

24. Whittington (1983), p.144

25. Gordon (1983), p.176

26. Lenman (1977), pp. 185, 186

27. Lenman (1977), p. 183

28. The Free, and the United Presbyterian Churches of Scotland combined as the United Free Presbyterian Church of Scotland at the turn of the

century. The rivalry between these and the 'established' Church of Scotland, and their different approaches to authority and 'democracy' within the church are well summed up in the traditional rhyme, which goes: 'The Wee Kirk, The Free Kirk, The Kirk without the steeple; the Auld Kirk, the cauld Kirk, The Kirk without the people'. As is argued in chapters seven and eight, however, as far as social policies were concerned there was little real difference between the two.

29. Checkland and Checkland (1984), pp.195, 196

30. Anderson (1983), pp.530, 531

31. Teitelbaum (1984), p.224

32. See, chapter 2, below, for an explanation of these terms.

33. See: Coale (1965); Coale and Treadway (1986), Appendix B. The indices are also well explained in Lesthaeghe (1977); Teitelbaum (1984); Woods (1979).

34. Hinde and Woods (1984), have argued that there is a "need for a variety of standard marital fertility schedules specific to the underlying fertility conditions of the particular population under investigation". Their argument has merit. Nevertheless, in the present study, to maintain comparability with the many studies which have used the Coale indices, those indices will also be used.

35. Coale (1967), p.205

36. It is of course arguable that the summary data published in the censuses is 'secondary' data. As a matter of convenience, as well as convention, it is regarded here as 'primary', or 'raw' data.

37. Bartholomew (1904); Munro (1973).

38. See, Shennan (189?). Shennan was the Secretary to the Boundary Commission in Scotland.

39. Thanks to Julian Read, of the Edinburgh Regional Computing Centre.

40. The civil parishes officially are numbered from 1 to 891. The number of actual parishes is 871 because certain places, mostly some of the islands of Orkney and Shetland, but also, and unfortunately, the cities of Edinburgh and Glasgow and some surrounding areas were made into single civil parishes.

41. Howie (1894). Also given are membership figures for the three main Protestant churches (the Church of Scotland, the Free Church, and the United Presbyterian Church), in 1879, and the other Protestant churches in 1885. These are incorporated in the database, but are not made use of here.

42. I am indebted to Rory Paddock, who is currently researching a thesis on illegitimacy in a sample of rural parishes in the Borders, for allowing me to use these data, which he compiled.

43. Farm data were, and continue to be, collected in terms of 'agricultural parishes'. In effect these have the same boundaries as the civil parishes. In some places though boundaries are 'stretched' or 'shrunk' to accomodate river bends and outlying fields, etc.

44. Lesthaeghe and Wilson (1986)

45. Full details of all the variants of the data-base, and the combinations used in constructing it will be made generally available when they are deposited in the ESRC archive in the near future.

46. Dupâquier and Fauve-Chamoux (1983); and Soloway (1982), give excellent accounts of, respectively, the Malthusian and neo-Malthusian schools of thought.

47. See especially, Wrigley and Schofield (1981); Coale and Treadway (1986).

48. Coale and Treadway (1986), p. 48.

49. Watkins (1986b) p.447.

50. Habakkuk (1971), p. 56.

51. Homans(1969)

52. Watkins (1986a), p. 328.

53. Watkins (1986a), pp. 328-329.

54. Flinn et al (1977), p.317.

55. "The much more nearly balanced ratio in the Western Lowlands was, however, in the mid-nineteenth century more the product of male-dominated immigration from Ireland than from other parts of Scotland". Flinn et al, (1977), p.319.

56. Flinn et al (1977), Part 6.3.

57. Flinn et al, (1977), p. 450.

58. Flinn et al, (1977), p. 452.

59. Flinn et al, (1977), p. 320.

60. See chapter 4, below.

61. Average age at first marriage statistics are of course preferable to those for average age at marriage, in that they exclude second and subsequent marriages. Unfortunately, average at first marriage figures are only available for Scotland as a whole.

62. See chapter 2, above. A full discussion of the effect of age-distribution on all the Coale indices (except Im*), is given in Coale and Treadway (1986), pp.157-158.

63. See, chapter 2, above. As Woods has stated, "it is possible to remove this error, because we know the proportion of women married at each age..... Similar sorts of equivalent indices could be derived for If, Ig and Ih to eliminate the influence of age-structure, but they would all require the use of age-specific fertility rates which are very rarely available at either the national or regional level for historical populations." [Woods (1979), p.120.] But see Knodel (1986), pp. 355-357 for a worked example of I_g directly standardised by age.

64. Teitelbaum (1984), p.54. See also, Teitelbaum's Table 3.1 on p.55.

65. In fact, Teitelbaum is the only Princeton author to mention Im*.

66. Teitelbaum (1984), p.55. See also, chapter 2, above, where the mathematical relationship between If, Ig, Ih, and Im is explained.

67. The Irish Im in c.1970 was 0.485. It 'recovered' to 0.557 in c.1980. See, Coale and Treadway (1986), Table 2.5

68. See, Coale and Treadway (1986), Table 2.3.

69. See, Watkins (1986a), table 8.1. For reasons of clarity, only 7 of the 15 countries listed by Watkins have been graphed. However, as Ireland alone records Im consistently (slightly) below those of Scotland for all the years shown except 1960, when the proportion married in Ireland is significantly less than all the other countries of Europe, the overall picture is not distorted by the selection used.

70. Hajnal (1965)

71. Hajnal (1965), p. 101.

72. Watkins (1986a), p.319.

73. Teitelbaum (1984), p.102.

74. Teitelbaum (1984), p. 111. Here Teitelbaum is referring to the patterns set by the county-level I_m of the various countries. Teitelbaum (1984), p.111 - see also his Tables 5A.1, 5A.2, and 5A.3.

75. That is, the grand mean I_m of the means for the individual years, computed from the Im of 856 civil parishes. These means, 0.394, 0.373, and 0.381, respectively, are consistently below the actual I_m - 0.438, 0.420, and 0.425.

76. Watkins states that "Most of the provinces with unusually high values of I_m in 1870 and 1900 were those of *precocious industrialization* Durham, *Renfrew*; and Staffordshire *in England*, East Lothian [Haddington], Kinross, and Midlothian in Scotland." Watkins (1986), p.323. My emphasis. Possibly, the counties and their indices were misaligned in her data-set; perhaps it was just one of those days. According to Teitelbaum's figures, the counties of Scotland with the three highest I_m in both 1871 and 1891 were Lanark, West Lothian [Linlithgow], and Stirling. These three counties are much better candidates in Scotland at the time for the 'precocious industrialisation' label.

77. Of the 43 Civil Parishes which had an I_m of greater than 0.500 at all three census points, 23 are contained in this cluster. See table A3.1 in appendix A3.

78. For a full explanation of the methodology used in constructing the Civil Parish data base and its variants, see chapter 2, above.

79. Teitelbaum (1984), Figure 5.5.

80. Change in I_m is here defined as: $\Delta I_m = \frac{I_{m(t+x)} - I_{m(t)}}{.800 - I_{m(t)}}$

Where 0.800 is taken as the highest value of I_m achieved, and I_m* is substituted I_m in order to compute ΔI_m*. c.f.Lesthaeghe (1977)

81. Teitelbaum(1984)

82. This is demonstrated to be the case, on pages 46,47, below.

83. Lesthaeghe (1977) p.98. An I_g of 0.700 or above is not, of course, definitive of 'natural fertility'. For example, Bourgeois-Pichat has reported I_g as low as 0.670 which are consonant with no control of fertility within marriage. Bourgeois-Pichat (1965). See also, Henry (1961).

84. Teitelbaum (1984) p.119. In fact, Teitelbaum chooses the 1871 level of I_g as the 'plateau' not on empirical grounds, but rather "for purposes of comparability" with England and Wales.

85. Teitelbaum (1984) p.119.

86. The actual number of Registration Districts and Civil Parishes varies from time to time (see Chapter 2), but in the variant of the data set used here, indices were constructed for a constant number of areas in order to facilitate comparisons over time.

87. The use of 0.670 or above follows the precedent set by the the Princeton authors, and allows some leeway for some 'natural' fertility levels which may be below 0.700. See note83, above. It might be that parishes with I_g below 0.670 have fertility every bit as 'natural' as those above, and of course it is entirely likely that some places, above or below this level, were deliberately limiting their fertility. See, Coale and Treadway (1986), especially pp. 37-41, and Appendix D.

88. Teitelbaum (1984) p.139

89. As explained in Chapter 2, the 1881 and 1901 fertility indices are based on 10-year averages of births. Thus, the 1881 figures are computed from the number of births occurring between 1876 and 1885, while the 1901 figures use the births taking place between 1896 and 1905.

90. Teitelbaum (1984)

91. This is as a result of the 1891 fertility indices being based on 2-year birth averages, as opposed to the 10-year averages used for 1881 and 1901. See Chapter 2, p.9 on, for a full explanation.

92. All the county-level fertility indices reported by Teitelbaum employ 10-year birth averages. Some of his figures ignore boundary changes effective within these 10-year periods, but given the high level of aggregation employed, the magnitude of the indices is not likely to be greatly affected.

93. Coale and Treadway (1986) Appendix A includes a fully detailed list of county-level indices for all the countries of Europe investigated by the Princeton Project.

94. Coale and Treadway(1986) p.41

95. Coale and Treadway (1986) p.45

96. Teitelbaum (1984) Table 6.3

97. Coale and Treadway (1986) Table 2.2. The figures quoted here are those in Table 2.2 which include France.

98. Teitelbaum (1984) Table 6.3

99. Figures based on Lesthaeghe (1977) Table 4.4.

100. In Scotland, divergence is apparent only if 1881 (or 1861) is used as the 'plateau'; if 1871 is used then the Scottish model takes the form convergence-divergence(-convergence). See p.5, above, and, Teitelbaum (1984) Table 6.3.

101. Teitelbaum(1984), Table 6.3.

102. Woods and Smith (1983). It should be noted, however, that the Coale indices produced by Woods and Smith are based on three-year averages of births, as opposed to the ten year averages used by Teitelbaum, and for the 1881 and 1901 figures on which this study is based. Woods and Smith's figures are thus more analogous to the 1891 figures used here, which show considerably more heterogeneity than those for 1881 and 1891. (Perhaps 1891 was a truly exceptional year throughout the United Kingdom for its range of marital fertility experience). However, Woods and Smith's averages are 'forward projected' in the sense that they use

births from the census year and the two years following, thus any fertility decline occurring at the time might be slightly exaggerated when reported as pertaining to the census year (1861 or 1891). The 1891 Scottish civil parish figures (two-year averages of births) are deliberately backward-biased, in that they are based on an average of the births for the census year (1891) and the year previous (1890). Another possible source of difficulty with regard to comparability is that the England and Wales registration districts contain on average much larger populations than the civil parishes and registration districts of Scotland, and so may disguise some of the actual degree of heterogenity present at the time.

103. Friedlander (1983) p.252. Friedlander does not actually state how many years his births averages are based on, although he does hint that ten-year averages were used: "Vital registration provided the intercensal numbers of births....." p.251

104. For details of this variant of the data set, see Chapter 2, and Appendix A.

105. As is noted above, there may of course be an indeterminate level of stochastic error in the 1891 figures.

106. The regions used here are those used by Flinn, et al for the nineteenth and twentieth centuries. Flinn, et al (1977) Map 3. The regions, and the counties included in each, are: 1 Far North - Shetland, Orkney, Caithness; 2 Highland - Sutherland, Ross & Cromarty, Inverness, Argyll, Bute; 3 North-East - Nairn, Moray, Banff, Aberdeen, Kincardine; 4 Eastern Lowlands - Angus, Perth, Fife, Kinross, Clackmannan, Stirling, Linlithgow, Edinburgh, Haddington; 5 Western Lowlands - Dunbarton, Renfrew, Lanark, Ayr; 6 Borders - Berwick, Selkirk, Peebles, Roxburgh, Dumfries, Kirkcudbright, Wigtown.

107. See page 11, and footnotes 23 and 24, above.

108. The small number of cases involved in the calculation of the deviations for some of the counties might affect the robustness of the statistics. Nevertheless, of these six counties in which the degree of differentiation remains constant in 1881 and 1901, only Nairn has an N of less than 30.The respective N are: Nairn, 4; Aberdeen, 79; Argyll, 41; Ross, 33; Fife, 57; Roxburgh, 30.

109. Teitelbaum (1984) Table 6.3

110. See Table 4.2. The Regions are as indicated in Table 4.2, above, viz. 1, Far North; 2, Highland; 3, North East; 4, Eastern Lowlands; 5, Western Lowlands; 6, Borders. c.f. Flinn et al (1977).

111. Illegitimacy, like marital fertility, is, strictly speaking, a social and not a demographic phenomenon. In pre-industrial Japan there was no word for illegitimacy. In Scotland, unlike England, subsequent marriage of the parents legitimises a birth. Much depends, then, on contemporary social attitudes whether births occurring outside wedlock are recognised as illegitimate.

112. Lesthaeghe (1977), p.120.

113. Lesthaeghe (1977), p. 122

114. See, Wrigley & Schofield (1981)

115. Wrigley (1985).

116. Leneman & Mitchison (1987)

117. Seton (1860), quoted in Flinn et al (1977), p.355.

118 . Flinn et al (1977), Table 5.4.1.

119. Flinn et al (1977), p.355.

120. Flinn et al (1977), p.367.

121. Flinn et al (1977), p. 349.

122. Teitelbaum (1984), p. 56.

123. See chapter 4, above.

124. This is true before the nineteenth century also. See, Wrigley & Schofield (1981). It does not hold true for much of Europe since the Second World War, where 'single parenthood' has increased, as has the number of stable unions not formally registered as marriages, the children of which are registered as illegitimate.

125. Flinn et al (1977), Table 5.4.2.

126. Flinn et al (1977), Table 5.4.2.

127. See, Coale & Treadway (1986), Appendix A.

128. According to the Princeton figures given in Coale & Treadway (1986), Appendix A, Shetland has one of the lowest levels of illegitimacy in Europe at the end of the nineteenth century.

129. Only Auldearn, in 1881, has an Ih above 0.49 between 1881 and 1901, although it should be noted that Cawdor and Nairn are combined with Moy & Dalarossie (Inverness-shire), a parish with consistently low illegitimacy, for 1891.

130. Flinn et al (1977), p.367.

131. See especially, Notestein, F.W. (1945), also Davis, K. (1945), and Thompson, W. (1929)

132. For England and Wales, most estimates of proportion urban use the census statistics for the 'principal towns' plus London, but whatever the measure is based on, all agree that 50 per cent or more of the population were 'urban' by mid-century. See, Lawton (1978), Table 3.1.

133. Flinn et al (1977), Table 5.1.7. Comparisons over time of absolute values of population size are not entirely reliable. Urbanisation is usually enhanced by boundary extensions as well as natural population increase and migration.

134. Sharlin (1986), p. 235

135. Sharlin (1986) p.260

136. Teitelbaum (1984) p.224

137. Sharlin (1986), p.236

138. Sharlin (1986), p.241. See also, Knodel (1974)

139. Sharlin (1986), p.253

140. Sharlin (1986), p. 237

141. Woods (1987), p.304.

142. Teitelbaum (1984), p.158

143. The respective mean I_g for the different categories are: 'large urban' places, 0.739, 0.637; 'small urban' places, 0.760, 0.658; and 'rural' areas, 0.750, 0.635.

144. Median values of I_g were used for this analysis.

145. Sharlin (1986), pp. 249-50.

146. This is investigated in the next, and subsequent chapters.

147. Sharlin (1986), p.237.

148. Compare Figure 6.1 to Figures 5.2-5.7 in Sharlin.

149. In fact, Glasgow has consistently higher I_m than the rural areas of Lanarkshire, but the urban I_m for the county as a whole is bolstered by the very high levels of nuptiality (in Scottish terms) which occur in the other parishes in the county with populations greater than 20,000. (See Figure 7.2., in chapter 7, below).

150. Censuses of Scotland, 1881 and 1901 - Occupations of males and females in the Burghs. The influence of 'occupation' on fertility decline is discused in chapter seven, below.

151. See Figure 7.3, and accompanying discussion in chapter 7, below.

152. The measure of urbanity used by Woods is based on population density, and so is different from that used here. The population density above which he regards a registration district as 'urban' is 100/km^2. The 25 Scottish parishes defined here as 'large urban' by virtue of population size alone would fit comfortably into his schema - all except Inverness (384/km^2) have densities in excess of 600/km^2. If the definition of urban is broadened for the civil parish data to include all places of 10,000 or more people, N is increased to 66 and the r^2 for 1891 falls to 0.506. Correspondingly, the r^2s for 1881 and 1901 fall to 0.296, and 0.445, respectively.

153. Woods (1987), p.304.

154. The mean I_m for the 25 parishes with populations greater than 20,000 in 1901 are: 1881 -0.496; 1891 - 0.474; 1901 - 0.469.

155. In order to accommodate boundary changes during the period, Dalziel and Hamilton are combined in 1891, and Bothwell, Dalziel, and Hamilton are combined in 1901. The I_g for the individual places at these dates are therefore 'estimates', in that they are in fact the I_g of the combinations. The populations given are those for the individual areas.

156. As described in chapter 4, above, the respective national averages for I_g in 1881, 1891, and 1901, are 0.058, 0.047, 0.039. The mean I_h for the North-east in the are, 0.099, 0.083, and 0.071.

157. The number 12 was chosen, rather loosely, as it is the nearest whole even number to 10 by which 108 is exactly divisible. Twelve numbers were then selected at random from a list of 108; the 12 were then matched to the line numbers of a list of the 'town' parishes which had previously been randomly sorted.

158. Two from each of the six regions.

159. The national averages for 1881, 1891, and 1901 for I_m are given in chapter 3, Table 3.2, above, as: 0.394; 0.373; and 0.381; the respective actual values are: 0.438; 0.420; and 0.425.

160. Sharlin (1986), p.235

161. In addition to those who went to the Lowlands, many, of course, were leaving these areas to emigrate to the 'extra-European'.

162. See, for example, Wrigley (1961); Haines (1979); Friedlander (1983); Teitelbaum (1984); Woods (1986); Woods (1987); also relevant are the oral histories of Gittins (1982); and Roberts (1984)

163. Roberts (1984), p.84. See also, Gittins (1982).

164. Campbell (1961), p.131

165. McLeod (1984), pp. 65, 66

166. The Free, and United Presbyterian churches, combined as the United Free Church in 1900.

167. United Free Church General Assembly, 1916, Report XXXII, p.5, quoted in Boyd (1980), p.244. The Report adds, perhaps in a bid to get at the whole truth, and nothing but the truth, that fertility decline could also be put down to,"('in the opinion of eminent medical men') 'certain racial poisons, due to alcohol, lead poisoning and venereal diseases'."

168. 1911 Census, vol.III, Table XCVIII. See also, Banks (1981), and Kemmer (1986)

169. Noonan (1965)

170. Lesthaeghe and Wilson (1986), p.291.

171. Three 'county towns' which fail to make the 5,000 mark are Nairn, Stonehaven (Kincardineshire), and Haddington.

172. There are in fact occupational data for 75 Scottish burghs in the 1901 census. However, several of these 'belong elsewhere' in terms of the civil parish data set: Govan, Kinning Park, and Partick come under Glasgow; Leith, and Musselburgh are included in Edinburgh; Maxwelltown is part of Dundee; Barrhead, Johnstone, and Paisley are taken as one place; Falkirk and Grangemouth are combined; Saltcoats is included in Ardrossan. The occupational data are likewise combined.

173. The only data available on Roman Catholics is the number of baptisms in 1885 and 1891. While these data are included in the data set, their use would be fraught with difficulties. If it is assumed that the baptisms occurred in the year of birth, then a rough and ready rate of Catholic births may be calculated by dividing the total number of births in a civil parish into the number of Catholic baptisms for a particular year. But every parish did not contain a Catholic chapel, and so it is never entirely clear what the catchment area for baptisms was, or, indeed, in which the year the actual birth occurred. For these reasons, the Roman Catholic baptismal data is not used here.

174. East Lothian, the 'rural' county discussed in the next chapter, contained two municipal burghs, Haddington, and North Berwick, but as both had populations of less than 5,000 in 1901, they are not included in the analysis of 'urban' areas.

175. Woods (1987), p.307. My italics. Because there is a more comprehensive range of data available for the England and Wales registration districts (which in the majority of cases are substantially larger and contained more people than the Scottish civil parishes),

Woods' three models are each considerably more sophisticated than the one used here. Even so, "each of the three models proves disappointing, for R^2 never exceeds 0.50." op.cit., p.103.

176. Howie (1893), p. ix

177. See chapter 2, above.

178. See: Checkland and Checkland (1984), ch.7; Smout (1986), ch.7; Boyd (1980); McLeod (1984).

179. This is the name by which the county of Haddingtonshire is now commonly, and, as East Lothian District, officially, called. In the civil parish data set, the historical name for this county was retained throughout, in order to reduce the risk of confusing or overlooking relevant source material.

180. Muir (1915), p.61

181. Muir (1915), p.57

182. See especially, Haines (1979), and Wrigley (1961). See also, Friedlander (1983).

183. Haines (1979), p.3

184. Significantly, the only other civil parish in the area illustrated in Maps 7.1 and 7.2 which shows a level of Ig above 0.700 in 1901 is Newtongrange.

185. Muir (1915), Figure 5, p.115.

186. Snodgrass (1953), p.49

187. Checkland and Checkland (1984), p.93

188. Dickson (1980), p.222; Rodgers (1985).

189. Bartholomew, 1904)

190. McNeill (1902), p.20

191. McNeill (1902), p.116

192. McNeill (1902), p.26. At the risk of doing him an injustice, 'incredible' should perhaps be taken with a pinch of salt, McNeill's style

often slips into what is best described as that of the novelist (which he was).

193. Muir (1915), p.113

194. Muir (1915), p.12

195. Muir (1915), pp.112,113

196. Muir (1915), pp. 57,58

197. The coastal fringe of East Lothian was (and is) for a long time an employer of large amounts of female labour in the fields.

198. 1901 Census.

199. 1911 Census, Volume III, Table XLVIII

200. 1911 Census, Volume III, Table XCVIII

201. Bartholomew (1904)

202. 1911 Census, Table XCVIII

203. Devine (1984), p.248

204. Devine (1984), p.252

205. 1911 Census, Volume III, Table XLVIII.

206. Smout (1986), p.200. Dirleton, North Berwick, Prestonpans, and Tranent are all in the the Haddington presbytery, Ormiston comes under the presbytery of Dalkeith.

207. Smout (1986), p.198

208. Sharlin (1986)

Bibliography

Adams, I. (1978) 'The making of urban Scotland' Croom Helm, London

Anderson, M. (1976) Marriage patterns in Victorian Britain -in- *Journal of Family History* vol.1

Anderson, M. (1980) 'Sociology of the family' (2nd edn.) Penguin, Harmondsworth

Anderson, M. (1985) The emergence of the modern life-cycle in Britain -in- *Social History* vol.10, no.2

Anderson, R. D. (1983) Education and the state in nineteenth century Scotland -in- *Economic History Review* 2nd series, vol.xxxvi,34

Askham, J. (1975) 'Fertility and deprivation' Cambridge University Press, Cambridge

Baillie, S. R. (1984) The structure of population in traditional fishing communities of north east Scotland: Whitehills and Gardenstown, 1855-1974 -in- *Northern Scotland* vol.6, no.1

Banks, J. A. (1981) 'Victorian values: secularism and the size of families' Routledge and Kegan Paul, London

Bartholomew, J. G. (ed.) (1904) 'The survey gazetteer of the British Isles'

John Bartholomew and co.,
Edinburgh

Blom, I. (1985)
Family history and women's history - the case of Norway
-in- Rogers, J., and Norman, H. (eds)
'The Nordic family: perspectives on family research'
Report from the Family History Group, Dept. of History, Uppsala University, no.4

Bourgeois-Pichat, J. (1965)
The general development of the population of France since the eighteenth century
-in- 'Population in history: essays in historical demography'
Aldine, Chicago, U.S.A.

Boyd, K. M. (1980)
'Scottish church attitudes to sex, marriage and the family, 1850-1914'
John Donald, Edinburgh

Brändström, A., and Sundin, J. (eds.) (1981)
'Tradition and transition'
The Demographic Data Base, Umeå

Campbell, F. (1961)
Birth control and the christian churches
-in- *Population Studies* vol.14

Caldwell, J. (1982)
'Theory of fertility decline'
Academic Press, London

Carlsson, G. (1966)
The decline of fertility: innovation or adjustment process
-in- *Population Studies* vol.18

Checkland, S., and Checkland, O. (1984)
'Industry and ethos'
Edward Arnold, London

Coale, A. (1965)
Factors associated with the development of low fertility: an historic summary
-in- 'United Nations world population conference, Belgrade', vol.II
United Nations, New York, U.S.A.

Coale, A. J., Anderson, B. A., and Härm, E. (1979)
'Human fertility in Russia since the nineteenth century'
Princeton University Press, Princeton, U.S.A.

Coale, A., and Treadway, R. (1986)
A summary of the changing distribution of overall fertility, marital fertility, and the proportion married in the provinces of Europe
-in- Coale, A. J. and Watkins, S. C. (eds.)
'The decline of fertility in Europe'
Princeton University Press, Princeton, U.S.A.

Coale, A. J., and Watkins, S. C. (eds.) (1986).
'The decline of fertility in Europe'
Princeton University Press, Princeton, U.S.A.

Coleman, D., and Schofield, R. (eds) (1986)
'The state of population theory'
Basil Blackwell, Oxford

Davis, K. (1945)
The world demographic transition
-in- *Annals of the American Academy of Political and Social Science*
273

Demeny, P. (1972)
Early fertility decline in Austria-Hungary: a lesson in demographic transition
-in- Glass, D. V., and Revelle, R. (eds)
'Population and social change'
Edward Arnold, London

Devine, T. M. (1984)
Scottish farm labour in the era of agricultural depression
-in- Devine, T. M. (ed)
'Farm servants and labour in lowland Scotland'
John Donald, Edinburgh

Dickson, T., et al (1980)
'Scottish capitalism: class, state and nation from before the union to the present'
Lawrence and Wishart, London

Dupâquier, J., Fauve-Chamoux, A., and Grebenik, E. (1983)
'Malthus past and present'
Academic Press, London

Engelen, Th. L. M., and Hillebrand, J. H. A.
Fertility and nuptiality in the Netherlands, 1850-1960
-in- *Population studies*
vol.40

Flinn, M. W. (1970)
'British population growth, 1700-1850'
Macmillan, London

Flinn, M. W., et al (1977)
'Scottish population history, from the seventeenth century to the 1930s'
Cambridge University Press, Cambridge

Friedlander, D. (1983)
Demographic responses and socio-economic structure: population processes in England and Wales in the nineteenth century
-in- *Demography*
vol.20, no.3

Gittins, D. (1982)
'Fair sex: family size and structure, 1900-1939'
Hutchinson, London

Glass, D. V., and Eversley, D. E. C.
'Population in history'
Edward Arnold, London

Gordon, G. (1983)
Industrial development
-in- Whittington, G. W., and Whyte, I. D. (eds)
'An historical geography of Scotland'

Habakkuk, H. J. (1971)
'Population growth and economic development since 1750'
Leicester University Press, Leicester

Haines (1979)
'Fertility and occupation: population patterns in industrialization'
Academic press, New York, U.S.A.

Hajnal, J. (1965)
European marriage patterns in perspective
-in- Glass, D. V., and Eversley, D.E. C. (1965)
'Population in history'
Edward Arnold, London

Henry, L. (1961)
Some data on natural fertility
-in- *Eugenics quarterly*
vol.8, no.2

Henry, L. (1976)
'Population analysis and models'
Edward Arnold, London

Hinde, P. R. A., and Woods, R. I. (1984)
Variations in natural fertility patterns and the measurement of fertility control
-in- *Journal of biosocial science*
16

Homans, G. C. (1969)
The explanation of English regional differences
-in- *Past and present*, 43

Howie, R. H. (1893)
'The churches and the churchless in Scotland'
David Bryce and Son, Glasgow

Livi-Bacci, M. (1977)
'A history of Italian fertility during the last two centuries'
Princeton University Press, Princeton, U.S.A.

Kemmer, D. (1986)
Victorian values and fertility decline: the case of Scotland
-in- *Critical social research*
vol.2, no.3

Knodel, J. (1986)
Demographic transitions in German villages
-in- Coale, A. J., and Watkins, S. C. (eds)
'The decline of fertility in Europe'
Princeton University Press, Princeton, U.S.A.

Knodel, J. (1979)
From natural fertility to family limitation: the onset of fertility transition in a sample of German villages
-in- *Demography*, 16

Knodel, J. (1974)
'The decline of fertility in Germany'
Princeton University Press, Princeton, U.S.A.

Knodel, J. (1968)
Infant mortality and fertility in three Bavarian villages: an analysis of family histories from the nineteenth century
-in- *Population studies*, 24(3)

Lawton, R. (ed) (1978)
'The census and social structure'
Frank Cass, London

Leneman, L., and
Mitchison, R. (1987)
Scottish illegitimacy in the early modern period
-in- *The economic history review*; 2nd series, vol.XL, no.1

Lenman, B. (1977)
'An economic history of modern Scotland'
Batsford, London

Lesthaeghe, R. J. (1977)
'The decline of Belgian fertility, 1800-1970'
Princeton University Press, Princeton, U.S.A.

Lesthaeghe, R. J. (1983)
A century of demographic and cultural change in western Europe: an exploitation of underlying dimensions
-in- *Population and development review*; 9(3)

Lesthaeghe, R.J., and
Wilson, C. (1982 and 1986)
Les modes de production, la laicisation et la rythme de baise de fecondité en Europe de l'ouest, de 1870 a 1930'
-in- *Population*, vol.3

Modes of production, secularization, and the pace of fertility decline in western Europe, 1870-1930
-in- Coale, A. J., and Watkins, S. C. (eds)
'The decline of fertility in Europe'
Princeton University Press, Princeton, U.S.A.

Livi-Bacci, M. (1971)
'A century of Portuguese fertility'
Princeton University Press, Princeton, U.S.A.

Lockridge, K. A (1983) 'The fertility transition in Sweden' Demographic data base, Umeå University

MacDougall, I. (ed.) (1978) Essays in Scottish labour history John Donald, Edinburgh

Main, B. G. M. (1985) 'The lifetime attachment of women to the labour market' University of Edinburgh, Department of Economics discussion paper, 1985:vii

Marcy, P. T. (1981) Factors affecting the fecundity fertility of historical populations: a review -in- *Journal of family history*, Fall, 1981

McLeod, H. (1984) 'Religion and the working class in nineteenth century Britain' Macmillan, London

McNeill, P. (1902) (reprint, 1984) 'Prestonpans and vicinity' Remploy, Leicester

Mitchison, R. M. (1977) 'British population change since 1860' Macmillan, London

Morrow, R. B. (1978) Family limitation in pre-industrial England: a reappraisal -in- *The economic history review*; 2nd series, no.31

Mosher, W. D. (1980) Demographic responses and demographic transitions: a case study of Sweden -in- *Demography*, vol.17,no.4

Muir, T. S. (1915) 'East Lothian' Cambridge University Press, Cambridge

Munro, R. W. (1973) 'Gazetteer of Scotland' Johnston and Bacon, Edinburgh

Newell, C. (1986) 'Spatial variations in fertility and nuptiality in Britain: an historical perspective' Centre for population studies, London school of hygeine and tropical medicine, University of London

Noonan, J. T. (1965) 'Contraception' Harvard University Press, Harvard, U.S.A.

Notestein, F. W. (1945) Population - the long view -in- Schultz, T. W. (ed) 'Food for the world' University of Chicago Press, Chicago, U.S.A.

Pressat, R. (1972) (transl. Courtney, D. A.) 'Statistical demography' Methuen, London

Pressat, R., and Wilson, C. (1985) 'The dictionary of demography' Blackwell, Oxford

Richards, T. (1977) Fertility decline in Germany: an econometric appraisal -in- *Population Studies*, 31, 3

Roberts, E. (1984) 'A woman's place: an oral history of working-class women, 1890-1940' Blackwell, Oxford

Rodgers, R. (1985) Employment, wealth and poverty in the Scottish cities, 1841-1914 -in- Gordon, G. (ed) 'Perspectives on the Scottish city'

Seton, G. (1860) 'The causes of illegitimacy, particularly in Scotland' Edinburgh

Sharlin, A. (1986)
Urban-rural differences in fertility in Europe during the demographic transition
-in- Coale, A. J., and Watkins, S. C. 'The decline of fertility in Europe
Princeton University Press, Princeton, U.S.A.

Shennan, H (1892)
'Boundaries of counties and parishes in Scotland'
Edinburgh

Slaven, A. (1975)
'The development of the west of Scotland'
Routledge and Keegan Paul, London

Smith, G. T. Bisset- (1902)
'Vital registration, a manual of law and practice'
William Green and Sons, Edinburgh

Smith, D. S. (1977)
A homeostatic demographic regime: patterns in west European family reconstitution studies
-in- Lee, R. D. (ed.) 'Population patterns in the past'
Academic Press, New York, U.S.A.

Smout, T. C. (1986)
'A century of the Scottish people, 1830-1950'
Collins, London

Snodgrass, C. P. (ed.) (1953)
'The third statistical account of Scotland: East Lothian'
Oliver and Boyd, Edinburgh

Snow, E. C. (1911)
The application of the method of multiple correlation to the estimation of post-censal populations
-in- *Journal of the royal statistical society*, lxxiv

Soloway, R. A. (1982) 'Birth control and the population question in England, 1870-1930' The University of North Carolina Press, London

Teitelbaum, M. S. (1984) 'The British fertility decline: demographic transition in the crucible of the industrial revolution' Princeton University Press, Princeton, U.S.A.

Thompson, W. (1929) Population -in- *American journal of sociology*, 34

van de Walle, E. (1974) 'The female population of France in the nineteenth century'

van de Walle, F. (1979) 'Infant mortality and the demographic transition' Manuscript of paper presented to the European fertility seminar, july 23-29, 1979

van de Walle, F. (1986) Infant mortality and the European demographic transition -in- Coale, A. J., and Watkins, S. C. 'The decline of fertility in Europe' Princeton University Press, Princeton, U.S.A.

van de Walle, F. (1980) Education and the demographic transition in Switzerland -in- *Population and development review*; 6(3)

van de Walle, E., and Knodel, John (1980) Lessons from the past: policy implications of historical fertility studies -in- *Population and development review*; 5

Watkins, S. C. (1986a) Regional patterns of nuptiality in western Europe
-in- Coale, A. J., and Watkins, S. C. 'The decline of fertility in Europe' Princeton University Press, Princeton, U.S.A.

Watkins, S. C. (1986b) Conclusions
-in- Coale, A. J., and Watkins, S. C. 'The decline of fertility in Europe' Princeton University Press, Princeton, U.S.A.

Whittington, G. W. (1983) Agriculture and society in lowland Scotland, 1750-1870
-in- Whittington, G. W. and Whyte, I. W. 'An historical geography of Scotland

Woods, R. I. (1979) 'Population analysis in geography' Longman, London

Woods, R. I. (1982) 'Theoretical population geography' Longman, London

Woods, R. I. (1986) The spatial dynamics of the demographic transition in the west
-in- Woods, R. I., and Rees, P.(eds) 'Population structures and models' Allen and Unwin, London

Woods, R. I. (1987) Approaches to the fertility transition in Victorian England
-in- *Population studies*, 41, 2

Woods, R. I., and Smith, C. W. (1983) The decline of marital fertility in the late nineteenth century: the case of England and Wales
-in- *Population studies*,, 37

Wrigley, E. A. (1985) — The fall of marital fertility in nineteenth-century France: exemplar or exception? Parts I and II -in- *European journal of population*, 1

Wrigley, E. A. (1961) — 'Industrial growth and population change: a regional study of the coalfield areas of north-west Europe in the later nineteenth century' Cambridge University Press, Cambridge

Wrigley, E. A., and Schofield, R. (1981) — 'The popualtion history of England, 1541-1871: a reconstruction' Edward Arnold, London

Treble, J. H. (1986) — The characteristics of the female unskilled labour market and the formation of the female casual labour market in Glasgow, 1891-1914 -in- *Scottish economic and social history*, vol.6

'Report on the decline in the agricultural population' (1906) Board of agriculture and fisheries HMSO, London

Censuses of population, Scotland — 1881, 1891, 1901

Detailed annual reports of the Registrar-General for Scotland — 1876-1885, 1890-1891, 1896-1905

Anderson, M. (1972) 'Standard tabulation procedures for the census enumerators' books,1851-1891' -in- Wrigley, E. A. (ed.) 'Nineteenth Century Society'

Cleland, J. & Wilson, C. (1987) 'Demand theories of the Fertility Transition: an iconoclastic view' -in- *Population Studies*, 41,1

Himes, N. E. (1936) 'The medical history of contraception' Noel Douglas London

Knodel, J. & van de Walle, E. (1986) 'Lessons from the past' -in- Coale, A. J., & Watkins, S. C. 'The decline of fertility in Europe' Princeton University Press, Princeton, U.S.A.

Kreager, P. (1986) 'Demographic regimes as cultural systems' -in- 'The state of poulation theory' Basil Blackwell, Oxford

Manvell, R. (1976) 'The trial of Annie Besant' Elek/Pemberton London

Peel, J. (1963) 'The manufacture and retailing of contraceptives in England' -in- *Population Studies*, 17

Tillott, P. M. (1972) 'Sources of innacuracy in the 1851 and 1861 censuses' -in- Wrigley, E. A. (ed.) 'Nineteenth Century Society' Cambridge University Press, Cambridge

Wilson, C. (1984) 'Natural fertility in pre-industrial England'
-in- *Population studies*, 38

MAP 3.1

Scotland 1881 – Im

0.400 –>
0.300 –> 0.399
0.000 –> 0.299

GIMMS

Scotland 1891 – Im

MAP 3.2

0.400 –>
0.300 –> 0.399
0.000 –> 0.299

GIMMS

Scotland 1901 - Im

MAP 3.3

0.400 ->
0.300 -> 0.399
0.000 -> 0.299

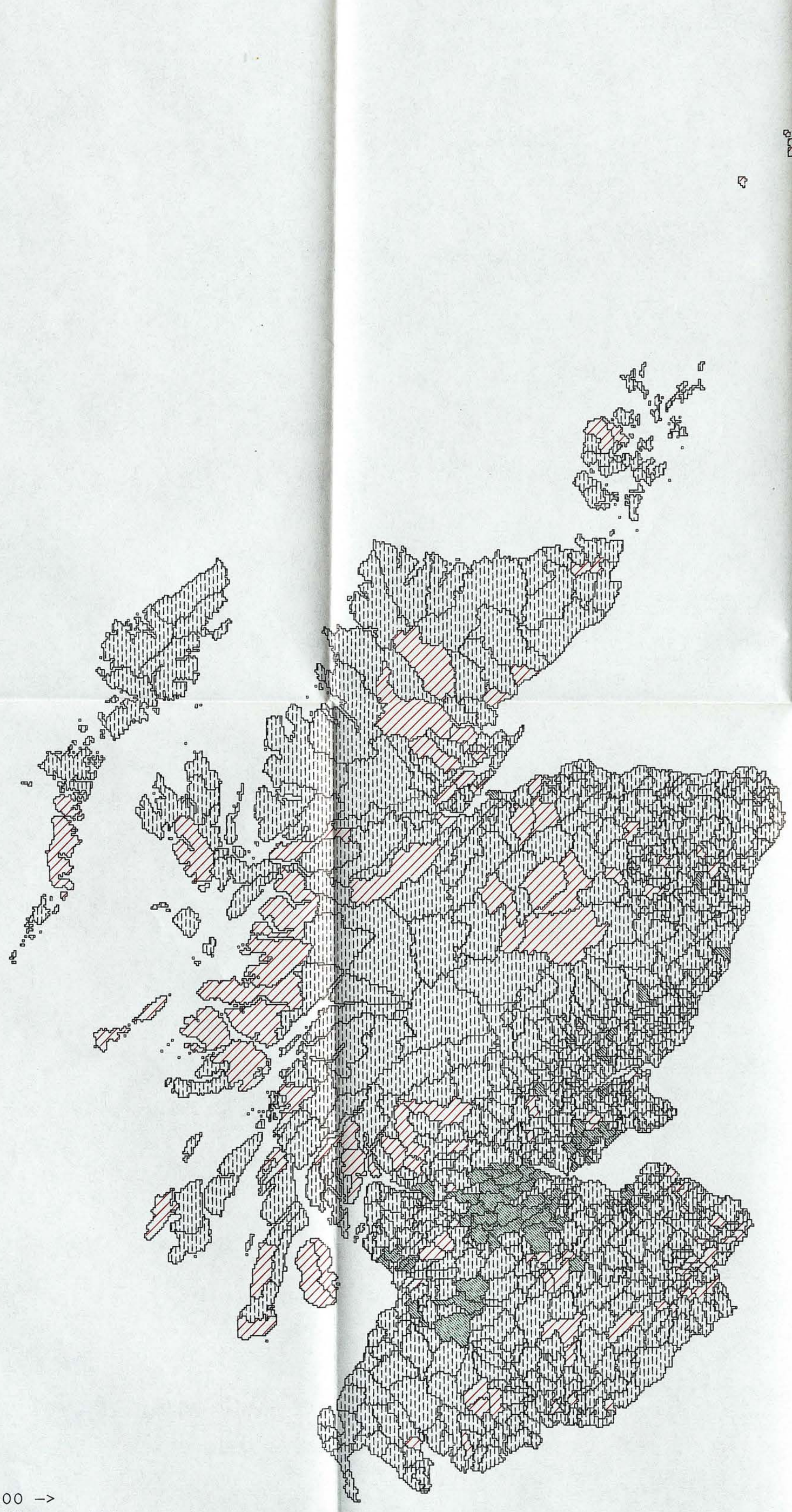
GIMMS

Scotland 1881 – Im

MAP 3.4

Scotland 1891 – Im

MAP 3.5



MAP 3.6

Scotland 1901 – Im

Scotland: change in Proportions Married (dfIm) 1881 – 1901

MAP 3.7

MAP 3.8

Scotland: change in Proportions Married (dfIm*) 1881 – 1901

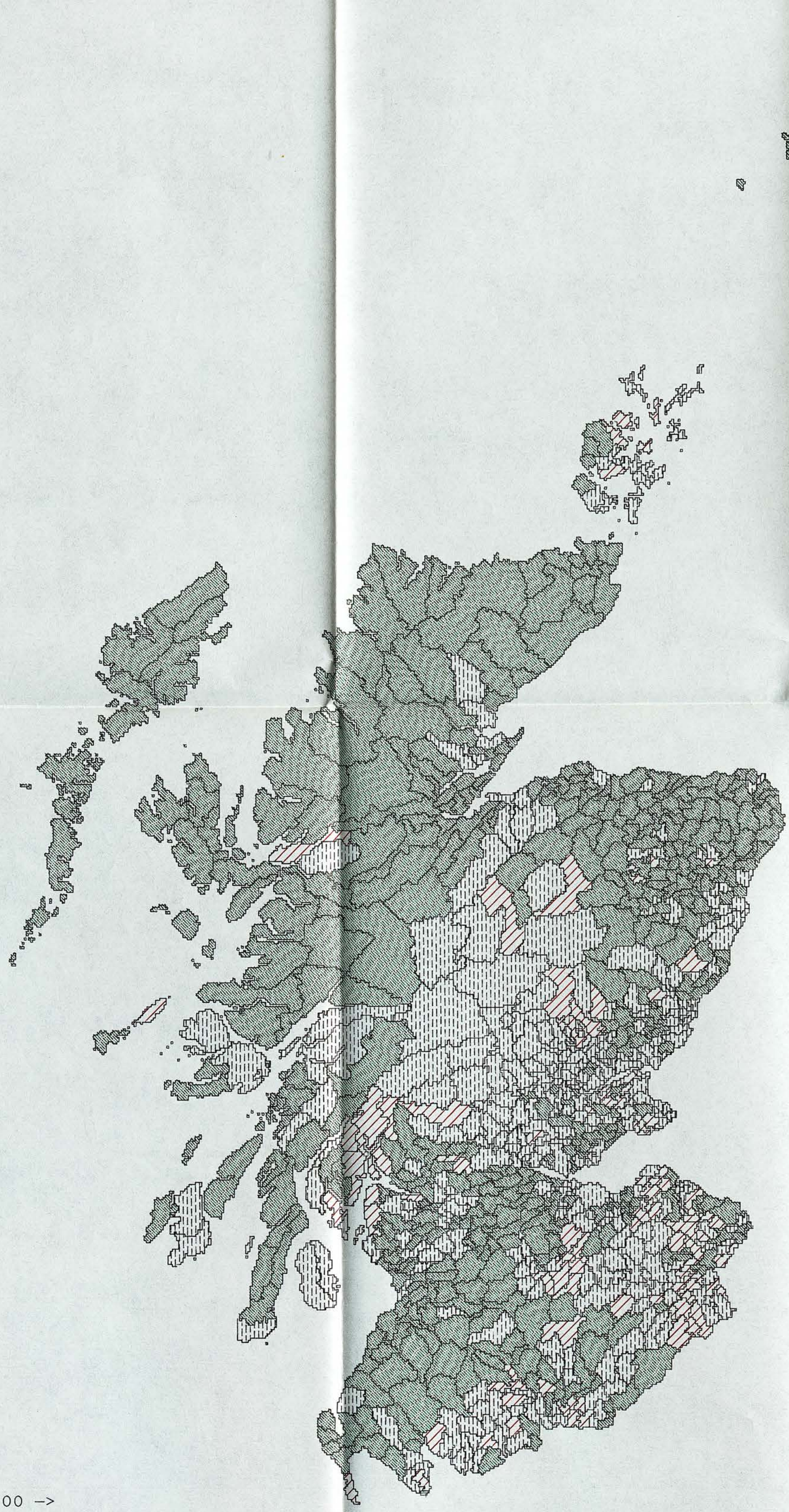
MAP 4.1

Scotland 1881 – Ig

0 700 →

Scotland 1891 – Ig

MAP 4.2



Scotland 1901 – Ig

MAP 4.3

GIMMS

Scotland: change in Marital Fertility (dfIg) 1881 – 1901

MAP 4.4

MAP 5.1

Scotland 1881 – Ih

0.050 ->
0.025 -> 0.049

MAP 5.2

Scotland 1891 – Ih

0.050 –>
0.025 –> 0.049
0.000 –> 0.024

Scotland 1901 – Ih

MAP 5.3

0.050 –>
0.025 –> 0.049
0.000 –> 0.024

GIMMS

MAP 5.4

Scotland 1881 – Ih/Ig per cent

MAP 5.5

Scotland 1901 – Ih/Ig per cent

10 –> 100.00 per cent
5 –> 9.99

MAP 6.1

Scotland 1901 – Population