

A LOST SEVENTEENTH CENTURY DEMOGRAPHIC CRISIS? THE EVIDENCE OF TWO COUNTIES

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Historical demographers are generally agreed that the population of England, after a period of growth in the Tudor era, rose comparatively slowly in the seventeenth century, from between four and four and a half millions in 1603 to five and a quarter or five and a half millions at the end of the century. Little, however, has been written about the behaviour of the population during the course of the seventeenth century. With the possible exception of the period 1680 - 1710, during which Chambers believed the population began to rise sharply,¹ the general presumption seems to be that the rate of growth was relatively stable throughout the century apart from temporary and localised set-backs resulting from attacks of plague or other epidemics. This slow, stable pattern of growth is generally confirmed by the analysis of seventeenth century parish registers, except for the years of the Civil War and Commonwealth when the poor quality of registration clouds the picture in many registers. It is, however, precisely in this period that there may well have been a sharp fall in English population of the order of twenty per cent in a generation.

One might well wonder why a decline of such magnitude has not been previously noticed. The reason, I suspect, is that in making population estimates, historians have generally used for comparison the 1603 Communicant Returns and the Hearth Tax and Compton Census of the 1660s and 1670s, and have tended to ignore the Protestation returns of 1642. It is true that the Protestation returns cover only a fraction of England, but for some counties, including West Sussex and Nottinghamshire, the returns are extensive. Early in 1642 Parliament ordered that every male in the country over eighteen should take an oath of loyalty to the Church of England; the purpose being to pinpoint the Roman Catholics, who might be expected to be the king's most fervent supporters in case of war.

In each county, the parish officers assembled before the Lord Lieutenant and took the oath; a few days later they themselves administered the oath to the men of their parish, recording the names of all those who

took the oath and those who did not take it. These lists were to be collected up by counties and returned to parliament. The vast majority of the surviving returns are to be found in the House of Lords Record Office. Whilst there is little external evidence against which to check the accuracy and completeness of the lists of names, the internal evidence suggests that a great deal of trouble was taken to make the lists complete. Quite often, the absence of normal parish residents is noted and reasons given for their non-appearance. In the months before the outbreak of the Civil War, it seems that all except openly avowed Roman Catholics were anxious to ensure that they were not omitted from a list of loyal supporters of the Church of England. Therefore there is no reason to suppose that the Protestation Returns are not generally reliable as an index of population.²

It was in the course of preparing a lecture on the population of Sussex between 1580 and 1801 that I was first confronted by an apparently sharp drop in the county population between 1642 and 1676 as indicated by the Protestation Returns and the Compton Census respectively. On that occasion I based my findings on a sample of Sussex parishes. Fearing that by mischance I might have selected an unrepresentative sample, I decided to rework my calculations using all those parishes for which returns survive, and the results set out below are based on all those parishes in West Sussex (before the recent boundary changes) for which valid comparison was possible. As research proceeded it became clear that some of the Compton Census returns, especially in the Storrington deanery, appear to give the total population of the parish instead of the number of communicants. This is known to have happened elsewhere.³ In order better to identify these 'rogue' returns, recourse was had to the 1724 return of communicant and non-conformist families. These returns are considered generally reliable and survive for most of the county.⁴

Any attempt, to compare two different population estimates before 1801 is bedevilled by the problem of choosing the right multiplier. Variations in the fertility and age structure of the population in different places and at different times mean that any multiplier is liable to give inaccurate results when applied to one particular parish. One can, however, reasonably expect that when applied to a wider area, local fluctuations will even themselves out. Basing my calculations on a table of model population appropriate for the conditions of early seventeenth century England,⁵ I have assumed that the male population of England over eighteen in 1642 made up 32.5 per cent of the total. Consequently, in the calculations summarised below, I have used a multiplier of 3.08 to convert the Protestation Return figures into total population. Similarly, for the Compton Census, I have assumed that communicants, those over sixteen, made up 70 per cent of the total population so that a multiplier of 1.43 is necessary. In choosing these multipliers I have in effect assumed that the age structure of the population remained the same between 1642 and 1676. If, as I suggest below, the fall in population was partly the result of declining fertility, the proportion of under sixteens in 1676 would have been lower than 30 percent of the population. (The same would of course be true if the decline in numbers were attributable to heavier child and infant mortality.) The totals shown for 1676, therefore, may well be too

high and the proportional decrease in the population too low. In other words, the assumption of a stable population structure between the two dates is hostile to the hypothesis of a falling population so that any decline indicated by the figures is likely to be a real one.

West Sussex divides naturally into four long and narrow strips running east-west. The Weald dominates the most northerly strip; wooded hilly countryside punctuated by market towns: Horsham, Pulborough, Petworth and Midhurst. South of the Weald proper, there is a strip of lower lying, more open country, broader to the east and bordered on the south by the South Downs. At the foot of the Downs on the North side, another string of rather smaller market towns: Henfield, Steyning and Storrington are interspersed with small parishes. Downland makes up the third strip. In the east, the Downs come so close to the sea that most of the downland parishes extend to the coast. To the west, however, the Downs broaden out so that there are a number of small, predominantly downland parishes and only one town, Arundel, which lies on the southern slopes. The most southerly strip consists of flat coastal land, narrower in the east but broadening out to the extensive flatlands which stretch from Chichester to Selsey Bill. Today the coast contains a string of resorts; in the seventeenth century, there were only two towns, Shoreham in the east and Chichester, the county capital, in the west.

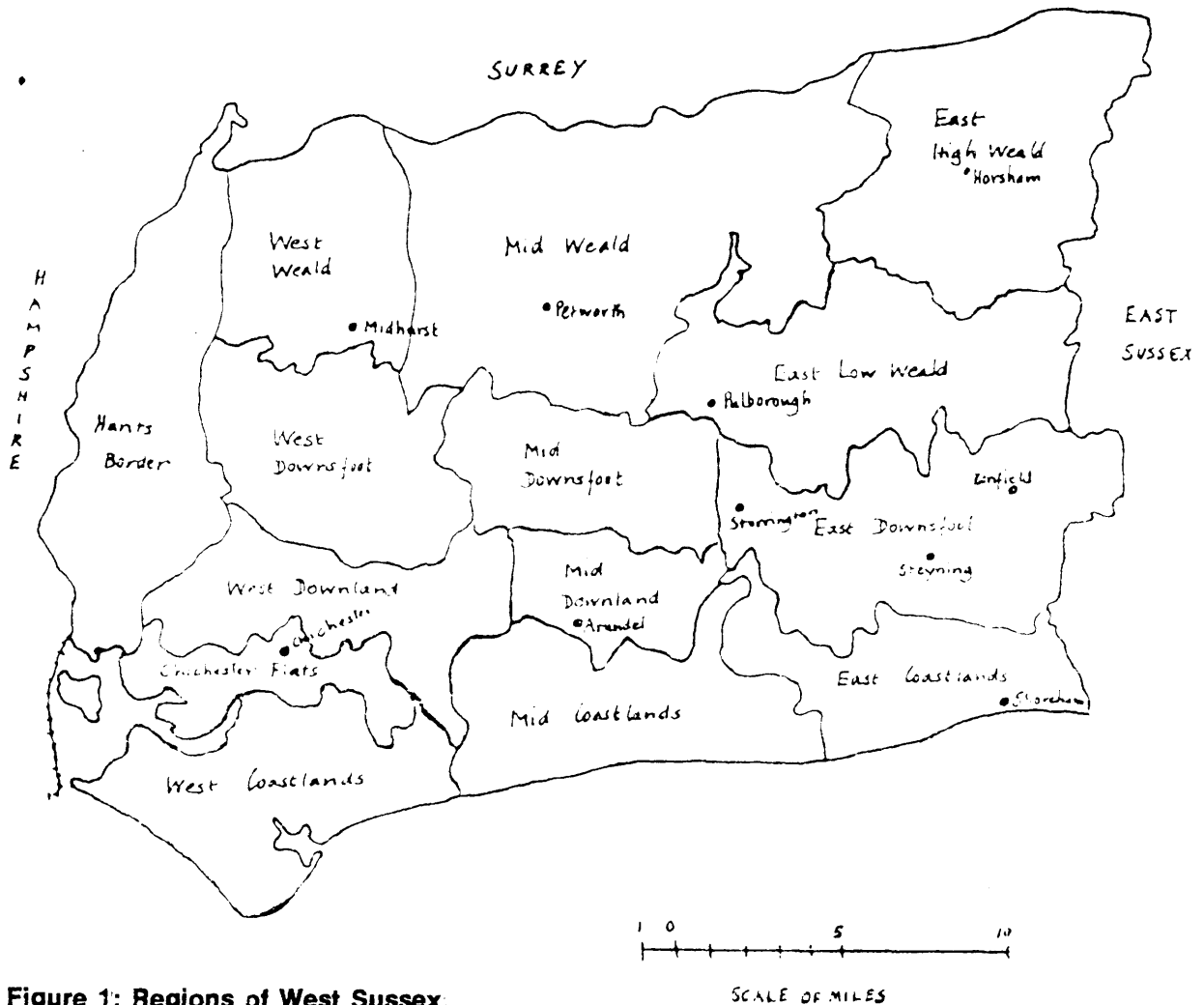


Figure 1: Regions of West Sussex.

For the purpose of analysis I have divided each of these horizontal strips into three vertical sections corresponding to the ancient rapes — the Sussex equivalent of hundreds — and have added on the extreme west a vertical strip of large rural parishes on the Hampshire border. Retrospectively, I am not certain whether this last grouping of parishes is justified, yet on a parish boundary map they stand in sharp contrast to the jigsaw of small parishes immediately to the east of them. The area covered by each of the fourteen regions used in the analysis is shown in Figure 1.

Table 1. Analysis of Source Material by regions.

Region	No. of parishes	No. of comparable parishes 1642/1676	No. of faulty 1676 returns	No. of possibly faulty 1676 returns	No. of parishes included in analysis
East Coastlands	13	9	1	0	8
Mid Coastlands	18	16	2	0	14
West Coastlands	14	13	0	0	13
Chichester flats	8	7	1	0	6
Mid Downland	7	5	0	0	5
West Downland	10	9	2	5	0
East Downsfoot	14	12	2	7	0
Mid Downsfoot	13	12	0	0	12
West Downsfoot	10	10	1	0	9
Hants. border	8	8	1	0	7
East Low Weald	8	7	2	4	0
East High Weald	7	5	1	1	0
Mid High Weald	14	13	0	3	13
West High Weald	10	9	2	1	7
Totals	154	135	15	21	94 (61%)

Table 1 shows the amount and the quality of the surviving source material. It can be seen that there were 154 parishes in West Sussex, of which 125 have recorded populations for both 1642 and 1676.⁶ I have excluded from my calculations those parishes where the figures show an apparent increase in 1676 of more than 50 per cent, followed by a correspondingly large reduction in 1724, or **vice versa**. In a number of parishes where the apparent changes are feasible but unlikely, comparison with parish register baptismal totals and with early nineteenth century decennial census figures has been made in an attempt to determine whether the returns can be regarded as reliable. Nevertheless, it has proved impossible to establish with any degree of certainty for a number of parishes that the significant increase in apparent population between 1642 and 1676 is due to the fact that the Compton Census records total population. In these cases the possibly 'rogue' returns have been included in the analysis as though they referred to communicants only, except in those regions in which they appear in large numbers. In this case the whole region has been excluded. Overall, therefore, just under two-thirds of the parishes of West Sussex have been included in the analysis. Amongst those parishes for which comparable figures for 1642 and 1676 are not available, there are only two of importance: Lower Beeding, a very large parish on the East Sussex border east of Horsham, and Arundel, a hot-bed of Roman Catholicism, for which it is hardly surprising that no Protestation Return exists. Of

those parishes which have had to be omitted because of serious doubts about the reliability of the returns, by far the most important is Horsham, whose returns pose special problems as indicated in the end-notes.⁷

Table 2. Comparable Population totals and percentage changes 1642, 1676, 1724.

Region	Totals 1642	Percentage change 1642-1676	Totals 1676	Percentage change 1676-1724	
East Coastlands	1628	-26	1200	-3	
Mid Coastlands	2554	-25	1925	+10	
West Coastlands	2369	-22	1838	+22	
Chichester flats	3345	-22	2624	+17	
Mid Downland	527	-26	391	+36	
West Downland	—	—	—	—	
East Downsfoot	—	—	—	—	
Mid Downsfoot	1801	-19	1459	+11	
West Downsfoot	1586	-24	1205	-11	
Hants. border	1444	-15	1233	+7	
East Low Weald	—	—	—	—	
East High Weald	—	—	—	—	
Mid High Weald	6798	-7	6263	+11	
West High Weald	2611	-33	1748	+30	
Totals 1642/1676	24663	-19	19886		Totals 1724
Totals 1676/1724			16403	+10	18063

Table 2 indicates the population trends between 1642 and 1724. Despite the problems and uncertainties of the evidence, and allowing that there is some regional variation, the evidence points firmly to a significant decline in population between 1642 and 1676 of the order of 20 percent followed by a period of slow growth between 1676 and 1724. If this mid-century decline were repeated consistently across England, then we would be witnessing a demographic set-back of a kind unknown in England since the fourteenth century. To discover whether this decline were anything more than a local phenomenon, I decided to apply the same analysis to Nottinghamshire, for which the appropriate returns survive and which could hardly have been suffering from the same local conditions which might have made West Sussex untypical of the country as a whole. For the analysis I used three of its ancient hundreds in the north, south and west of the county. The results are set out in Table 3. That the final percentage decline should be so close to the figure obtained for Sussex should not be made too much of. The sample taken was not a random one and, as can be seen from Table 3, the pattern of change varies in different areas. In parts of Broxtow Hundred in the west of the county, there is a clear indication of population increase. Nevertheless, taking the area as a whole — just under half the county — the drop in the population is unmistakable and of the same order as in Sussex. It does therefore seem that the population decline of the mid seventeenth century is both a real and a national phenomenon; which is not of course to claim that every county in England experienced such a decline.

For Nottinghamshire it is possible to compare the Protestation Returns with earlier as well as later figures, namely the Communicant Returns

of 1603, which survive for about two-thirds of the whole county.⁸ Using the same multiplier for 1603 as for 1676, the analysis indicates a very slight increase of 5 per cent overall in the same three hundreds, again with variations between them. Interestingly, the Communicant Returns for Nottinghamshire contain, uniquely as far as I am aware, information about the number of under-age non-communicants for forty-four parishes. Sixteen of these lie in the areas chosen for analysis and the figures indicate that communicants formed 67.5 per cent of the total population (66.6 per cent in all forty-four parishes). This is slightly less than the proportion, assumed from the model population, and if used for the calculations, gives an increase in population between 1603 and 1642 of a mere one percent. Neither five nor one percent is implausible and in both cases the mid-century fall more than wipes out any growth during the first four decades.⁹ If there is nothing in the 1603 figures which proves the accuracy of the 1642 returns, there is equally nothing to suggest that they are unreliable for Nottinghamshire. The hypothesis of the mid-century demographic crisis is not disproved. It remains therefore to attempt some explanation of why it occurred.

Table 3. Comparable totals and percentage changes in parts of Notts. 1603, 1642, 1676.

Region	Percentage change 1603/42	Totals 1642	Percentage change	Totals 1676
Bassetlaw Hundred	+9	13388	-25	10084
Bingham Hundred	+12	5784	-24	4376
Broxtow Hundred	-2	7881	-2	7716
Totals	+5	27053	-18	22176

It is natural to think first in terms of some spectacular rise in mortality arising from an epidemic. Certainly there were outbreaks of plague during the period, notably the 'Great Plague' of London in 1665. Outside London, however, the plague made relatively little impact. East Sussex experienced no crisis mortality in that year, nor indeed in any other year during the mid-century period.¹⁰ Dr. Schofield's national survey also found no more than the usual number of 'crisis mortality' years amongst his sample parishes.¹¹

Another possible explanation is that there was a general rise in the death rate during the period. There is some indication that, nationally, mortality rates had started to climb from the beginning of the seventeenth century but there is no evidence of a sharp rise after 1640. It is also possible that the birth rate fell significantly. The physical factors that control fertility are at present the subject of research, but there seems little likelihood that changes occurring in, for instance, food supply during this time were sufficient to bring about a significant drop in fertility. The psychological factors controlling levels of fertility are still largely uninvestigated, but it has been suggested that family limitation, conscious or unconscious, occurs in certain social situations, particularly situations of stress or uncertainty. The failure of late medieval population to rise has been attributed to a birth rate kept low for psychological reasons.¹² It is possible that the political, religious and social insecurity

of the Civil War and Commonwealth period depressed fertility, either through 'psychic despair' or, more straightforwardly, because marriages were delayed. Nevertheless, it is improbable that either the fertility or the mortality rate alone can account for the decline. To bring about a 20 per cent fall in around thirty years would require the birth rate to fall about eight per thousand below the death rate during the period, an actual fall of twelve to fifteen per thousand if the death rate remained static. Such a dramatic fall in birth rate seems hardly likely over an extended period. It would be more plausible if the birth rate fell to something like parity with a slowly increasing death rate. One other explanation needs to be considered. The rest of the decline, in the two predominantly rural areas of Sussex and Nottinghamshire, can be attributed to 'the flight to the towns'. Dr. Wrigley has pointed out the importance of London as a magnet for the surplus rural population.¹³ It seems as though the power of the capital remained strong enough to attract the rural population even when there was no surplus. There is evidence both in Nottinghamshire and Sussex that urban growth continued at a time when the rural areas were being depleted,¹⁴ and from all accounts London's growth continued during the seventeenth century unchecked except temporarily by plague epidemics.

The model here adduced to explain the mid-century decline: fertility reduced by uncertainty, rising mortality and continued migration to the towns, depends more on speculation than hard evidence but it does not contain any elements which are inherently unlikely or contrary to such scraps of evidence as we do possess. The fact of the decline has not been established beyond reasonable doubt and further research into the Protestation Returns, Compton Census and Hearth Tax may cast doubt on, or disprove, the existence of the decline as a national phenomenon. The evidence of parish registers, aggregated on a nationwide scale, may prove to be the vital evidence. In a sample of about eighty East Sussex parishes, the mean number of baptisms, taking decadal averages, fell by 25 per cent between 1642 and 1676. This fact is capable of a number of interpretations but all would tend to favour the hypothesis of a falling birth rate and/or declining total population. At this stage, all that can reasonably be claimed is that there is a **prima facie** case for believing that a mid-seventeenth century demographic crisis existed and that plausible reasons can be put forward to explain it. It is hoped that readers of **LPS** will regard it as a case that merits further investigations in their own areas.

Acknowledgements

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NOTES

1. J. D. Chambers, **Population, Economy and Society in Pre-Industrial England**, 1972, pp. 19, 23.
2. For a good discussion of Protestation Returns, including examples of parish officers giving reasons for non-protestation, see R. Carraway Rice, 'West Sussex Protestation Returns', **Sussex Record Society**, vol. V, 1905.

3. 'The Compton Census — Peterborough', **LPS, No. 10, 1973.**
4. The correct title for these returns is 'Bishop Bower's Visitation'. They are to be found in the Diocesan Record Office (West Sussex County Record Office) at Chichester. For a discussion of their value as a historical source, see N. Caplan, 'Visitation of the Diocese of Chichester in 1724', **Sussex Notes and Queries**, Vol. XV, 1962, pp. 289-295.
5. A. J. Coale and Paul Demeny, **Regional Model Life-Tables and Stable Populations**, 1966, Model North, level seven, female. (Stationary population, expectation of life thirty-five years.)
6. I have counted the nine parishes of the city of Chichester as one, and have also counted singly those pairs of parishes which sent in combined returns for both dates.
7. The problem with Horsham is that the Protestation Return records only 498 names, giving a population of around 1,500, compared with estimated totals of 4,290 in 1676 and 8,455 in 1724. If these figures are to be taken at their face value, then the apparent growth of population at Horsham would go a long way towards compensating for the seeming decline in most of the other parishes. The evidence of the parish register is inconclusive. Baptisms exceed burials by about 20 per cent. which is fairly typical of the pattern for rural Sussex at this time and does not indicate massive immigration. Assuming that the Protestation Return figures are correct, the number of baptisms recorded at this period indicates a birth rate of 44 per thousand. This is certainly high but not impossible. A more typical birth rate of 35 per thousand would give a population in 1642 of around 2,000, which would still produce an apparent doubling of the town's population in a generation. On balance it seems probable that the figures quoted of 3,000 communicants in 1676 and 1,780 families in 1724 are inaccurate guesses.
8. A. C. Wood transcribed and edited these returns in **Transactions of the Thoroton Society**, Vol. 46, 1942, pp. 3-14. According to Wood, the returns are to be found in a bundle of presentment bills in the custody of the archdeaconry of Nottingham. I have used Wood's transcriptions.
9. Wood points out that the number of communicants recorded for the whole county fell from 29,323 in 1603 to 26,416 in 1676 — a decrease of 9.9 per cent.
10. Colin Brent, 'Devastating Epidemic in the Countryside of Eastern Sussex between harvest years 1558 and 1640', **LPS No. 14, 1975.**
11. R. S. Schofield, 'Crisis Mortality', **LPS No. 9, 1972**, pp. 16-21.
12. J. D. Chambers, pp. 71,128, referring to S. Thrupp, 'The Problem of Replacement Rates in Medieval English Population', **Econ. Hist. Rev.**, 2nd. ser., Vol. 18, 1965 and L. Chevalier, 'Towards a History of Population', Glass and Eversley, **Population in History, 1965.** I am not convinced that Chambers's interpretation of Thrupp's words, as supporting the idea of psychological reasons for changing fertility, is correct.
13. E. A. Wrigley, 'A Simple Model of London's Importance in Changing English Society and Economy 1650-1750', **Past and Present**, Vol. 37, 1967.
14. A. C. Wood, 'A Note on the Population of Nottingham in the Seventeenth Century', **Transactions of the Thoroton Society**, Vol. 40, 1936, pp. 109-113 and 'A Note on the Population of Six Nottinghamshire Towns in the Seventeenth Century', **ibid.** Vol. 41, 1937, pp. 18-26. Wood argues for a growing urban population on the evidence of the parish registers.