Population Growth and the Development of Capitalism in England, 1550-1850.

In 1965, H.J. Habakkuk presented a 'heroically simplified version of English economic history':

'long-term movements in prices, in income distribution … in real wages … are dominated by changes in the growth of population. Rising population: rising prices … low real incomes for the mass of the population … this might stand for a description of the thirteenth century, the sixteenth century, and the early seventeenth, and the period 1750-1815. Falling or stationary population with … higher mass incomes might be said to be characteristic of the intervening periods.'[1]

This statement represents a form of demographic determinism, which is confirmed by the evidence presented in this paper. It assumes that population growth was independent of economic development, an assumption challenged by the Cambridge Group, who argued that population increase was largely fuelled by economic development, with a growth of real wages leading to a reduction in the age of marriage and an increase in fertility.[2]

The assumption that real incomes rose during the eighteenth century is open to doubt, given that there was a marked increase in poverty amongst labourers and other impoverished groups at the end of the eighteenth century and first half of the nineteenth. Attempts have been made by economic historians to resolve different conclusions by adopting mathematical models, but these have resulted is significantly different answers.

For example, there is fundamental disagreement between Gregory Clark on the one hand, and Stephen Broadberry and colleagues on the other about long-term growth in England in the period between the fifteenth and early nineteenth century. The former concluded that there was no significant change in per capita incomes in this period, whereas Broadberry et.al. have concluded that GDP per head approximately doubled in the same period.[3] The different conclusions are the result of disagreements on estimates of population, the impact of technology, employment levels, the incomes of women and children, changing occupational structure, and the effect of enclosures on the demand for labour.

The problem is that there is no reliable national evidence to evaluate competing ideas and attempts to resolve these difficulties have led to the use of models which necessarily require a range of unreliable assumptions. As E.P. Thompson argued, the lack of reliable national evidence has bedevilled the long standard of living debate, which is unlikely to ever be resolved by econometric analysis.[4]

In his study of income and wealth inequalities, Thomas Piketty has written that

For far too long economists have sought to define themselves in terms of their supposedly scientific method. In fact, those methods rely on an immoderate use of mathematical methods … the new

[1] P.E Razzell, *Essays in Historical Sociology*, 2021, p, 222.
[2] E.A. Wrigley and R.S. Schofield, *The Population History of England and Wales*, 1981.
[3] G. Clark, The long march of history: farm wages, population, and economic growth, England, 1209-1869', *Economic History Review*, 60, 2007, pp. 97-135; S. Broadberry, B.M.D. Campbell, A. Klein, M. Overton and B Van Leewen, *British Economic Growth, 1270-1870*, 2015.
[4] E.P. Thompson, *The Making of the English Working Class*, 1963.

methods often lead to a neglect of history and the fact that historical experience remains our principle source of knowledge.[5]

One of the major problems with assessing real incomes is the prevalence of unemployment. Henry Mayhew in his study of London's poor concluded that 'in the generality of trades the calculation is that one third of the hands are fully employed, one third partially, and one third unemployed throughout the year.'[6] These levels of unemployment would make the use of statistical series of wage levels very unreliable. Given these difficulties, the most reliable evidence is that based on local and literary sources, particularly where it is possible to adopt a triangulation of data.

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Accumulating evidence has indicated that infant, child and adult mortality fell sharply in the eighteenth century, from the middle of the century onwards. This can be illustrated with following sources of data:

Table 1: Infant and Child (1-4) Mortality (per 1000) in Eighteen English Parishes, 1600-1837.[7]

Period	*Infants at Risk*	*Children at Risk*	*Same Name Ratios*	*IMR*	*CMR*
1600-49	16543	12413	965/642	158	113
1650-99	13723	10266	959/689	151	106
1700-49	14994	10747	1241/1014	181	106
1750-99	17697	13035	1143/841	148	100
1800-39	19082	12922	758/565	104	85

Infant mortality rose in the first half of the eighteenth century before falling sharply during the latter half of that century and the first half of the nineteenth. Child mortality was relatively stable during the period 1600-1799 but fell during the beginning of the nineteenth century.

The mortality pattern was more pronounced in London during the parish register period, as depicted in the following table.

[5] T. Piketty, *Capital in the Twenty-First Century*, 2013.
[6] Razzell, *Essays*, pp. 234, 25.
[7] Peter Razzell, *Mortality, Marriage and Population Growth in England*, 2016, P.31. Half of the parishes were included in the Cambridge Group's reconstitution sample. All infant and child mortality figures are based on corrections derived from same-name methodology. See 'The measurement of the reliability of parish registration through same-name methodology', *Academia Online.*

Table 2: Infant and Child (1-4) Mortality in Sixteen London Parishes, 1539-1849.[8]

Period	*Infant at Risk*	*Children at Risk*	*Same Name Ratio*	*IMR*	*CMR*
1539-99	839	616	48/31	155	168
1600-49	1073	770	83/52	238	224
1650-99	1020	686	99/67	256	282
1700-49	704	387	68/39	409	176
1750-99	720	435	60/36	263	270
1800-49	199	102	8/4	141	118

Falling infant and early child mortality from the middle of the eighteenth century is also demonstrated in data from the London Bills of Mortality.

Table 3: Infant and Child Mortality from the London Bills of Mortality, 1728-1809.[9]

Period	*Number of Burials Under Two as a Proportion of Baptisms (%)*
1728-29	61
1730-39	60
1740-49	61
1750-59	51
1760-69	49
1770-79	45
1780-89	36
1790-99	33
1800-09	28

There was a similar pattern in seventeen Cambridge Group parishes, indicated by a study carried out matching elite families – clergymen, gentlemen, esquires, aristocrats – with the next non-elite family in the baptism register.[10]

Table 4: Estimated Infant and Child Mortality (1-4) Rates (Per 1000) Amongst Elite and Control Families in Seventeen Cambridge Group Parishes, 1600-1849.[11]

Period	*Elite Families*		*Control Families*	
	IMR	CMR	IMR	CMR
1600-49	134	120	184	117
1650-99	158	143	180	132
1700-49	177	106	223	146
1750-99	113	69	159	134

[8] Razzell, *Population*, pp. 13, 134. The relatively low infant and child mortality in the sixteenth century is confirmed by Finlay's research on London's infant mortality in the sixteenth century, with one measure as low as 55/1000. See Peter Razzell and Christine Spence, 'The history of infant, child and adult mortality in London, 1550-1850', *The London Journal*, 2007, pp. 276, 277.
[9] Razzell and Spence, 'The history of infant'.
[10] See Razzell, *Population*, pp. 132-133 for details of the research.
[11] Razzell, *Mortality*, p, 37.

There were rises and falls in infant mortality in both elite and control families, although the timing was slightly different in the two groups. Overall, child mortality was lower amongst the elite population, possibly as a result of better hygienic and child-rearing practices. There were, however, rises and a slight fall in child mortality in control families in the period between 1600-49 and 1800-49.

A similar study was carried out on 115 Bedfordshire parishes, revealing the following pattern.

Table 5: Estimated Infant and Child Mortality (1-4) Rates (Per 1000) Amongst Elite and Control Families in 115 Bedford shire Parishes, 1600-1849.[12]

Period	*Elite Families*		*Control Families*	
	IMR	CMR	IMR	CMR
1600-49	98	90	144	66
1650-99	147	99	166	164
1700-49	239	53	195	139
1750-99	136	49	185	245
1800-49	86	50	99	101

The pattern is similar to that in Table 4, with mortality rising and falling in the long period between the early seventeenth and middle of the nineteenth centuries, but with slight variations. One of the most significant findings was the much lower child mortality in elite families from the seventeenth century.

Some of the mortality shifts may have been the result of the increasing virulence of smallpox. For example, under five per cent of young children appear to have died of the disease in London during the sixteenth century, whereas by the end of the nineteenth century this increased to forty-five percent among the unvaccinated.[13] The wealthy practised inoculation and vaccination at an earlier date than the general population, possibly accounting for some of the variations in child mortality patterns.[14]

Adult mortality fell amongst all socio-economic groups, including the wealthy.[15] This suggests that wealth was not an important factor in the reduction in mortality. For example, the mean number of years lived by Members of Parliament during the period 1660-1820 was as follows:

[12] Razzell, *Population,* p. 133.

[13] See P.E. Razzell, *The Conquest of Smallpox*, 2003, pp. 169-180; P.E. Razzell, The geography of smallpox in England before vaccination: a conundrum compounded, *Academia Online*, pp. 6-8. McVail in his extensive review of the fatality of smallpox, concluded that 'natural smallpox gradually became throughout the eighteenth century, and up to the epidemic of 1870-73, a more virulent and fatal disease, its maximum fatality being on a large basis of facts 45 per cent.' See Ibid, p.169.

[14] Ibid.

[15] Razzell, *Population*, pp. 107, 116, 199, 204.

Table 6: Mean Number of Years Lived by Members of Parliament, 1660-1820 (Number of Cases in Brackets).[16]

Period of First Entry	*Age at First Entry*		
	29 Years and Under	*30-39 Years*	*40 Years Plus*
1660-1690	25.7 (429)	22.6 (458)	17.9 (633)
1691-1714	28.1 (520)	25.4 (402)	18.3 (438)
1715-1754	30.8 (541)	28.2 (422)	18.5 (347)
1755-1789	37.1 (480)	29.9 (354)	21.2 (431)
1790-1820	38.1 (571)	32.0 (432)	22.4 (572)

The data is of very hight quality with information on age and number of years lived for over ninety per cent of the sample. Members of Parliament came from all areas of the country and from urban and rural districts. They were very wealthy, yet their life expectancy in age groups under 39 years increased by ten to twelve years between 1660-90 and 1790-1820.

The reasons for the decline in mortality are complex, but improvements in hygiene and public health were probably a factor in lower mortality in the eighteenth century, although other health improvements such as inoculation against smallpox[17] and better midwifery practices probably played a part. In the nineteenth century infant mortality in poorer agricultural areas was much lower than in rich urban districts.[18] However, elite groups gained an increasing advantage in child mortality during and after the eighteenth century,[19] and this was probably the result of the health improvements mentioned above.

Overall, there appears to have been an exogenous change in disease mortality, with infant and child mortality increasing in severity in 1539-1749, before reducing after that period.[20] There was an increasing adult life expectancy amongst all socio-economic groups in the eighteenth century, regardless of ecology or wealth.[21] This supports Chambers thesis that there had been an autonomous reduction in disease incidence in the eighteenth century.[22]

Socio-economic differentials in infant and adult mortality appear to have largely emerged in the twentieth century, when the role of hygiene and infection begun to be fully understood. Wealth itself was probably not the major factor, and as T.H. Stevenson observed 'the lower mortality of the wealthier classes depends less upon wealth itself than upon culture, extending to matters of hygiene'.[23] Personal hygiene is independent of wealth and probably played a role on the reduction of mortality in the period between the seventeenth and nineteenth centuries.

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[16] Ibid, p. 199. The data for 1691-1714 is from the unpublished essay P.E. Razzell, 'Malthus: mortality or marriage? English population growth in the eighteenth century', *Academia Online.*

[17] Given the marked increase in the virulence of smallpox between the sixteenth and nineteenth centuries, inoculation and vaccination were critical for the maintenance of population growth. See P.E. Razzell, *The Conquest of Smallpox*, 2007.

[18] See for example, Razzell, *Mortality*, pp. 41, 45, 48.

[19] Razzell, *Essays*, pp. 162, 195; Razzell, *Mortality*, p. 39.

[20] Razzell, *Mortality*, pp. 31, 32, 35, 37.

[21] Ibid, pp. 48, 53,

[22] D. Chambers, *Population, Economy and Society in Pre-Industrial England*, 1972.

[23] T.H.C. Stevenson, 'The vital statistics of wealth and poverty', *Journal of the Royal Statistical Society*, 91, 1928, pp. 209, 214.

What was the role of fertility in the demographic transition in the early modern period? Malthus argued theoretically that population had grown in the eighteenth century largely as a result of increasing fertility. However, he qualified this conclusion by noting that in England 'the more rapid increase of population, supposed to have taken place since the year 1780, has arisen more from the diminution of deaths than the increase of births.'[24] He went on to conclude that

> The gradual diminution and almost total extinction of the plagues which so frequently visited Europe, in the seventeenth and the beginning of the eighteenth centuries, produced a change [in the incidence of marriage] … in this country [England] it is not to be doubted that the proportion of marriages has become smaller since the improvement of our towns, the less frequent return of epidemics, and the adoption of habits of greater cleanliness.'[25]

This was an early form of demographic transition theory, and in order to evaluate this argument, it is necessary to examine the history of English nuptiality in the early modern period. The Cambridge Group argued that fertility had grown during the eighteenth century as a result of falling mean ages of marriage, linked to an increasing standard of living. They found a decline of about two-and-a-half years in the average age of marriage of spinsters in the eighteenth century.[26] This finding is somewhat contradicted by data from marriage licences, which indicate that average age of marriage rose by about a year in this period.[27] The marriage licence data covered a somewhat wealthier population than the general population, and there is evidence of different trajectories in marriage patterns between the two populations.[28]

According to marriage licences in Nottinghamshire and Gloucestershire during the seventeenth century the average age of spinsters marrying labourers and husbandmen was over 26 years, whereas the average for yeomen, gentlemen and professionals was between 22 and 24 years.[29] This conclusion is supported by the analysis of marriage licences for the Archdeaconry of Chichester:

Table 7: Marriage Age of Spinsters Marrying Bachelors, 1754-1769, 1770-95.[30]

Period	Labourers		Yeomen, Gentlemen & Professionals	
	Number	% Under 21	Number	% Under 21
1754-69	142	9%	142	22%
1770-99	169	25%	169	14%

In the earlier period 1754-69 labourers married much later than yeomen, gentlemen and professionals, but by 1770-99 the position was reversed, with labourers marrying much

[24] Razzell, *Essays*, p. 147.
[25] Ibid, p. 149.
[26] E. A. Wrigley, R.S. Davies, J.E. Oeppen, R.S. Schofield, *English Population from Family Reconstitution, 1580-1837*, 1997, p. 149.
[27] Razzell, *Population*, p. 64.
[28] For example, see G. Clark and N. Cummins, 'Malthus to modernity: wealth, status and fertility in England, 1500-1879', online paper.
[29] Razzell, *Essays*, pp. 174, 175.
[30] Ibid, p. 176.

earlier and the elite group much later. The latter differential was maintained throughout the nineteenth century.[31]

In addition to marriage ages, the proportion of women ever marrying declined significantly during the eighteenth century.

Table 8: Proportion of Female Deponents Single in the London Consistory Court, 1583-1817.[32]

Period	*Age Group – Proportion Single*			
	15-24	25-34	35-44	45+
1586-1611	62%	15%	1%	0%
1703-1713	72%	25%	7%	4%
1752-1783	77%	43%	14%	5%
1792-1817	76%	53%	13%	15%

There were important reductions in the frequency of marriage in all age groups during the eighteenth century, and this was also the case in Yorkshire and other areas of England. [33] These falls in the frequency of marriage are also to be found in data from burial registers. The following table summarizes information from twenty-three Bedfordshire burial registers which list the marital status of those buried.

Table 9: Proportion of Spinsters Listed in Twenty-Three Bedfordshire Burial Registers, 1695-1704 and 1795-1804.

Period	*Number of Spinsters*	*Total Known Cases*	*Proportion of Spinsters*
1695-1704	26	817	3%
1795-1804	90	853	11%

There was an increase of eight per cent in the number of spinsters in the period between the ends of the seventeenth and eighteenth centuries, confirming the trend of diminishing marital frequency.

The Cambridge Group's raw data indicated that it was a fall in mortality that was more important than a rise of fertility in population growth.[34] According to same name research, defective birth registration was very high in the sixteenth and seventeenth centuries before improving in the first half of the eighteenth. However, there is now evidence that birth registration deteriorated in the latter half of the eighteenth century.

[31] Ibid,
[32] Ibid, p. 67.
[33] Ibid, pp. 60-70. Szreter and Garrett have argued that there was a decline in the frequency of marriage from the middle of the eighteenth century onwards. S. Szreter and E. Garrett, 'Reproduction, compositional demography, and economic growth: family planning in England before the fertility decline', *Population and Development Review*, 2000, p. 67.
[34]Razzell, *Population*, p. 47.

Table 10: Estimated Under-Registration of Births and Deaths in England, 1538-1837.[35]

Period	*Proportion of Births Not Registered (%)*	*Proportion of Deaths Not Registered (%)*
1538-1599	39	34
1600-1649	36	31
1650-1699	30	27
1700-1749	21	22
1750-1799	32	27
1800-1837	30	23

The figures in Table 10 significantly vary from the Cambridge Group's estimates of under-registration, particularly in the sixteen and seventeenth centuries. However, they do reveal that birth registration deteriorated in the second half of the eighteenth century, assumed by the Cambridge Group. Applying the figures in Table 10 to the Group's estimates of baptism and burial rates,[36] yields the following data for the eighteenth and early nineteenth centuries.

Table 11: Estimated Birth and Death Rates in England, 1701-1820.

Period	*Estimated Birth Rate Per 1000*	*Estimated Death Rate Per 1000*
1701-1740	35.5	34.6
1741-1780	39.3	31.4
1781-1820	38.8	24.7

Table 11 reveals an increase in the birth rate of the order of three years, whereas the death rates fell by about ten years. The age structure of the English population appears not to have significantly changed between the early eighteenth and nineteenth centuries,[37] suggesting that the rise in fertility played a relatively minor role in population growth compared to the reduction of mortality.

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John Lovell made the following argument about the importance of Ireland's economic and demographic history:

'if population growth was caused by factors independent of the economy … then it becomes possible to regard the industrialization process as one that was vitally necessary for the welfare of the mass of the population, for if there had been no rapid expansion of economic activity … then the growth of numbers would ultimately have produced a crisis of subsistence. Such a crisis of subsistence did in

[35] For death under-registration see Razzell, *Population,* p. 15. The figures for birth under-registration are based on research published in 'The measurement of the reliability of parish registration through same-name methodology', *Academia Online.*
[36] See Razzell, *Population,* p. 47.
[37] Razzell, *Population,* p. 47.

fact occur in one part of the British Isles where the growth of population was not matched by that of industry. This was in Ireland, where the pressure of population resulted in small famines in 1817-18 and 1822 and a catastrophic famine in 1846.'[38]

Ireland's population history reveals a new perspective on the debate about Britain's demographic and economic history. There is however little historical demographic data for Ireland, except for that on Irish Quakers. The following Table summarizes an analysis of reconstitution schedules, using same name correction ratios.[39]

Table 12: Estimated Quaker Infant Mortality (Per 1000) in England and Ireland, 1650-99.

Place	*Infants At Risk*	*Infant Deaths*	*Same-Name Ratio*	*Estimated IMR*
London	330	113	12/12	342
Bristol & Norwich	691	117	111/86	219
Provincial England	2781	293	304/181	177
Dublin	591	149	45/38	299
Cork, Wexford, Waterford & Limerick	966	131	54/44	166
Rural Ireland	1953	120	75/56	82

Infant mortality was much lower in rural Ireland than elsewhere in Britain, reflecting an urban/rural gradient in mortality. This pattern persisted in the period after the 1650s, as revealed in the following table,

Table 13: Estimated Infant Mortality (Per 1000) Amongst Quakers in Great Britain, 1650-1849.

Period	London	Bristol & Norwich	Provincial England	Dublin	Cork. Wexford. Waterford & Limerick	Rural Ireland
1650-99	342	219	177	299	166	82
1700-49	269	216	200	196	160	118
1750-99	166	158	124	164	151	82
1800-49	132	107	69	107	62	41

After an increase in mortality in the first half of the eighteenth century, infant mortality fell very significantly in rural areas, to very low levels in the first half of the nineteenth century.

The mortality rates in Ireland according to the 1841 Census were significantly lower in the rural districts than the urban areas.

Table 14: Age Specific Death Rates in Ireland According to the 1841 Census.[40]

Age Group	*Number Living*	*Deaths Per*	*Number Living in*	*Deaths Per*

[38] Ibid, 224.
[39] I have analysed the original schedules compiled by Vann and Eversley which were deposited in Friend's House in London. See R.T. Vann and D.E.C. Eversley, *Friends in Life and Death*, 1992 for a description of their research.
[40] K.H. Connell, *The Population of Ireland, 1750*-1845, 1950, p. 193.

(Years)	*in Urban Areas*	*1000*	*Rural Districts*	*1000*
Under 1	50,369	138.02	311,055	81.35
2-5	105,676	45.49	779,313	17.22
6-15	243,551	9.78	1,813,605	4.51
16-25	242,237	9.90	1,403,660	6.56
26-35	181,208	13.34	973,169	8.34
36-45	132,481	18.42	696,961	11.43

Mortality in the urban areas was up to twice as high as in the rural districts, mirroring the mortality gradient in the Quaker data. According to the 1841 Census 1,135,465 people lived in urban areas and 7,039,659 in the rural districts,[41] so most of the Irish population lived in rural areas.

It was the unanimous opinion of authors writing of the condition of rural inhabitants that the majority lived in great squalor. According to a Scottish agriculturalist 'a large proportion of the peasantry live in a state of misery … Their cabins scarcely contain an article that can be called furniture; in some families there are no such things as bedclothes, the peasants showed some fern, and a quantity of straw thrown over it, upon which they slept in their working clothes.'[42]

Likewise, Cambell wrote of the Irish in 1777:

> the manner in which the poor of this country live, I cannot but help calling beastly. For upon the same floor, and frequently without any partition, are lodge the husband and wife, the multitudinous brood of children, all huddled together upon the straw or rushes, with the cow, the calf, the pig, and the horse, if they rich enough to have one.[43]

Connell concluded that 'almost every reference to the subject by travellers and doctors underlines the filthiness both of the persons of the mass of the Irish and the interior and surroundings of their cabins …'[44] The result was the prevalence of typhus, griping diarrhoeas and epidemic dysenteries. However, as Connell also concluded, 'the years of rapid population increase, it is true were free from serious epidemics'.[45]

It suggests that personal and domestic hygiene was not critical for lower mortality, and that rural Ireland's relatively low mortality was the result of its geographical isolation. The Irish rural population lived in scattered settlements in a country that was separated both from England & Wales and the Continent of Europe. Disease spreads rapidly in urban environments because of the proximity and density of population, which were not characteristics of rural Ireland.

We may speculate that like England, Ireland's population history was shaped by a pattern of demographic transition. Falling mortality triggered a population increase and a

[41] P.E. Razzell, 'Population growth and economic change in eighteenth and early nineteenth century England and Ireland', in E.L. Jones and G.E. Mingay (eds.), *Land, Labour and Population in the Industrial Revolution*, p. 272.
[42] Connell, *The Population*, p. 58.
[43] Ibid.
[44] Ibid, p. 187.
[45] Ibid, p. 257. Some of the decline in infant and child mortality would have been the result of the practice of smallpox inoculation in rural Ireland. See Razzell, 'Population growth', pp. 270-273.

surplus of labour, resulting in the growing pauperisation of the poor. Pauperisation led to demoralisation, as described by Malthus, resulting in early marriage and the growth of fertility. The Irish Poor Inquiry Commission was told by a Catholic curate from Mayo that 'small holders are induced to marry by feeling that their condition cannot be made worse, or, rather they know that they can lose nothing, and they promise themselves some pleasure in the society of a wife.'[46] Likewise, 'from Kilkenny – as indeed, from most other counties – there came almost the same story: labourers get married under the idea they cannot make their condition worse than it is.'[47]

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Jane Whittle has summarized the impact of population on the development of capitalism in the medieval period:

> Fluctuations in population levels have been used to explain some of the most important trends in medieval and early modern history, trends with vital importance to the development of capitalism … Manorial lords had retained their hold on the economy in the century before the Black Death because of the high demand for land. Once this factor was removed by population decline, the diversified economy undermined the manorial lord's position … Peasants, or rather wealthy peasants, had capitalized on the fifteenth century situation, building up their land holdings, and orientating themselves increasingly towards market production … Additionally … there was no shortage of labour in the sixteenth century [for the growth of capitalism].[48]

At a later date Lawrence Stone noted a process of social polarisation that had taken place in England during the sixteenth century as a result of population growth:

> The excess supply of labour relative to demand not only increased unemployment but forced down real wages to an alarming degree … [there was] a polarisation of society into rich and poor: the upper classes became relatively more numerous, and their real incomes rose; the poor also became more numerous and their real incomes fell.'[49]

According to Phelps Brown and Hopkins in their study of builders' real wages during the period 1264-1954, 'the lowest point we record in seven centuries was in 1597, the year of *Midsummer Night's Dream*.'[50] This is also what occurred in Shakespeare's Stratford during the same period. Although there is no evidence on the population history of Stratford, there is for a neighbouring group of five rural parishes in the Forest of Arden, fifteen miles north of Stratford. Population increased rapidly in the sixteenth century, from about 2,250 in the 1570s to 3,400 in 1650.[51] Although not entirely reliable, Wrigley and Schofield estimated that the population of England & Wales increased from 2,773,851 in 1541 to 4,011,563 in 1601,[52] an increase largely the result of the gradual disappearance of the plague.

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[46] Ibid, p. 57.
[47] Ibid,
[48] J. Whittle, *The Development of Agrarian Capitalism: Land and Labour in Norfolk, 1440- 1580*, 2000, pp. 18, 310.
[49] Razzell, *Essays*, p. 238.
[50] P.E. Razzell, *William Shakespeare: The Anatomy of an Enigma*, 1991, p. 140.
[51] Ibid, p. 12.
[52] E.A. Wrigley and R.S. Schofield, *The Population History*, p. 208.

As a consequence of this growth in population the price of arable produce trebled in the Forest of Arden area, and cattle more than doubled during the same period.[53] Rents in this area 'often lagged behind prices to quite an extraordinary extent', and the result was a marked increase of the wealth 'of the farmer, as against the landless labourer or craftsman on the one hand, and the landlord on the other.'[54] This was reflected in national trends with yeomen farmers noted for their increasing wealth, including the 'great rebuilding' of farmhouses and the growth in the consumption of a range of domestic goods.[55]

This increasing gap between the poor and the rich as we have seen was also recorded by Lawrence Stone at a national level and represents the development of capitalism. In Stratford at the end of the sixteenth century about forty per cent of the population were designated as poor,[56] whereas at the same time one-hundred-and-twenty of the leading townsmen were found illegally to be hording grain and barley.[57] This resulted in a serious riot, described by Abraham Sturley in a letter to his friend Richard Quiney:

> U shall understande, brother, that our neighbours are growne with the wantes they feele throughe the dearnes of corne … malecontent. Thei have assembled together in a great nomber, and travelld to Sir Tho. Luci on Fridai last to complaine of our malsters; on Sundai to Sir Foulke Gre. and Sir Joh. Conwai. I should have said on Wendsdai to Sir Ed. Grevll first … Tho. West, returning from the ij knights of the woodland, came home so full that he said to Mr. Baili that night, he hoped within a weeke to leade some of them in a halter, meaninge the malsters … to se them hanged on gibbettes att their owne dores.[58]

This can be seen as an anticipation of Marx's account of the conflict between capital and labour, although it was fuelled more by population increase than an independent development of the economy.

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The reduction in mortality had a different effect on the marriage patterns of the wealthy and the poor. For the elite, lower mortality allowed them to marry later, whereas for the poor it meant a pressure on subsistence resulting in demoralization and earlier marriage. A part of this demoralization was a rise of illegitimate births among the poor at the end of the eighteenth and beginning of the nineteenth century.[59]

The pressure on subsistence amongst the poor is reflected in the proportion of labourers who left wills in this period. This is indicated by evidence on agricultural occupations in Cambridgeshire and Bedfordshire.

Table 15: Percentage Distribution of Wills in Cambridgeshire and Bedfordshire, 1601-1800.[60]

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[53] V. Sharp, *Crisis and Development: An Ecological Case Study of the Forest of Arden, 1570-1674*, 1978, pp. 13, 47.
[54] Ibid, pp. 68.71.
[55] Ibid, pp. 62, 70.
[56] E. Fripp, *Master Richard Quiney*, 1924, p. 177.
[57] B. Rowland Lewis, *The Shakespeare Documents*, 1940, p. 284.
[58] Ibid, 227.
[59] See the data on the increase in illegitimacy during this period in Wrigley, Davies, Oeppen & Schofield, *English Population*, p. 219.
[60] The data for Cambridgeshire is taken from N. Evans, 'Occupations and status of male testators in Cambridgeshire, 1550-1750', in T. Arkell, N. Evans and N. Goose (eds.), *When Death Do Us Part*, 2000, p.

Period	*Farmers & Yeomen*	*Husbandmen*	*Labourers, Shepherds, Servants*	*Number of Wills*
1600-1649	42.4%	27.8%	29.8%	2023
1650-1699	65.6%	17.6%	16.9%	2000
1700-1749	64.7%	16.0%	19.3%	2409
1750-1799	82.1%	8.5%	9.5%	1495

Although not conclusive, the probate data on the changing distribution of occupations is consistent with the increasing pauperisation of labourers and husbandmen and the growing wealth of farmers and yeomen in the South of England.[61] The pauperisation of labourers is confirmed by the literary evidence. This can be illustrated by one of the most detailed accounts provided by the Reverend John Howlett, who had been the Vicar of Great Dunmow in Essex for about 50 years. Describing the condition of labourers he wrote in 1796:

for the last forty or fifty years, some peculiarly favoured spots excepted, their condition has been growing worse and worse, and is, at length, become truly deplorable. Those pale famished countenances, those tattered garments, and those naked shivering limbs, we so frequently behold, are striking testimonies of these melancholy truths.[62]

He argued that these developments were the result of 'the rapid increase of population on the one hand and from the introduction of machines and variety of inventions … [which have led to] more hands than we are disposed or think it advantages to employ; and hence the price of work is become unequal to the wants of the workmen.'[63] He compiled figures of income and expenditure, using details of wages from farmers' wage books and local knowledge of family incomes and consumption, for the two ten-year periods, 1744-53 and 1778-87. The annual expenditure per family in the first period was £20.11s.2d and earnings £20.12.7d, leaving a surplus of 1s.5d. In the second period the figures were £31.3s.7d and £24.3.5d, leaving a deficit of £7.0s.2d.[64] Howlett concluded that

Of this deficiency the rates have supplied about forty shillings; the remaining £5 have sunk the labourers into a state of wretched and pitiable destitution. In the former period, the man, his wife, and children, were decently clothed and comfortably warmed and fed: now on the contrary, the father and mother are covered with rags; their children are running about, like little savages, without shoes or stockings to their feet; and, by day and night, they are forced to break down the hedges, lop the trees, and pilfer their fuel, or perish with cold.[65]

181; the Bedfordshire material is derived from P.E. Razzell, C. Spence and M. Woollard, 'The evaluation of Bedfordshire burial registration, 1538-1851', *Local Population Studies*, 84, 2010. Labourers and husbandmen who left wills were much poorer than yeoman and farmers. In 1585-1638 in Essex, Kent, Buckingham, Surrey and Suffolk the average assets bequeathed by yeomen/farmers was £406, whereas that bequeathed by husbandmen was £87 and that by labourers £42. See G. Clark and G. Hamilton, 'Survival of the richest; the Malthusian mechanism in pre-industrial England', *Journal of Economic History*, 66, 2006, p. 11. In a sample of inventories from eight parts of England in 1675-1725, the equivalent figures were: Yeomen/Farmers £165, Husbandmen £32, Labourers £16. L Weatherill, *Consumer Behaviour and Material Culture, 1660-1760*, 1988, p. 212.

[61] For other evidence see also Razzell, *Essays*, pp. 232, 233.

[62] J. Howlett, *A n Examination of Mr Pitt's Speech in the House of Commons on 12 Feb. 1796, Relating to the Condition of the Poor*, 1796, 2. For a similar account of the condition of labourers, see D. Davies, *The Case of Labourers in Husbandry*, 1796, p. 7.

[63] Ibid, p. 19.

[64] Ibid, p. 48.

[65] Ibid, p. 49. Enclosure may have played a role in generating surplus labour, but this is a controversial thesis. See J.D. Chambers and J.D. Mingay, *The Agricultural Revolution, 1750-1850.*

This conclusion was supported by virtually all contemporary evidence,[66] including that of Admiral Lord Nelson. In a letter to the Duke of Clarence in 1790 he described the condition of the poor in Norfolk:

the poor labourer [is] really in want of everything to make life comfortable. Hunger is a sharp thorn, and they are not only in want of food sufficient, but of clothes and firing … [they] cannot afford candles, soap or shoes, and for drink nothing but water, for beer our poor labourers never taste.[67]

The poverty of labourers and the poor was a contributory factor in the wealth for those owning capital. As Malthus wrote: 'farmers and capitalists are growing rich from the real cheapness of labour.' [68] This indicates that this was a further development of capitalism fuelled largely by the increase in population.

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The population of England & Wales virtually doubled in the period 1801-1851.[69] This resulted in the increasing poverty of labourers and the poor and the growing wealth of the rich. Much of the decline in real incomes was the result of increasing prices associated with the increase in population, which can be illustrated by the relationship between population growth and the price of bread in London.

Table 16: The Relationship between Increasing Population and the Price of Bread in London.[70]

Period	*Mean Population of London*	*Mean Price of 4lbs of Bread in London (Pence)*
1700-49	625,00	5.1
1750-99	788,000	6.4
1801-51	1,631,000	10.7

Mean real wages probably declined in the first half of the nineteenth century,[71] resulting in extreme poverty at times. The Captain Swing riots in 1830 occurred widely in southern and eastern counties, and according to Hobsbawm and Rude 'the basic aims of the labourers were singularly consistent: to attain a minimum living wage and to end rural unemployment ... [much of it the result of] a permanent surplus of labour ... due in the first instance to the growth of population.'[72]

The rural correspondent to the *Morning Chronicle* survey of labour and the poor stated that the labourer's 'employment is precarious, and their wages fluctuating, their

[66] Ibid, p. 227; K. Snell, *Annals of the Labouring Poor: Social Change and Agrarian England. 1660-1900*, pp. 412-417.
[67] Ibid.
[68] T.R. Malthus, *Essays in the Principal of Population*, 1989, p. 28.
[69] B.R. Mitchell and P. Deane, *Abstract of British Historical Statistics*, 1971, p. 6.
[70] E.A. Wrigley, 'A Simple Model of London's importance in changing English society and economy, 1650-1750', *Past and Present*, 37, 1967, p. 44; B.R. Mitchell and P. Deane *Abstracts of British Historical Statistics*, 1971, pp. 497, 498. The population figures are the averages between the population numbers in 1700, 1750, 1801 and 1851.
[71] Razzell, *Essays*, p. 232.
[72] E.J. Hobsbawm and G. Rude**,** *Captain Swing*, 1973, pp. 22, 163.

lives are spent, in the majority of cases. In constant oscillation between their homes and the workhouse, with no alternative beyond starvation or the gaol.'[73]

Mayhew discussed the sweating system as a part of his analysis of poverty in London. At its worst could be highly dangerous to health and life, as was revealed by someone who had worked for one:

> One sweater I worked with had four children, six men, and they, together with his wife, sister-in-law, and himself lived in two rooms, the largest of which was about eight feet by ten. We worked in the smallest room and slept there as well – all six of us. There were two turn-up beds in it, and we slept three in a bed. There was no chimney, and indeed no ventilation whatever. I was near losing my life there. Almost all the men were consumptive, and I myself attended the dispensary for disease of the lungs.[74]

Charles Shaw in his autobiography described the conditions of workers in the Staffordshire Potteries in the 1830s and 1840s:

> All the great events of the town took place … [in] the marketplace. During the severity of winter I have seen one of its sides nearly filled with stacked coals. The other side was stacked with loaves of bread, and such bread. I feel the taste of it even yet, as if made of ground straw, and alum, and Plaster of Paris. These things were stacked there by the parish authorities to relieve the destitution of the poor. Destitution, for the many, was a chronic condition in those days, but when winter came in with its stoppage of work, this destitution became acute, and special measures had to be taken to relieve it. The crowd in the marketplace on such a day formed a ghastly sight. Pinched faces of men, with a stern, cold silence of manner. Moaning women, with crying children in their arms, loudly proclaiming their sufferings and wrongs. Men and women with loaves or coals, rapidly departing on all sides to carry some relief to their wretched homes − homes, well, called such … This relief, wretched as it was, just kept back the latent desperation in the hearts of these people.[75]

This poverty was also a factor in the revolutionary condition of Buckinghamshire in the 1830s:

> Numbers of men were out of work, bread was dear, and the Chartist agitation was violently active. Copies of the *Northern Star* and other Chartist papers found their way into every workshop. Meetings were held almost every evening and on Sundays. Some of the speeches advocated physical force as the only remedy … Lectures on Peterloo, the Bristol Riots, the Monmouth Rising, and the Pension List were common. Bad trade, low wages, and dear bread were the stimulating causes of widespread discontentment. Men were driven to their lowest depth of hatred of the governing classes… the country was passing through the throes of a political convulsion which was fast ripening into a revolution. The mechanics institute gradually degenerated into a violent revolutionary club.[76]

Revolution was prevented by the rise in the standard of living after the mid-nineteenth century. The poverty found by Mayhew was gradually alleviated, and this was partly because industrialisation had brought about an improvement in average living standards after the 1840s, mainly through a fall in prices. A number of informants told Mayhew how the fall in prices of bread, meat, fruit and vegetables, clothing and other goods, had improved their lot

[73] P.E. Razzell and R. Wainwright, *The Victorian Working Class*, 1973, p. 3.
[74] Ibid, p. 303.
[75] C. Shaw, *When I Was a Child*, 1980, pp. 42, 43.
[76] J. Buckmaster, *A Village Politician*, 1982, pp. 98, 99, 124, 153.

from the mid-1840s onwards, and this was due to a number of factors – new technology, railways, more efficient farming and foreign imports.[77]

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Harley has recently concluded that 'the emergence of Britain's modern growth depended more on a long history of capitalism than on the industrial revolution.'[78] Why did capitalism and the industrial revolution first arrive in England and not elsewhere? Weber gave several reasons why England differed from continental powers:

> As a result of its insular position [as an island] England was not dependent on a great standing army. On the continent it was possible for the state to protect its peasantry through its standing army, but in England this was not possible. As a result, England became the classical land of peasant eviction. The labour force this threw on the market made possible the development of the domestic small master system ... Thus, while in England shop industry arose, so to speak, by itself, on the continent it had to be deliberately cultivated by the state ... This is by no means fortuitous but is the outcome of continuous development over centuries... the result of its [England's] insular position.'[79]

In essence what Weber is saying here is that capitalism first developed in England as a result of its geographical position as an island, allowing to protect itself by the use of a navy rather than a standing army. England's insular position allowed the development of capitalism at a very early stage from the thirteenth century onwards. According to Unwin

> During the thirteenth century there was an increasing shift of industry away from urban areas to the countryside … which permitted cloth producers to take advantage of cheap labour away from the prohibitive restrictions of the guilds … Textile skills were traditional there and the rural overpopulation made labour available …[80]

The development of capitalism in rural areas in the fifteenth and sixteenth centuries is well documented,[81] and contemporaries contrasted the freedom of trade in England compared to the situation in France.[82] In France the crown had used its standing army to impose taxes and control of the economy, inhibiting entrepreneurial activity, whereas in England the absence of a standing army allowed the flourishing of trade free of royal control.[83]This was a critical factor in the English civil war, with the crown losing its war with parliament due to its lack of a standing army.[84]

In Shakespeare's Stratford an attempt to supress the forestalling of grain in 1598 was undermined by the inability of the government to enforce legislation. The poor had appealed to the four local landed magistrates for protection, not realising that all of them were leading

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[77] Ibid, p. 311.
[78] C.K. Harley, 'British and European industrialization' in L Neal and J.G. Williamson (eds.), *Capitalism: Volume 1: The Rise of Capitalism from Ancient Origins to 1848*, 2014, p. 492.
[79] Razzell, *Essays*, p. 78.
[80] P.T.H. Unwin, 'Town and trade 1066-1500' in R.A. Dodgson and R.A. Butlin (eds), *A Historical Geography of England and Wales*, 1978, p. 136.
[81] J. Whittle, 2000; L Shaw-Taylor, 'The rise of agrarian capitalism and the decline of family farming,' *Economic History Review*, 65, 2012.
[82] Razzell, *Essays*, pp. 88, 89.
[83] Ibid.
[84] See P.E. Razzell, 'A sociological analysis of the English civil war' in *Essays*, pp. 84-145, Academia Online.

forestallers of grain themselves.[85] In England, the lack of a central authority supported by a standing army was critical in the development of free trade and the spread of capitalism.

However, population growth provided the surplus labour required for the development of capitalism and this is a process that has occurred in the modern period in China and elsewhere in the world.[86] It is unclear whether this in the long run will continue to operate, but this is an issue beyond the scope of the present paper.

[85] Razzell, *William Shakespeare*, p. 142.
[86] See 'Asian population growth and the increase of economic inequality in Britain' in Razzell, *Essays.*