THE HISTORICAL DEMOGRAPHY OF WARTON PARISH BEFORE 1801

BY R. SPEAKE, M.LITT.
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THE demographer is not simply concerned with totals. He requires to know how they are obtained and how numbers of simple entries in a parish register, such as baptisms, burials and marriages, can be turned into a concrete figure indicating population. The first census return was made in 1801 and from that date statistical data exists in various forms. In pre-census times there were no classified listings of people made at regular intervals over the country as a whole. It is necessary, therefore, to examine local listings, hearth tax returns, ecclesiastical returns and surveys in order to establish numbers. These may relate to households, houses, communicants or tenants, but at least the demographer has something to work on and seeks to establish, by using various formulae, ways and means to turn this information into a population figure. Perhaps the most famous demographer-mathematician to use parish registers and hearth tax returns as a basis for calculation was Gregory King. He suggested lists of multipliers for figures from these sources and showed how these would differ from place to place.

Parish registers offer a most promising opportunity for the calculation of population. Rickman, the instigator of the improved and more reliable census of 1831, established a system of obtaining a multiplier for register figures by comparing the 1801 census figure of population and the annual average number of baptisms for the decade 1790–99, and multiplying any given annual average baptism figure by the resulting multiplier in order to obtain a population figure. Rickman was concerned with parish register material, which, because of the precarious way in which the registers were compiled, probably suffered from under-registration. Talbot Griffith, writing in 1926, produced evidence to suggest that baptisms should be multiplied by 15 per cent and burials by 10 per cent in order to compensate for deficiencies in registration.¹

¹ G. Talbot Griffith, Population movements in the age of Malthus (1926), p. 28.
In more recent times, the Cambridge Group for the History of Population and Social Structure has undertaken more sophisticated demographic work, including aggregative analysis of parish registers, family reconstitution, and the incidence of literacy as shown in marriage registers.\(^2\) Such study of parish registers produces much information related to social conditions. It is possible for the demographer to examine the effects of plague and infant mortality, explore migration by studying the constancy of surnames and migration of marriage partners, discover bastardy, and relate occupations to the general demographic picture. This kind of knowledge has been gleaned from the Warton registers and is used to illuminate the population trends in an age before the Registrar General’s office existed.

The ancient parishes in the North of England were very large and Warton was no exception to this rule. It was situated on the shores of Morecambe Bay and bounded on the west by the sea, on the north by the Westmorland county boundary and on the east and south by the parishes of Burton and Bolton-le-Sands. It covered the seven scattered townships of Warton with Lindeth, Carnforth, Silverdale, Yealand Conyers, Yealand Redmayne, Borwick and Priest Hutton.

Warton lay on the direct route north to south and beside the oversands route from South Lonsdale to North Lonsdale and Westmorland. However, the sandy estuary of the river Kent to the north of the parish tended to hinder the easy flow of traffic and at various times in its history Warton found itself both a main route and a back-water.

The parish church dates from the fifteenth century and the registers from 1568. They record baptisms, burials and marriages at Warton and at the chapel of ease at Silverdale which Lucas, the early-eighteenth century historian, states was erected ‘for the relief and ease of such inhabitants as by reason of the distance, the badness of the ways and weather, were often hindered from attending divine service.’\(^3\) The Warton incumbents who began recording baptisms, burials and marriages were not conscious, one presumes, of recording data for modern statistical analysis, but it is possible from their records to obtain sufficient information to help historians determine growth of population and other


Figure 1: MAP OF THE WARTON AREA

Figure 2: DISTRIBUTION OF MARRIAGE PARTNERS COMING FROM OUTSIDE WARTON BETWEEN 1638 AND 1813
information related to social structure. In the main, the Warton registers are a good set of documents but just how reliable they are and to what extent nonconformity invalidated them as a record of the whole population is a problem we shall deal with later.

SEVENTEENTH AND EIGHTEENTH-CENTURY OCCUPATIONS IN WARTON PARISH

Throughout the seventeenth and eighteenth centuries the occupations of the people in the parish were based mainly on agriculture and domestic industries. Although essentially rural in character, the area, in common with South Westmorland, saw pockets of domestic industry develop in the villages. These industries were based on raw materials produced on the land or in the sea. Thus we find people engaged in linen weaving, cloth making, rope making and fishing.

The burial registers show some details of occupation from 1795 and the baptism registers record occupations from 1800. The Warton marriage registers, however, are unique. Judging by returns submitted to the Cambridge Group for Population and Social Structure, very few registers give details, as do the Warton records, of occupations through the eighteenth century and up to the 1820s. Returns on the scale found here are almost unknown in the south of England and in this respect the registers provide information not readily available in other areas. The occupations shown in the marriage registers relate only to the bridegrooms and, since many men came temporarily into the parish for marriage, the details of occupations are not wholly accurate. However, it is possible to appreciate the significance of any possible miscalculation by first considering the grooms who were ‘not of this parish’. About 25 per cent of the marriages involved a partner from outside the parish. Because the numbers of men from afar were low the areas of more than 20 miles away had little significant effect on the occupation figures. Among the occupations for men spouses from a distance one finds occupations of a middle-class or commercial character such as sugar-boiler, attorney-at-law, surgeon, stationer and merchant. There was also a merchant from Manchester, a mariner and a paper-glazier from Beetham. Burton provided husbands who were barbers and saddlers.

4 I am indebted to Dr Roger Schofield of this research unit for comments on the Warton marriage register.
Between 1750 and 1800 the marriage register occupations were almost wholly agricultural, husbandmen constituting 62 per cent of all workers. Weavers, with a proportion of 11 per cent, were the next most important in size. An entry in the burial register reads 'Isaac Jackson of Warton, Wevre (1666)' and in the marriage registers weavers appear at fairly widespread dates. The tendency is for these workers to hail from Priest Hutton, Borwick, Warton, the Yealands and Silverdale areas, and the Yealands remain the main areas down to 1900. Similarly, in the baptism register, weavers appear throughout the eighteenth century. In the year 1812, 17 per cent of all baptisms show the occupation of the men as weaver and all are confined to the Yealands, with two exceptions at Warton.5

Leighton, a district situated on the Westmorland boundary of Warton, housed a furnace, great coal house, lesser coal house, stocktaker's house, bellows house, casting house, bridge house, and a founder's house.6 The Backbarrow Company had an interest in the workings until 1755 and the furnace closed for a short time in 1764. It finally closed in 1806 when the business and some of the employees were transferred to Halton. Leighton Furnace thus became a placename in the parish register along with such names as Leighton Beck, Leighton Beck Bay and Leighton Beck Furnace.7

The earliest reference to Leighton Beck is in the burial register of 1718 where the entry reads 'John Osliff, of Leighton Beck in Parish of Beetham'. There are no other entries relating to the Beck or Furnace before 1763. Leighton Furnace was on a stream, with two buildings in Lancashire and two in Westmorland, and the site was actually nearer Beetham church where the early workers at the furnace went for worship and to record baptisms, burials and marriages.

Flax dressing is an occupation which came into the parish from the area around Milnthorpe.8 Alex Harker who married Mary Oddy in 1787 came into the parish; so did Thomas Brewer in 1794 when he married Jane Robinson. Thomas Wooff of Yealand and Francis Robinson were married in 1800 and Thomas Robinson and Margaret Robertson in 1804. Peter and Sarah Robinson had children baptised in 1810 and 1813. From parish

5 A decline is observable between 1815 and 1825, when the figure goes down to 6 per cent, due probably to the depressed state of trade which worsened the already difficult circumstances of the handloom weavers.
register evidence it appears that the Robinson family was closely connected with the trade but the exact location of their residence is uncertain.

The names connected with sawyer as an occupation did not belong to people normally living in Warton parish. They are Robert Townson shown in 1782 from Slyne, Robert Jackson from Lancaster in 1792 and James Briscoe from Kirby Lonsdale, 1796. This occupation did not provide employment for large numbers of men but references are to be found in the contractors' scales of wages paid to 13 such workers on the canal and in the census returns of 1851.

It is difficult to understand why the occupation of mariner only occurs three times and fisherman once between 1754 and 1829 and there are no other occupations shown connected with the sea. This does not give a true picture if the curate of Silverdale's submission is to be believed when he reported to the Bishop of Chester in 1811, that, reckoning young and old, there were two hundred souls, generally fishers, cocklers and poor. ⁹

In spite of mining activity at Warton and Jenny Brown's point, there are few references to miners and certainly not enough evidence to prove or disprove any theories about a mining community in Warton. George Walker of Lindeth, a miner who came to an untimely death by gunpowder in 1785, was buried at Warton. Two other miners, William Moore and Robert Nicholson, were married in 1757 and 1785 respectively. William Moore was not baptized at Warton and by 1764 had left the parish according to an entry which shows him 'late of Warton parish'. The miners shown lived in Warton but are scattered in time and there is no evidence of a mining community, however small. Mining operations carried on at Warton and Jenny Brown's Point, therefore, could have been on a very small scale only, unless a number of general labourers were used and their association with the mining industry is not readily revealed in the registers. Stone-getters, masons and wallers appear less frequently in the eighteenth century and this probably serves to emphasize the change brought about by the canal which enabled stone to be transported speedily and cheaply, thus causing the industry to develop in this area.

Carpenters, shoemakers, butchers, brewers, tailors, millers, blacksmiths, cordwainers and drapers appear infrequently and serve to show something of the trades which supported and served the community. In general a very earthy and yet typical list of occupations, similar to the ones to be found in parishes of North Lancashire and South Westmorland, is observable.

⁹ Cheshire Record Office: Articles of Enquiry 1811.
Apart from employment in agriculture the occupations which straddled the eighteenth and nineteenth centuries and heralded the new industrial era were those associated with canal building. Occupations of the canal era are revealed in the baptism and marriage registers which show coal agents, clerk of the canal warehouse, boatmen, locks agent, canal agent, surveyor and a resident at the canal locks house, though these entries date mainly from 1813 and form some continuity with material which is obtained from census returns relating to the conditions later in the century.

Several entries in the marriage and burial registers provide evidence of the arrival in the parish of Scotsmen who were working on the canal. Invariably they are shown as canal cutters or canal labourers. The first entry in 1793 tells of ‘a traveller believed to be a Scotsman going to work at the canal, found drowned upon the sands’. The dangerous nature of the work is revealed by entries relating to burials of men who were killed whilst working on the construction of the canal. Others show how the newly created expanse of water was a danger to children and adults alike. An entry in 1808 tells of the drowning on Easterday of Robert Cannon of Capenwray, a miller aged 66. The entry is concluded with the words, ‘alas poor Cannon’.

The first really effective industrialisation to reach Carnforth was the building of the railway which commenced in 1844. The occupations attached thereto provided work for the local labouring classes and they continued to do work very similar in character to that to which they had been accustomed. Warton, therefore, had a wide variety of land-based occupations of a domestic nature and the surprising feature is the lack of occupations connected with the sea. Seagoing occupational activity in this area declined in the eighteenth century partly due to the growth of trade based on Lancaster and to the ever-present sandbanks which afford an easy crossing from Hest Bank to Cartmell but isolated the parish coastline from the main shipping routes of the rivers Lune and Leven.

POPULATION MOVEMENT IN WARTON

In a study of the areas from which marriage partners came to Warton, it becomes clear that the roads north and south and the over-sands route played important roles, but the majority of people only moved short distances and the north to south character of the local migration is not easily discernible. The percentages of marriage partners from outside the parish are
remarkably stable throughout the period, indicating a steady movement of people in and out of the parish. Since the partners are shown as ‘of this parish’ or of a parish indicated in the registers, it is unlikely that the consistency is a freakish product of the system of registration and the interesting feature is a true reflection of the regular and consistent involvement of people in this parish with those of nearby parishes. The largest number of migrants came from the area immediately to the east of Warton parish, indicating that in the adjacent parishes as well as in Warton the emphasis was on local intersecting routes and not on the north-south pattern of migrants from further afield. The inhabitants of Warton were restricted when they travelled and could only go north, east and south, and similarly they could only receive people from the same general directions. In each of the 50 year periods studied, the number of partners from outside the parish area increased in volume, although percentages remained the same at 28 to 33 per cent.

### TABLE IA: Movements of Marriage Partners 1638/1813

<table>
<thead>
<tr>
<th>Period</th>
<th>Number of Marriages</th>
<th>Number from outside the Parish (Male or Female)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1638/1647</td>
<td>69</td>
<td>23</td>
<td>33.3</td>
</tr>
<tr>
<td>1651/1700</td>
<td>292</td>
<td>85</td>
<td>29.1</td>
</tr>
<tr>
<td>1701/1750</td>
<td>319</td>
<td>92</td>
<td>28.8</td>
</tr>
<tr>
<td>1751/1800</td>
<td>467</td>
<td>155</td>
<td>33.2</td>
</tr>
<tr>
<td>1801/1813</td>
<td>144</td>
<td>41</td>
<td>28.5</td>
</tr>
</tbody>
</table>

Although these figures in total are for both brides and grooms it is evident from the further break down in figures given below that the young men were in the habit of coming to Warton to meet the girls there and were married in the parish church.

### TABLE IB

<table>
<thead>
<tr>
<th>Period</th>
<th>Number of Marriages</th>
<th>Brides outside the Parish</th>
<th>Bridegrooms outside the Parish</th>
</tr>
</thead>
<tbody>
<tr>
<td>1638/1647</td>
<td>69</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>1651/1700</td>
<td>292</td>
<td>33</td>
<td>52</td>
</tr>
<tr>
<td>1701/1750</td>
<td>319</td>
<td>25</td>
<td>57</td>
</tr>
<tr>
<td>1751/1800</td>
<td>467</td>
<td>10*</td>
<td>145</td>
</tr>
<tr>
<td>1801/1813</td>
<td>144</td>
<td>3*</td>
<td>38</td>
</tr>
</tbody>
</table>

*Note* The number of brides from outside the parish drops considerably after 1751, possibly due to the more stringent regulations of Hardwicke’s Marriage Act of 1753 which required all marriages to take place at the parish church.

10 Dr E. A. Wrigley pointed out this feature of stability and consistency. I am grateful to him for his observation.
During the whole period all the brides came from places less than twenty miles away, except in the case where the marriage involved both the bride and groom from outside the parish. Between 1643 and 1797 there are some nine such entries, three of which involved mariners and one a Scotsman who married a woman from Manchester.

Many of the brides would settle and live in Warton, but some who married men from outside the parish would go to live in a new area and therefore a true picture of migrations cannot be made. However, the main lines of communication can be seen and the flow of inter-village relationship established. Villages to the east and south provided most marriage partners and, no doubt, provided a general interchange of ideas, visits and goods but the Warton area did not establish itself as a centre or market town, for seventeenth-century exchanges were with areas of a similar economy and social structure (see Figure 2, p. 45). The increased involvement with Lancaster in the eighteenth century was no doubt due to that town’s growth as a port, market town and commercial centre which accounts for the shift of emphasis in migration towards the Lune, and possibly explains the decline in communications to the immediate east.

The geography of Warton must be borne in mind when examining this population movement. The western side of the parish was bounded by the sea and a considerable portion of the northern side, except for a tract of land about a mile wide in Westmorland, was bounded by the River Kent, thus causing travellers from the north to go via Kendal or to cross Morecambe Bay Sands. Although the sands of Morecambe Bay were not a reliable overland route they did afford a passage, at low tide, for people to and from the northern shores of the bay. This route caused travellers to miss the parish. To the east lay a rich pastoral area based mainly on Burton in Kendal, an ancient market town and posting station in Westmorland and a natural market centre for the villages and hamlets of Warton parish. Towards the end of the eighteenth century Warton looked south and made greater commercial and social allegiances with Lancaster; this heralded a period of limited ‘opening up’ of the area.

One peculiar instance of strangers to the parish marrying in Warton is provided by the marriages of Quakers (21 of their 26 marriages involved partners both of whom were from outside the parish area). Places of residence are given as Upperby, Cumberland, Edinburgh, Sunderland, Carlisle, London (Robert Barclay of Lombard Street London married Ann Ford of Manchester), Derbyshire, Middlesex, Liverpool, Darlington,
and one dated 1800 was between Joshua Gilpin, a merchant of the city of Philadelphia U.S.A., and Mary Dilworth, the daughter of a Lancaster banker.

The Quaker registers are not representative of the area generally and migration of population cannot be assessed on the movements shown in these documents which show a large proportion of wealthy merchant and middle-class families, as in the case of the Barclays coming from a distance away to be married at Yealand and then leaving to settle in another place. These marriages, however, have some significance, if only to show the greater mobility of wealthier families and perhaps indicate how widespread were the lines of communication north and south.

**POPULATION TRENDS FROM PARISH REGISTERS**

Using evidence gleaned from the parish registers it can be shown that the population history of the parish of Warton falls into four separate phases. In the late-sixteenth and early-seventeenth centuries there was an excess of baptisms over burials which continued until 1623 when a visitation of the plague temporarily caused burials to rise to 68, but the general excess of baptisms continued down to 1637 (see Figure 3). About this time a change occurred in the demographic pattern. For a few years the baptisms and burials were in balance but from the late 1640s both figures dropped until almost the end of the century. Burials became more dominant and scarcity of food and pestilence took heavy toll of the population. The decline in the number of marriages, especially from the 1670s onwards, due possibly to economic stringency, may have helped the decline. The third phase occurred in the late-seventeenth and early-eighteenth centuries when the graph shows a trough-like depression. Here the population was constant, kept down by the low number of marriages and low fertility in marriage. In these years there was also a relatively high incidence of under-registration. The fourth phase, from 1730, reversed the pattern, with the number of baptisms in Warton increasing much more rapidly than the burials. Thus there was a steady natural increase during this period.

In the period before 1637 the population of Warton was rising and the ecclesiastical return of 1563 indicates a population of 1,200, a figure not very different from the one found over one hundred years later in 1701.\(^{11}\) Bouch and Jones in *The Lake*

\(^{11}\) British Museum, Harleian MS. 594f 105b.
BAPTISMS BURIALS AND MARRIAGES
WARTON PARISH 1611-1811

Figure 3
Points out that at Crosthwaite (Keswick) there was a similar increase and link this with the development of the Mines Royal. The rise at Warton is not so readily explained, though one possible reason was the prosperous shipbuilding business on the river Kent, described by Lucas, which declined when the river changed course. High figures of marriages and baptisms certainly bear out a prosperous area. The year 1621, when the number of marriages reached a peak of 18, was followed by a steep rise in the number of births in 1622 and 1626, 1627 and 1628. Between 1627 and 1640 there was a steady increase in the number of marriages, which produced a peak number of births in 1640 and, to a lesser extent, in 1644. The break in the registration of marriages between 1648 and 1653 is difficult to explain because the baptisms and burials are recorded throughout this period but it seems clear that marriages generally maintained a fairly high level during the Civil War and Commonwealth periods and reached the very high total of 20 in 1656. The predominance of baptisms over burials during the late 1650s and early 1660s suggests a healthy population.

Population decline, however, seems to have set in from the 1640s and a drop in the marriages in the 1670s appears to have helped along a depression in the population which lasted until the middle of the eighteenth century. Not only were fewer people marrying, they were bearing fewer children. Using the device of overlapping periods to establish the number of children per marriage born we arrive at a figure of 5.86 children per marriage between 1626 and 1645. Between 1666 and 1685 the number fell to 3.74 but rose slightly between 1686 and 1705 to 3.99. The period 1746–65 saw the figure of 3.77, and between 1786 and 1805 the number was 4.04. Thus, with variations, the figures present a general troughlike impression.

Attention has already been drawn to the problem of under-registration, and it is possible that the declining figures on the graph were caused more by this than by real demographic change. The extent of under-registration is almost impossible to assess and it may have seriously affected the figures. Nonconformity certainly did and some attempt can be made to ascertain how greatly it reduced anglican register figures.

In 1720, Lucas wrote 'Yealand Conyers is almost wholly inhabited by people called Quakers'. The significance and influence of the increase in the number of quakers was shown when it was recorded that the curate at Silverdale chapelry was

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13 E. A. Wrigley, English historical demography, p. 75.
poorly paid and would close the chapel building but, ‘that would give a handle to the Quakers’. The quakers held a licenced meeting at William Higginson’s house in 1689 and later built a meeting house in 1697. Register-type information on Warton is available as early as 1655 in the Lancaster meeting records, which actually began in 1644. Some of these presumably were a compilation of information relating to families rather than a detailed recording made at the time of the event.

Separate registration by the quakers was necessary for legal purposes since members of the society did not adhere to the sacraments of the established church under pain of disownment and were therefore denied documentary evidence of births, marriages and deaths. In the Warton parish registers only seven entries refer to quakers, of which six concern adults. Only one entry relates to a burial, that of ‘Joseph son of Roger Hind of Burton, Westmorland, a Quaker’, though not of this parish. In the six years 1655–60 eleven births of children from the Warton parish area were recorded in the quaker registers. Between 1661 and 1670 the number of quaker births recorded was 15 against a total 276 in the parish registers, a percentage of 5.3. Similar percentages of quakers baptized, married and buried in every decade between 1660 and 1780 are shown on table II.

<table>
<thead>
<tr>
<th>Bapisms</th>
<th>Burials</th>
<th>Marriages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1661/1670</td>
<td>5.3</td>
<td>2.37</td>
</tr>
<tr>
<td>1671/1680</td>
<td>7.8</td>
<td>6.61</td>
</tr>
<tr>
<td>1681/1690</td>
<td>6.9</td>
<td>5.78</td>
</tr>
<tr>
<td>1691/1700</td>
<td>15.5</td>
<td>8.34</td>
</tr>
<tr>
<td>1701/1710</td>
<td>9.25</td>
<td>6.25</td>
</tr>
<tr>
<td>1711/1720</td>
<td>10.6</td>
<td>7.82</td>
</tr>
<tr>
<td>1721/1730</td>
<td>11.8</td>
<td>8.47</td>
</tr>
<tr>
<td>1731/1740</td>
<td>4.7</td>
<td>4.55</td>
</tr>
<tr>
<td>1741/1750</td>
<td>6.3</td>
<td>2.5</td>
</tr>
<tr>
<td>1751/1760</td>
<td>5.0</td>
<td>7.15</td>
</tr>
<tr>
<td>1761/1770</td>
<td>2.4</td>
<td>4.35</td>
</tr>
<tr>
<td>1771/1780</td>
<td>8</td>
<td>5.4</td>
</tr>
<tr>
<td>Mean for the period</td>
<td>10.37</td>
<td>7.08</td>
</tr>
</tbody>
</table>

The strength of the quaker cause in the district can be readily understood when one recalls that ‘the Seekers’ met at Preston Patrick and were comprised of people from Yealand. Richard Sherlock, the minister at Borwick Hall in 1654, was driven to write The Quaker’s Wilde Questions Answered in order to

15 These records have been compiled from the original register by W. Giles Howson of Lancaster. Details of the Yealand Meeting House records have been extracted from his unpublished lists.
protect Lady Rebecca Bindloss of Borwick Hall from being beguiled as Margaret Fell had been. Richard Hubberthorne, often described as the publisher of the truth, and a quaker protagonist, ‘was born of good parentage and liberal education’ in Yealand Conyers. Quakerism continued to hold sway in the area until the mid-eighteenth century when the port of Lancaster began to attract traders and men of adventurous spirit, many of whom were quakers. The large number of quakers thus caused a high degree of under-registration in the registers at the parish church. This in turn produces the effect of a decline in population when only parish register figures are considered.

From the parish records it can be seen that the catholic families lived mainly at Leighton Hall and at Borwick Hall. First, the Middleton’s of Leighton are shown as recusants in 1629. They supported the royalist cause in the Civil War and Sir George Middleton assisted in the trial of George Fox at Holker Hall (1663) and at Lancaster Castle. Mr Hodgson, also of Leighton, was captured as a Jacobite at the battle of Preston in 1715. Among the successive residents at Leighton Hall were the famous Lancaster banking family, the Worswicks, and the furniture makers, Gillows, both of whom supported the catholic cause in the area. In a return of 1780 there are 52 papists shown to have been resident in Warton parish. The register of baptisms kept by the priest of the mission at Leighton commenced in 1762 but formal registers were not kept until 1782, and before this time it is unlikely that the presence of catholics in the area would have affected registration to any appreciable degree.

| Table III: Catholic registrations shown as a percentage of all known registrations in Warton parish area, 1761–1800 |
|-----------|---------|---------|---------|
|           | Baptisms | Burials | Marriages |
| 1761/1770 | 6·1      | —       | 6·4      |
| 1771/1780 | 7·9      | —       | 1·0      |
| 1781/1790 | 3·5      | —       | 9·7      |
| 1790/1800 | 4·7      | —       | —        |

A Presbyterian chapel perhaps disrupted the patterns of registration less. It had a congregation of 138 in 1720 and it would seem that this sect did not flourish long, nor did it keep registers. There are no non-parochial registers, apart from quakers, at the Public Record Office or in the chapels, which would help to establish the amount of dissent. Entries in the

18 V. C. H. Lancashire, VIII, p. 179. 19 Ibid. 179.
parish registers of 1738 and 1749 show baptisms of children from Carnforth performed by a dissenting minister. There are two entries only which relate to male children belonging to one Presbyterian family. The extent of all nonconformity is shown by Table IV.

### Table IV

<table>
<thead>
<tr>
<th></th>
<th>Baptisms</th>
<th>Burials</th>
<th>Marriages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1655/1700 Total:</td>
<td>1172</td>
<td>1410</td>
<td>331</td>
</tr>
<tr>
<td>Anglican</td>
<td>92</td>
<td>95.25</td>
<td>88.2</td>
</tr>
<tr>
<td>Quaker</td>
<td>8</td>
<td>4.75</td>
<td>11.8</td>
</tr>
<tr>
<td>Catholic</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1701/1750 Total:</td>
<td>1368</td>
<td>1242</td>
<td>351</td>
</tr>
<tr>
<td>Anglican</td>
<td>91.4</td>
<td>93.8</td>
<td>90.9</td>
</tr>
<tr>
<td>Quaker</td>
<td>8.6</td>
<td>6.2</td>
<td>9.1</td>
</tr>
<tr>
<td>Catholic</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1751/1800 Total:</td>
<td>1785</td>
<td>1087</td>
<td>482</td>
</tr>
<tr>
<td>Anglican</td>
<td>93.5</td>
<td>96.0</td>
<td>96.9</td>
</tr>
<tr>
<td>Quaker</td>
<td>1.9</td>
<td>4.0</td>
<td>1.45</td>
</tr>
<tr>
<td>Catholic</td>
<td>4.6</td>
<td>—</td>
<td>1.65</td>
</tr>
</tbody>
</table>

Perhaps we ought not only to search deeply to explain changes in register figures by examining local conditions. The patterns of population growth and recession have a wider and more comprehensive national pattern. In his work at Colyton in Devon, E. A. Wrigley discovered a similar growth and decline pattern, and in the West Riding M. Drake discovered that in the parish of Leeds and at Morley and Agbrigg the change between the first and second halves of the seventeenth century was very striking. Population rose rapidly in these areas in the first half of the century and in the second half it appears to have been falling.

E. A. Wrigley attributes this phenomenon to ‘over-fishing’ on a national scale. The cause was brought about by a population rising faster than production, and as a result real incomes became depressed, a movement which would account at the local level in Warton for the lack of building between 1563 and 1664. This also caused the hearth tax at Warton to show some 27 per cent of the households to be excused payment of the tax in 1664 and in 1673. The effect of the national economic recession was to

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24 The number of households shown in 1563 was 284; B. M. Harleian MS 594f 105b. In 1664 it was 290; Public Record Office, Hearth Tax return Lady Day 1664, E 179/250/11.
cause people to marry later and, as we have seen, for each marriage to produce fewer children than had been the case a century earlier. A similar picture was discovered by W. G. Howson in his work on plague, population and poverty in north-west England. 25

From 1730 the population trend in Warton continued to follow a national pattern; the number of baptisms increased steadily to 1801, and the number of burials remained the same until the beginning of the nineteenth century, with the result that the population rose. 26

THE EFFECT OF PLAGUE AND FAMINE

Warton parish underwent most of the common privations of pre-industrial England. The population was affected at various times by the plague until about 1670. The mortality peaks were high and it would seem that serious outbreaks of the plague occurred in 1568, 1574, 1586, 1596–98, 1613, 1623, 1637 and 1670, and affected not only mortality but baptisms and marriages. Unfortunately, the parish registers, which provide the vital means of quantification, are not complete over some possibly crucial periods. They commence their record of burials, baptisms and marriages in 1568; breakdowns in burials occur in 1588–91, and between 1592 and 1611 there is an even larger gap. Baptisms are not recorded between 1606 and 1612. These gaps in sources which should provide continuity present a serious problem. They could indicate that the clerk responsible for registration in the parish had succumbed himself to disease or was unable to cope with the recording of suddenly increased burials, but evidence for either contingency is lacking in the Warton records. In some parishes it has positively been found that the clerk was a victim of the plague and recording ceased from the date he was affected. However, most of the register evidence is available for Warton parish and the figures show many characteristics common to the development of Westmorland-type parishes. It is possible to identify plagues with some degree of confidence.

Such identification, though possible, is not easy because of the limited amount of direct evidence. High mortality could be

caused by starvation rather than by plague, or by a combination of the two. So often a visitation of the plague was preceded by a run of bad harvests. A second disease, the Scottish-type famine fever, was caused by dearth and is described by Creighton as sweeping round South-West Scotland in the early-seventeenth century.\(^{27}\) W. A. Howson asserts that at this period starvation itself was one of the common causes of death.\(^{28}\) However, it is necessary to study each particular outbreak, whether of plague or starvation fever, and to assess the evidence in each case. It is not sufficient to assume that similar or simultaneous increases in mortality were due to some form of epidemic or visitation of plague and other evidence must be produced before one can be sure that the area was affected in a particular way at a given time.\(^{29}\) However, if a number of mortality peaks appear at the same time in several neighbouring parishes then one may feel more secure in assuming that epidemic of some kind was present.

Other diseases continued to affect the population after the plague had disappeared. In 1728, 50 people were buried at Warton, and in 1729 the number was 65. William Stout writing in 1728 records, ‘It was a very sickly summer, and great mortality in the plain country, much more than in the towns; and the burials were double this year to what they were last year, and corn proved dear—wheat 20s, barley 10, oats 7, and beans 13s. oatmeal 14s. a windle and potatoes double what they were last year, and the linen manufactory very low and spinning one third less than last year. So that the poor have a hard year.’\(^{30}\) In these years the burials, which were greatest from December 1728 to April 1729, greatly exceeded births, and burials were higher than in any year since 1623. This epidemic was widespread in the north, affecting places in Cumberland and Westmorland (Barton, Bootle, Lamplugh, Millom, Whicham and Penrith), in Lancashire (Broughton in Furness), the West Riding, Cheshire and Anglesey.\(^{31}\) The registers at Warton do not reveal the nature of the epidemic but there are many references to this period of sickliness which may well have been similar to the period of starvation fever which occurred about a century earlier. There was certainly a depletion of local population as a result of this

\(^{27}\) Ibid. pp. 30–1; 506. \
\(^{28}\) W. G. Howson, op. cit. p. 33. \
\(^{29}\) R. Sharpe France, ‘A history of plague in Lancashire’, \textit{T.H.S.L.C. XC}. General use has been made of this article for evidence relating to trends in Lancashire as a whole. \
outbreak and burials declined after 1730. The subsequent
growth of population in the late-eighteenth century may have
been caused by a desire to replenish the broken ranks or by the
increased economic prosperity of the area. Both in Lancaster
and the Furness area trade started to improve and, apart from
very localised outbreaks of smallpox, the area of Warton con-
tinued to enjoy a way of living which had not been known for
more than a century.

POPULATION ESTIMATES

Population estimates can be made by using the ecclesiastical
return of households made in the diocese of Chester in 1563,32
the hearth tax of 1664,33 and figures quoted by Lucas in 1720,
and the results can be compared with calculations based on
parish register figures. Baptisms, marriages and burials can be
added and a multiplier sought to translate these figures into a
population figure. John Rickman devised a formula whereby a
separate multiplier for each parish could be arrived at by divid-
ing the census population figure for 1801 by the average annual
number of baptisms during the decade 1790–99. The Warton
population in 1801 was 1,574, the average number of baptisms
38.7 per annum, and the resulting multiplier about 40.34 At any
date before 1801, therefore, an estimate of population can be
obtained for Warton by multiplying the annual average number
of baptisms for the decade by 40.

Another method of calculating the population is to take one
of the tax or ecclesiastical returns for the area and multiply the
number of households given by the average number of persons
in each household. The hearth tax provides a list of householders
in the parish sub-divided into several townships.35 The return
made on Ladyday 166436 is a particularly full one giving details
of householders charged and those excused payment of the tax.
Although the returns and their use are subject to some qualifica-
tion we can obtain a rough estimate of the population by
multiplying the number of households given in 1664, 290, by the
number of persons per household.37 The ecclesiastical return of
1563 gives a figure of some 284 houses which can be converted

32 British museum, Harleian MS. 594f 105b.
33 PRO Hearth Tax return, Ladyday 1664, E 179/250/11.
34 1931 Census Return, introduction.
35 For an assessment of hearth tax returns see J. Thirsk, 'Sources of infor-
mation on population', Amateur Historian, IV, numbers 4 and 5 (1959)
36 PRO Hearth Tax return, Ladyday 1664, E 179/250/11.
37 E. A. Wrigley, English historical demography, p. 173.
into a population figure in the same way.\textsuperscript{38} These two sources are the only ones of use, for investigation into the existence of additional materials, such as muster rolls, protestation returns or any unofficial listings of persons has so far proved unsuccessful for Warton parish.

Two figures of the number of persons per household can be used. Professor Jones used a multiplier of 4.5 for household numbers for his calculations of eighteenth-century population. The same multiplier was used by D. E. C. Eversley in connection with the seventeenth-century hearth tax returns.\textsuperscript{39} In 1695 Gregory King put the average size of households for a group of towns with 300 houses each somewhat lower, at 4.2.\textsuperscript{40} W. G. Hoskins used a similar multiplier, 4.25, for household listings of Leicestershire villages in 1605.\textsuperscript{41} Applying the 4.2 multiplier to the 284 households in the 1563 ecclesiastical return we arrive at a population figure of 1,192 in Warton; using 4.5 as the multiplier the population figure would be 1,278. Both of these estimates are close to a calculation of population using parish register figures and Rickman's multiple of 40. The average annual baptisms in the 1570's multiplied by 40 gives a population of 1,256.

A similar coincidence does not appear between population estimates from the hearth tax and from the parish register. Rickman's baptism multiple of 40 produces a population of 1,104 in the 1660's. Multiplying the 290 households in the hearth tax of 1664 by 4.5 we obtain a population of 1,305, some 200 more than the one produced by Rickman's method. Even using the lower multiple of 4.2 on the hearth tax households would produce a population of 1,218, still considerably above the Rickman figure. It has been noted that nonconformity reduced the parish register figures considerably at this period. Adding 15 per cent to the baptism figures to allow for this, and then using the Rickman multiplier, a population figure of 1,320 is produced, a little higher than the estimates from the hearth tax. This, it would seem, implies that it is necessary to use the corrective of 15 per cent for baptism figures devised by Talbot Griffith.\textsuperscript{42}

Some fifty years later, in 1720, Lucas stated that there were 40 families in Carnforth, then a small township in the parish of

\begin{itemize}
  \item \textsuperscript{38} The size of the multiplier cannot be regarded as reliable for these purposes. The size of households varied from area to area and from period to period; D. V. Glass, 'Two papers on Gregory King', \textit{Population in history}, pp. 159-220.
  \item \textsuperscript{39} E. A. Wrigley, \textit{English historical demography}, p. 78.
  \item \textsuperscript{40} D. V. Glass, \textit{op. cit.} pp. 159-220.
  \item \textsuperscript{41} W. G. Hoskins, 'The population of an English village', \textit{Transactions of the Leicestershire Archaeological and Historical Society}, XXXIII (1957), pp. 15-35.
  \item \textsuperscript{42} G. Talbot Griffith, \textit{Population movements in the age of Malthus}, p. 28.
\end{itemize}
Warton, and not the main centre of population as it is today. 43 In 1801 Carnforth included 14 per cent of the population of Warton parish. Using a multiplier of 4-5, these 40 houses would harbour 180 people. Since Carnforth contained 14 per cent of the Warton population in 1801, and assuming that it contained the same proportion in 1720, the Warton population in the latter year must have been 1,286. This figure seems high for this date and it may be that Carnforth contained a greater proportion of the Warton population in 1801 than in 1720 as a result of the building and opening of the canal in the 1790’s. One must remember that it has been assumed that Carnforth represented 14 per cent of the population of the parish in 1720 and in 1801.

A check on this estimate in 1720 may be obtained in a crude way by obtaining the natural increase in population during the period between 1720 and 1801, reducing it by 10 per cent to allow for migration and undue inflation, and subtracting it from the census figure for 1801. 44 In Warton the natural increase was 542 (i.e. the excess of baptisms over burials between 1720 and 1801). When reduced by 10 per cent to 488 and subtracted from the census figure of 1,574 this gives a population figure for 1711–20 of 1,086, lower than the estimate from the Carnforth figures of Lucas, and probably more accurate. The figure is certainly more in accord with an estimate from the baptism figures set out in Table V.

**Table V: Warton Population in the early-eighteenth century based on calculations from baptism figures**

<table>
<thead>
<tr>
<th>Actual baptisms</th>
<th>+15% (to allow for under-registration)</th>
<th>Population produced by using multiplier of 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>1701/1710</td>
<td>254</td>
<td>292</td>
</tr>
<tr>
<td>1711/1720</td>
<td>245</td>
<td>282</td>
</tr>
<tr>
<td>1721/1730</td>
<td>238</td>
<td>274</td>
</tr>
</tbody>
</table>

Thus the calculations based on the 40 families at Carnforth given by Lucas appear to be in excess of the actual population figure. This is probably due, apart from the misleading assumption that Carnforth was relatively the same size in proportion to the other townships in 1801 as in 1720, to the use of 4·5 as a multiplier which may be a little high for this period. Using the 4·2 multiplier in connection with the number of families in Carnforth in 1720 a population for the parish of 1,200 (40 houses = 168 people) is obtained, more in keeping with the above table.

44 This is a quick though not always accurate method of calculation; E. A. Wrigley, *English historical demography*.
A third method of estimating population is the Sogner method explained by D. E. C. Eversley in *An Introduction to English Historical Demography*. It is described as 'a method of determining a base population'. Eversley goes on, 'We calculate the base population in the following manner: Multiply the average annual baptisms of the second base period by a thousand and divide by X (indicating birthrate). Subtract average annual baptisms of the first base period multiplied by a thousand and divide by X. The result should equal the observed natural increase between the two periods. From this, we can calculate X—the birthrate'.

Example for Warton

Data:  
Baptisms 1756–60 136 = 27·2 per year  
Baptisms 1711–15 107 = 21·4 per year

Natural increase between 1711 and 1760  
(i.e. the excess of baptisms over burials) = 157

Formulas:  
\[
\frac{27·2 \times 1000}{X} - \frac{21·4 \times 1000}{X} = 157
\]

(i.e. population in 1760 – population in 1711 = natural increase)

\[
X \text{ (birthrate, i.e. births per thousand population)} = 36·9
\]

Therefore,

\[
\text{Population in 1711} = \frac{21·4 \times 1000}{36·9} = 579
\]

(i.e. population = \( \frac{\text{baptisms} \times 1000}{\text{birth rate}} \))

\[
\text{Population in 1760} = \frac{27·2 \times 1000}{36·9} = 737
\]

These numbers are well below any previous estimate of population. Even if we increase baptisms by 15 per cent and burials by 10 per cent to allow for under-registration, the figures produced are still low, 855 in 1711 and 1,127 in 1760. That for 1711 is much lower than the 1,128 produced by the Rickman method of multiplying the average annual baptisms by 40, and that for 1760 compares unfavourably with the 1,228 calculated with the same Rickman multiple (see Table VI).

By 1801 we have the more reliable census population figure to compare with parish register figures, by means of which John Rickman arrived at his baptism multiplier of 40. Further comparison of the census figure for Warton of 1,574 and parish register figures suggests an interesting conclusion about population movement. Comparing the census figures of 1,574 for

45 *Ibid.* Appendix A.
1801 and the population figure derived from the average annual baptisms in the 1780’s, 1,444, a rise in population of 130 persons is discernible. However the natural increase in population (i.e. the excess of baptisms over burials) during this period was 151. This would indicate a movement out of the parish of some 21 persons in the ten years at the end of the eighteenth-century. Similarly, between 1801 and 1811 the actual increase of population was 93 and the natural increase 215. Thus some 122 people left the district in those ten years. Looking at the eighteenth century as a whole, a population in 1701 of 1,168 rose to 1,574 in 1801, an increase of 406, but the baptisms and burials in the parish registers show a natural increase for the same period of 822. This would suggest that at least 416 persons left the parish between 1701 and 1801. There may have been an inward movement of people from other parishes which would tend to have compensated for the losses through emigration. However, there is little evidence to suggest that immigration took place to any significant degree. The drift of local people away from the area seems established.

**TABLE VI: Warton Parish population estimates**

<table>
<thead>
<tr>
<th>Using Rickman's multiplier of 40</th>
<th>Ecclesiastical Return</th>
<th>Lucas (40 families at Carnforth) method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register baptisms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1563</td>
<td>1,256</td>
<td>1,192</td>
</tr>
<tr>
<td>1664</td>
<td>1,104</td>
<td>1,320</td>
</tr>
<tr>
<td>1701/10</td>
<td>1,016</td>
<td>1,168</td>
</tr>
<tr>
<td>1711/20</td>
<td>980</td>
<td>1,128</td>
</tr>
<tr>
<td>1721/30</td>
<td>952</td>
<td>1,096</td>
</tr>
<tr>
<td>1760</td>
<td>1,068</td>
<td>1,228</td>
</tr>
<tr>
<td>1780</td>
<td>1,296</td>
<td>1,488</td>
</tr>
<tr>
<td>Census</td>
<td>1,574</td>
<td></td>
</tr>
</tbody>
</table>

* Figures produced when correctives have been used: Baptisms + 15% Burials + 10%

Although Warton shared in what has been called ‘the demographic upsurge’ of the eighteenth century its population increase was not as fast as in some areas. It follows a demographic pattern similar to that found by Professor Jones in the parishes of Westmorland and Cumberland. A decline in population at the end of the seventeenth and beginning of the eighteenth centuries was followed by a rise between 1750 and 1800. The
population of Westmorland in this period increased by 7.8 per cent; Lancashire increased its population much more rapidly by 97 per cent. Warton, although situated geographically in Lancashire, did not experience the rate of growth which obtained in the south of the county, and its development was more in keeping with the Westmorland pattern. The parish obviously showed a slower growth than was normal. In England and Wales the population rose by 27 per cent between 1695 and 1750 whereas in Warton there was a decline. After 1750 the national population grew even more rapidly, rising from about six millions to about nine millions in 1801, an increase in round figures of 50 per cent. Although it followed the general trend, Warton does not show such high growth and the figures indicate that the increase was by comparison slower in the latter half of the eighteenth century.