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The Consumer Revolution: Turning Point in Human History, or Statistical Artifact?

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A Farewell to Alms argued based on wages, rents and returns on capital that the English by 1800 were no wealthier than in 1400. An argument against this has been the supposed *consumer revolution* of 1600-1750. Since ordinary families by 1750 begin routinely consuming former luxury goods, income must have risen much faster than wages through a concomitant *industrious revolution*. This paper argues that the *consumer* and *industrious revolutions* of 1600-1750 are artifacts created by misinterpreting the major source on consumption in these years, probate inventories. Properly interpreted there is no conflict between wages, income and consumption in England 1600-1750.

The Consumer Revolution

It has now become accepted almost as a matter of historical truism that in 1600-1750 a *consumer revolution* - a large and rapid increase in the consumption of consumer goods such as tableware, curtains, pictures, and cutlery, a lust for objects - preceded the Industrial Revolution, both in England and elsewhere in northern Europe. This *consumer revolution* was discovered in 1982 by Neil McKendrick. "*A consumer revolution occurred in England in the eighteenth century along with the Industrial Revolution...The consumer revolution was a turning point in the history of human experience*" (McKendrick, 1982, 9). Despite its recent discovery, it quickly found wide acceptance. Colonial Williamsburg, in a 2006 newsletter to High School history teachers, notes that "... it is clear that mechanization, the factory system, faster and less expensive transportation, and the Industrial Revolution were all preceded by the phenomenon we call the "consumer revolution." The term refers to the total revision of expectations."¹ At least one university in England now even offer classes on the *consumer revolution*.² Joel Mokyr, in his just published history of

¹http://www.history.org/history/teaching/enewsletter/volume5/december06/consumer_rev.cfm

² <http://huss.exeter.ac.uk/history/modules/HHH3597/description/>

England 1700-1850 states as fact “the consumer revolution... clearly preceded the Industrial Revolution” (Mokyr, 2010, 15). A recent article begins,

...historians now contend that eighteenth century men and women began to consume goods on a previously unthinkable scale...ordinary men and women freed themselves from the “stranglehold of scarcity” that had long defined their material world and began to fill their lives with objects...consumers launched a buying spree of historic dimensions, purchasing unprecedented quantities of household furnishings, clothes, and personal accessories (Kwass, 2003, 87).

As Jan de Vries points out, this is only one of five *consumer revolutions* that have been proclaimed by historians for various eras: the Renaissance, the Baroque, the eighteenth century, the late nineteenth century, and the twentieth century (de Vries, 2008, 37-39). But de Vries focuses on “the new consumption regime observable by the second half of the eighteenth century” as the true *consumer revolution* which “formed the context in which the Industrial Revolution unfolded” (de Vries, 2008, 177).

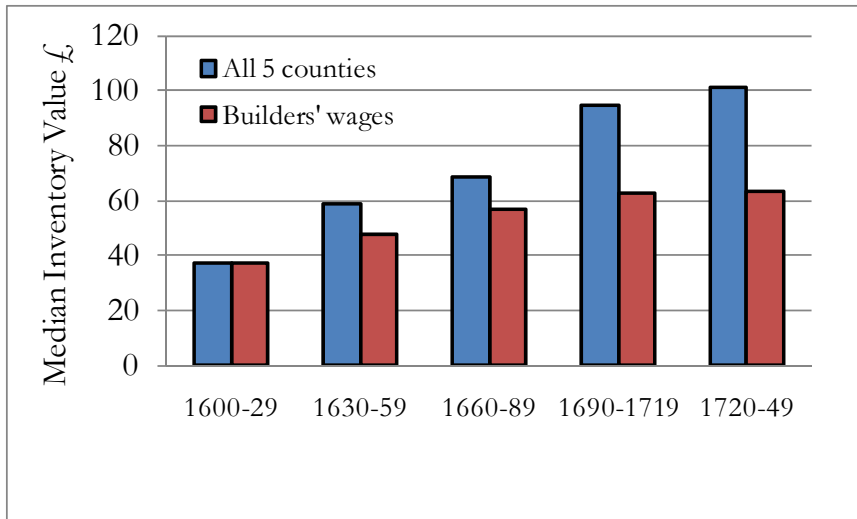
But what is the empirical basis of the received wisdom of a *consumer revolution*? The dominant source of information on material life in England in the years 1600-1750 is the inventories of the movable goods of the deceased drawn up in proving wills. Overton et al., for example, note that “*Our perspective of economic and social change ... is entirely dependent on the evidence from probate inventories*” (Overton et al., 2004, 170). John Moore states equivalently that “*...without probate inventories large areas of early modern economic and social history must inevitably remain unknown and all but unknowable*” (Moore, 1976, 2).

These inventories can give an astonishingly detailed view of the material possessions of the deceased, down to knives and forks. It is the inventories that have suggested to a succession of investigators an efflorescence of material goods.³ The median of the value of personalty, for example, for 5 counties – Cornwall, Hertfordshire, Kent, Lincolnshire and Worcestershire – increase by 2.5 times between 1600 and 1750, as is shown in figure 1.⁴ In the same interval, also shown in figure 1, the nominal day wages of building workers in England increased by only two-thirds. Material consumption seemingly increased much more rapidly than wages.

³ Weatherill, 1988, 1993, Shammas, 1990, Overton et. al., 2004.

⁴ Personalty included bonds, and debts owed the deceased. But the share of personalty represented by goods seems to have stayed constant 1600-1750 (Overton et al., 2004, 140).

Figure 1: Median Inventory Appraisal 1600-1749 (£)



Note: The value given is the mean of the median for each of these five counties in each period.

Nominal day wages are adjusted to be equal to mean inventory values 1600-29.

Source: Overton et al., 2004, 140, Clark, 2005.

Figure 2: Share of Households with given object, 1675-1725

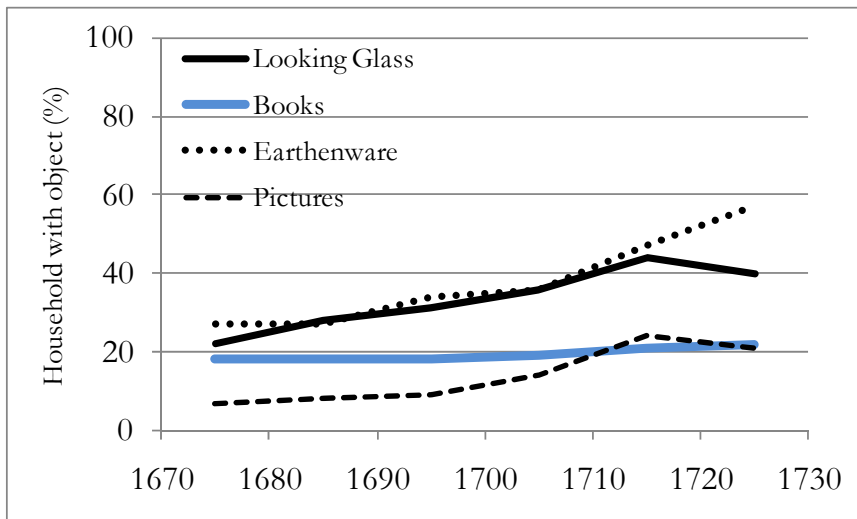
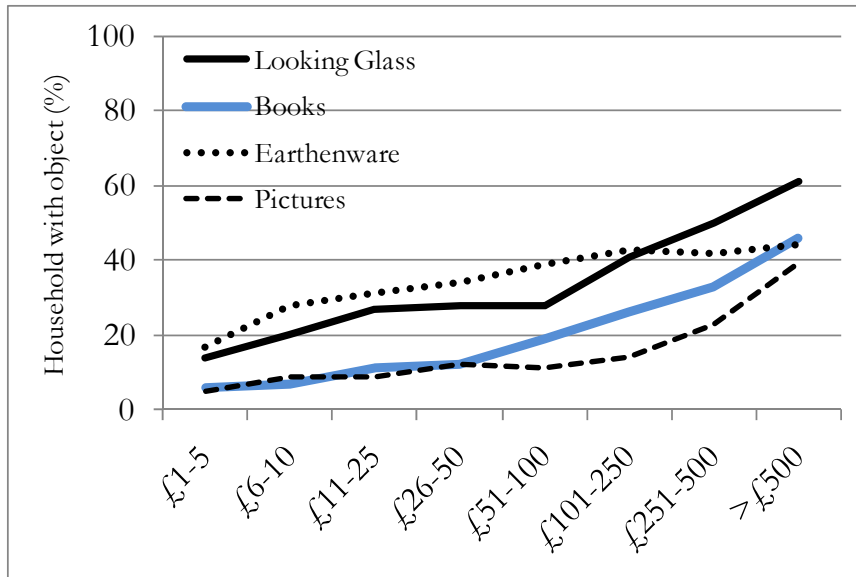


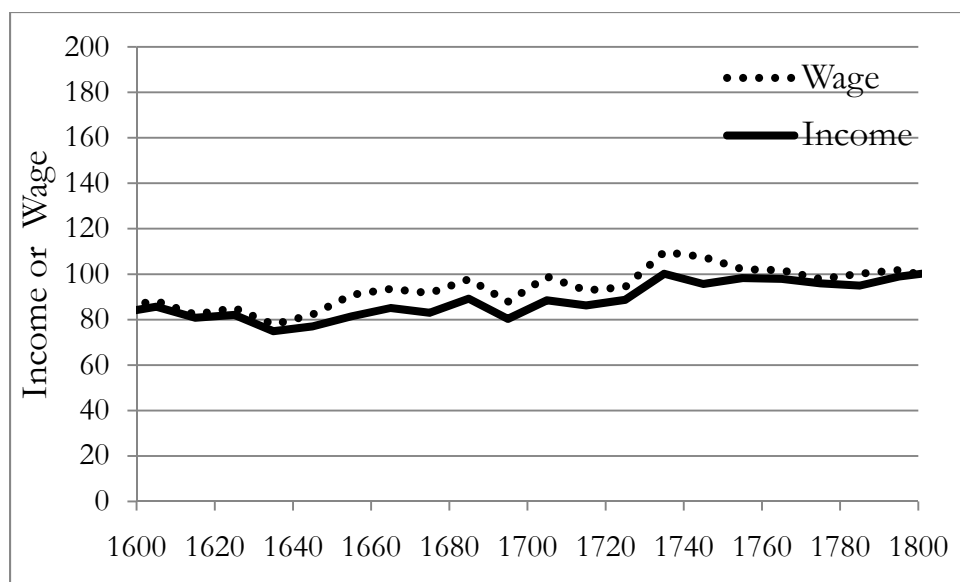
Figure 3: Possessions by total inventory values, 1675-1725



What is true of the sum of possessions, is true for a whole range of individual goods. Lorna Weatherill in a study of inventories in 1675, 1685, 1695, 1705, 1715, 1725 across England finds a rise in the numbers of households containing a whole variety of material possessions. Figure 2, for example, shows the share of households possessing books, earthenware, looking glasses, and pictures. Somehow consumers, without much increase in wages, were consuming a whole cornucopia of new objects.

Such a rise of material possessions without any sign of equivalent gains in day wages immediately poses a problem. Figure 4 thus shows for England 1600-1800 the average estimated male real day wage, as well as average real income per person, with 1790-1809 set as 100. The rise in both wages and income between 1600 and 1750 is very modest – less than 20 percent. Where did the income come for these new goods? The most popular resolution of this conundrum has been the positing by Jan de Vries of another entity, the *industrious revolution* (de Vries, 1994, 2008). Driven by their increased desire for material consumption eighteenth century workers worked more days per year, and employed more of the labor of their wives and children. Though day wages stagnated, household incomes rose because of increased hours of work of men, women and children (de Vries, 2008, 73-121).

Figure 4: Real Wages and Incomes by decade, England 1600-1800



Note: 1790-1809 = 100 for both series.

Source: Clark, 2010, figures 8, 9.

Broadberry, Campbell et al. take the positing of such *industrious revolutions* to an extreme in the attempt to reconcile a notion of a general rise in incomes per capita in England 1200-1800 with the obdurate testimony of real wages to the contrary. Their imputed work days per year per farm family in 1250 to 1850 thus varies from a low of 266 days per family in 1450, to a high of 539 in 1850 (Broadberry, Campbell et al., 2009, Table 24). But they also with this method end up assuming a “de-industrious revolution” in the years 1300-1450, when work days are assumed to decline by nearly 30 percent. They make these assumptions about changing work days per year is in order to reconcile their estimates of farm outputs directly with estimates of farm output from factor payments (wages, land rents, etc.). Farm wages are so high in 1450, for example, that the total farm output implied if all workers were fully employed would greatly exceed the directly estimated output.

Clark and van der Werf point out, however, that at least in England there is empirical sign of only the most modest *industrious revolution* in the years 1600-1850.⁵ The increase in days worked per

⁵ Clark and van der Werf, 1998. Voth (2001a, 2001b) does find evidence of an industrious revolution, but in the wrong period, 1760-1830, to explain what is observed in the probate inventories of 1600-1750.

year for farm workers over these years is estimated to be only in the order of 10 percent (Clark and van der Werf, 1998, table 1, 838). Even by 1851 in England all child and female labor constituted only 21 percent of total wage earnings. So even if the amount of child and female labor doubled over the years 1600 to 1750 it could add only another 10 percent to earnings (Clark and van der Werf, 1998, 840). So to explain one observed entity, the *consumer revolution* we have ended up positing another unobserved entity, the *industrious revolution*.

However, Weatherill also shows that in the interval 1675-1725 the possession of all such objects is strongly dependent on the total value of the inventory. Figure 3, for example, shows by total inventory values the percentage of households possessing books, earthenware, looking glasses, and pictures. Thus the inventories will only be a good guide to average material consumption or goods possession in England over the years 1600-1750 if the inventories are sampled across all these periods from the same fraction of the wealth distribution. I show below that this assumption fails dramatically in exactly this period in England. Wills went from being an astonishingly democratic activity to becoming much more the preserve of the propertied. The average will maker in 1750 was much higher in the social scale than his counterpart of 1600. By looking at probate inventories we have undoubtedly exaggerated the rise in material consumption in the years 1600-1750.

Indeed the *consumer revolution*, and the attendant *industrious revolution* are an artifact of the sources, rather than a reflection of reality. Occam's Razor, "entities must not be multiplied beyond necessity," counsels against this rapid multiplication of theorized revolutions, based on no empirical evidence.

The Characteristics of Will Makers, 1540-1858

The inventories used to identify the *consumer revolution* are those of wills that were proved in the local courts: Archdeaconry Courts, Commissary Courts or Peculiars. However those using the evidence of the inventories have not appreciated that the characteristics of the average testator in England, and in these courts, changed markedly from 1600 to 1750.⁶

⁶ Goose and Evans report on increase in numbers of surviving wills per head of the population nationally from the early sixteenth century to 1600-46, but they do not consider what happened after 1660, where we will see below the decline set in (Goose and Evans, 2000, 38-43).

The first evidence of the potentially changing nature of testators comes when we calculate for different counties in England the proportions of men leaving a will that survives to this day.⁷ To do this I calculate for each decade for the counties Essex, Kent, Buckingham, and Suffolk (1540-1709) the estimated number of adult men dying in each decade 1540-1858. From the census and Wrigley (2007) we have county population estimates 1761-1861. For 1689 we get an estimate of houses in each county, which is converted into county populations before 1689 using the general trend of population in England 1540-1690, and counting 4.74 people per house in 1689. Between 1689 and 1761 I interpolate county populations using the census trends also. To get from county populations to males dying in each decade I multiply the estimated populations by the crude death rate for England given in Wrigley et al. (1997), p. 614, divided by 2. I also assume that 60% of men in each period live to adulthood, so that 60% of male deaths are of adult men.

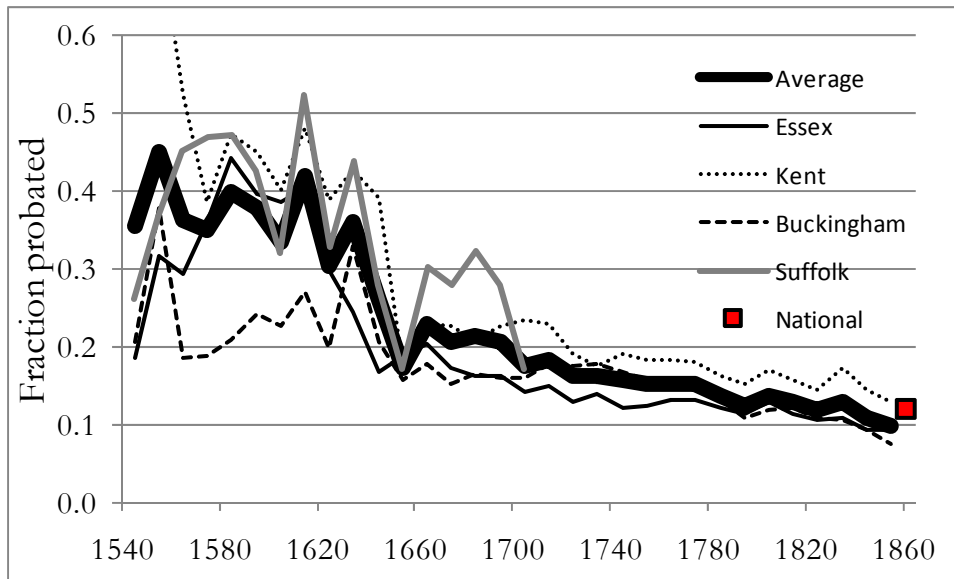
I calculate two totals of male wills by decade for each county. The first is all surviving wills and administrations of men in that county in all will courts. The second are all wills proved in the local archdeaconry and diocesan courts (excluding the Prerogative Courts of Canterbury and York). The ratio of wills to male deaths represents the proportion of men we know were at risk of producing a surviving probate inventory. The survival of wills in the various local probate registers of England before 1858 is to some degree a random process – wills and will registers got lost or destroyed over time. So this number actually represents a lower bound of men whose estates went through the probate process. But the hazards of survival should typically be greater for the earlier years.

Figure 4 shows the estimated fraction of men leaving a probated will in each county in all courts, and the overall average, over the interval 1540-1858. Two things stand out. The first is the high fraction of all men leaving a will in the decades before 1640: typically 37 percent of men. Men whose estate entered probate spanned a large fraction of the male population in these early years.

After the 1630s these proportions entered into a long decline. By the 1660s the proportion was down to 23 percent, by the 1740s, at the end of the probate inventory era, 16 percent, and by the 1850s only 10. Thus between 1600 and 1750 the fraction of men whose estate entered probate in these counties declined from 37 percent to 16 percent. Also shown is the estimated national share of probated wills in 1861 for men nationally in England and Wales, 12 percent, which is not too far above the average estimated share for these counties in the 1850s of 10 percent.

⁷ Male wills are used here because men's wills typically reveal their occupations, and hence give indicator of their social and economic status.

Figure 4: Fraction of Men Probated by Decade, 1540-1858



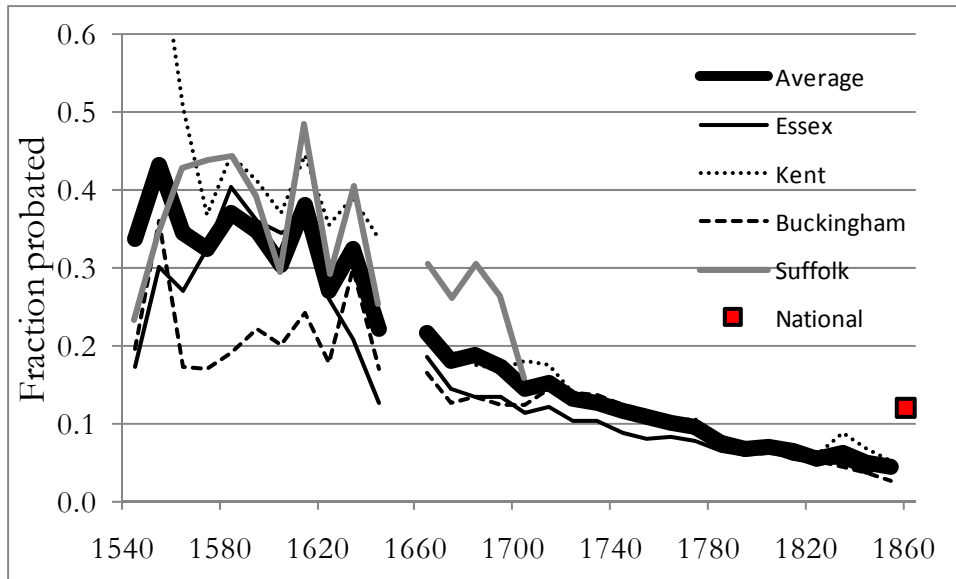
Sources: See appendix.

If we look just at the local courts, whose probate inventories provide the evidence of the *consumer revolution*, then the decline in the share of men's estates probated is even more marked: from 34 percent before 1640, to 22 percent in the 1660s, 12 percent in the 1740s, and a mere 4 percent in the 1850s.

As noted the evidence here comes from surviving wills and administrations in court records – the original wills, the register copies, or the record of an administration. Both original wills and registers would get lost over time. But we would expect in general that the earlier we go, the greater these losses would be, so that if anything the trends shown here would underestimate the decline in the numbers of men whose estates were probated.

It is unclear why the frequency of probate was declining 1630-1858. It has long been noted that there were mysterious variations across different ecclesiastical jurisdictions in the frequency of will survivals for any given time period (Goose and Evans, 2000, 39), which we see also in figures 4 and 5. But why in a society which was steadily becoming more literate and numerate over the years 1540-1858 the frequency of men making written wills filed in courts declined so markedly is unknown.

Figure 5: Fraction of Men Probated in local courts by Decade, 1540-1858



Note: For most of the years 1652-1660 local probate courts were closed, and all estates proved in a new court in London.

Sources: See appendix.

As the frequency of probates declined 1600-1750, the characteristics of will makers were changing in favor of higher status and richer men. The first measure we get of this is the ratio of high status agriculturalists (yeomen, graziers, farmers) to those of low status in agriculture who mainly earned their living through their labor (husbandmen, shepherds, laborers). In England before 1650 there was a continuum of farm sizes, with many small farms occupied by yeomen.⁸ But average farm size was increasing leading to a more polarized social structure in the countryside, with fewer yeomen and farmers, and more laborers and husbandmen. Thus if wills were sampling the same distribution of men in farming in 1700-50 as in 1600-50 there would be more husbandmen and laborers in the later period

What we strongly observe in 1540-1760 is instead a substantial increase in the fraction of men in farming who are described as “yeomen” or “farmers” as opposed to the lower status occupations. Figure 6 shows the ratio of yeomen to husbandmen and laborers in the local wills of Essex, Kent,

⁸ In a sample of wills, the average yeoman before 1650 is estimated to have owned just 8.6 acres of land, and the average husbandman or laborer only 1.4 acres.

Buckingham, Surrey and Suffolk over these years. In the farming sector there is an almost complete disappearance of what would be a growing agricultural proletariat from probate records over this period. In the seventeenth century there are only 0.55 yeomen for every husbandman/laborer. This ratio then moved steadily and dramatically in favor of yeomen: 1600-49, 1.37, 1650-99, 2.7, 1700-69, 4.6.⁹

This was not because the term “yeoman” was becoming debased. For a large sample of 14,570 local wills collected by Clark and Neil Cummins to examine the relationship between wealth and fertility, the average estimated amount of land held per yeoman increased substantially in the interval 1540-1760.¹⁰ Indeed for local wills the average amount of land held by those engaged in farming increased as follows: 1540-99, 3.1 acres, 1600-49, 4.2 acres, 1650-99, 4.6 acres, 1700-69, 8.7 acres. Since the ratio of men engaged in farming per acre nationally changed little over these years, the wills must be sampling a more exclusive section of the farm population. The decline in the fraction of the population having estates probated seemingly was substantially because poorer men were disappearing from the probate process.¹¹

Another sign of the increasing exclusivity of testators, even in the local courts, is the ratio of the fraction described by such honorifics as “gentleman” and those of the lowest classes in general: husbandmen, laborers, servants. In the local wills of Essex, Kent, Buckingham, Surrey and Suffolk, as is shown in figure 7 in the sixteenth century in local wills there were 6 “gentlemen” for every husbandman, laborer or servant. Again this ratio rose steadily and dramatically: 1600-49, 15 per 100, 1650-99, 40 per hundred, 1700-69, 71 per hundred.¹²

Again the objection might be raised that the term “gentleman” was just being steadily devalued. But with the Clark-Cummins sample of wills we can check two things: how many acres of land did the average gentleman with a will proved in the local courts have, and how many dwellings did they own. Land and dwellings were both in relatively fixed supply compared to the population. If “gentleman” was being applied to the *boi polloi* after 1700 then we should see a decline in the ownership of such goods by gentlemen. Table 1 shows for “gentlemen” in local wills by period the

⁹ Because of the wide range in this ratio across the five counties, the average is constructed as the geometric mean of the ratio in each county. This reduces the weight given to counties such as Essex and Suffolk with high ratios.

¹⁰ Clark and Cummins, 2010. The wills here are mainly drawn from Surrey, Suffolk and Essex.

¹¹ The evidence here is consistent with a study by Nesta Evans of occupation statements in wills in rural Cambridge. The ratio of yeomen and farmers to husbandmen and laborers in the Consistory Court of Ely was as follows: 1551-1660, 0.28, 1601-1650, 0.43, 1651-1700, 1.00, 1701-1750, 2.38 (Evans, 2000, 180).

¹² Evans again finds the same trend for rural Cambridge (Evans, 2000, 179-80).

Figure 6: Ratio of Yeomen to Husbandmen, Local Probates, 1540-1760

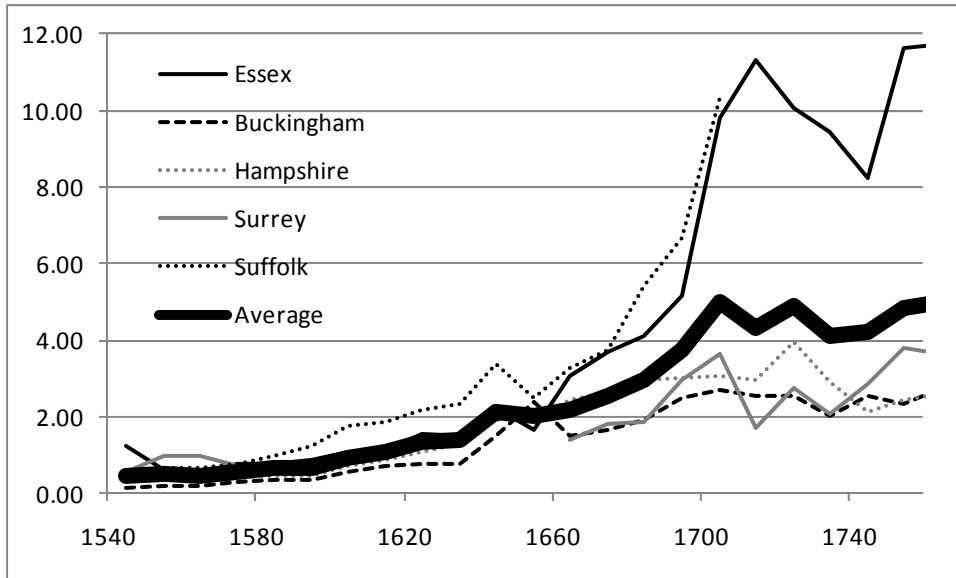


Figure 7: Ratio of “Gentlemen” to husbandmen, laborers, servants, Local Wills, 1540-1858

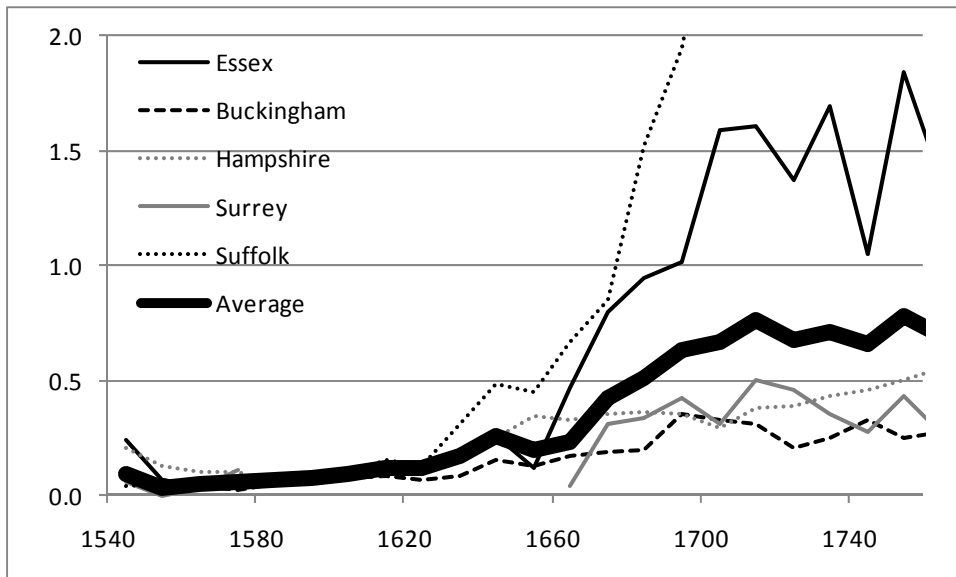


Table 1: Characteristics of “Gentlemen” in Local Wills, 1540-1769

| Period | Number | Houses | Land (acres) |
|---------|--------|--------|--------------|
| 1540-99 | 23 | 4.6 | 14.9 |
| 1600-49 | 100 | 2.7 | 20.7 |
| 1650-99 | 53 | 1.9 | 17.9 |
| 1700-69 | 80 | 2.7 | 19.4 |

Source: Clark-Cummins Wills Database (Clark and Cummins, 2010).

average number of houses they owned, and the average estimated number of acres of land. There are small numbers in these wills which allows for a lot of random error. But the overall impression conveyed by the table is that there was little change in aggregate in the numbers of houses and amount of land that gentlemen held over these years. The rise in numbers of gentlemen was not a byproduct of a dilution of the social and economic status of gentlemen in these years.

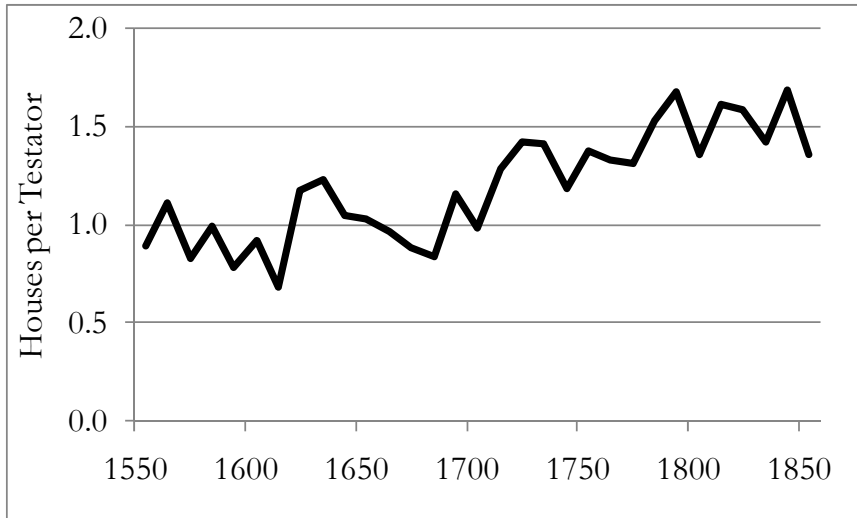
From 1540 to 1858 houses may have become more elaborate, with more rooms, larger rooms and more furnishings. But as long as family sizes and compositions did not change, then we expect that there would be about 4.7 people per dwelling as is suggested by the hearth tax of 1689, and the census of 1801. In that case, if adult men are 0.6 of all males, there should be 0.7 houses per adult male across the whole population. If almost all these houses were owned by men, and all men left wills, then the average male would leave 0.7 dwellings.

In fact wills were more likely to be made by men with property. So the average testator should leave more than 0.7 dwellings. And since dwellings are in relatively fixed supply compared to the population, we can use the numbers of dwellings left per testator as an indicator of the relative average status of testators over time. More houses per testator implies an average testator higher up in the overall income distribution. A reflection of this is the number of houses per testator for different occupational groups over the whole sample: laborers, 0.7, husbandmen, 0.8, artisans, 1.2, traders, 1.2, farmers, 1.3, professionals, 1.5, gentlemen, 2.3.

Figure 8 shows the average number of houses per testator, for a large sample of local will makers in Surrey, Suffolk and Essex, 1540-1858, controlling just for residence in a town, or in London. There is a clear rise in the numbers of dwellings bequeathed per testator around 1700, and the average number of dwellings owned per testator rises from 0.86 in 1540-99 to 1.26 by 1700-49. Testators are becoming a more selective group.

Could we perhaps use wills to infer men's assets and consumption if we controlled for occupation? Figure 8, which shows the number of dwellings reported per testator controlling for occupation, 1540-1858, suggests that even with such controls testators were becoming a more selective group. The graph shows the estimated number of houses for a testator who was an artisan – carpenter, bricklayer, mason, plumber, etc. – for each decade. Even with these controls houses per testator rise after 1700, though the gains are smaller. Thus houses per testator were 1.1 in 1540-99 but 1.3 in 1700-49, and 1.5 by 1800-58. So even if we controlled for occupations, there is strong evidence that the typical testator would be from relatively higher in the wealth distribution after 1700. There is no simple way to control for the changing character of testators over time. This means that wills in this period are not informative on society wide changes in wealth and consumption. Since wills are a vast source of information on life in early modern England, with by some estimates as many as 2 million surviving, the changing character of will makers is an important caveat about this source that should be widely advertized.

Figure 8: Houses per testator, local wills, 1550-1858



Source: Clark-Cummins Wills Database (Clark and Cummins, 2010).

Figure 9: Houses per testator, local wills, controlling for status, 1550-1858



Source: Clark-Cummins Wills Database (Clark and Cummins, 2010).

Probate Inventories and the Consumer Revolution

We see above that the flood of new goods supposedly characteristic of the *consumer revolution* is likely just an artifact of the changing composition of the population making probated wills. To emphasize this, note that the wealthy long before 1700 consumed almost all the goods characteristic of the supposed *consumer revolution*. Extracts, for example, from the household account books of Lord William Howard, of Naworth Castle near Carlisle, far remote from London, reveal expenditures in 1612-33 for the following very modern list of items:

Furnishings: clocks, pictures, picture frames, pictures framed in glass, wall hangings, rugs, carpets, "Turkey" carpet, cushions, upholstered chairs, curtain rings, curtain rods, glass crucifix, bed covers, fire grate, fire tongs, window glass, fire bellows, tables, cabinets, looking glasses, wainscot, plaster

Clothing and textiles: table cloths, napkins, silk stockings, capes, cloaks, breeches, dresses, slippers, shoes, boots, beaver hat, bone lace, silver buttons, gloves, smocks, waistcoats, shirts, jerkins, garters, petticoats, doublets

Tableware: silver spoons, silver bowls, silver candlesticks, silver box, silver platters, cream dishes, pewter plates and dishes, wine glasses, beer glasses, glass salt cellar

Kitchenware: pans, saucepans, pie plates, glass bottles, strainers, coal shovels, sieve, mincing knives, dripping pan, chopping knives, bucket

Foodstuffs: French wine, Canary wine, vinegar, sugar, liquorish, oranges, lemons, quinces, almonds, olives, figs, gingerbread, lobster, oysters, salmon, trout, eels, swans, saffron, raisins, currants, dates, prunes, ginger, cinnamon, cumin, turmeric, cloves, nutmegs, saffron, cucumber, pepper, mace, rice, plums

Garden: apple trees, pear trees, garden rake, garden axe, garden sheers, shovels, sundial, flower pots, dovecot

Miscellaneous: tobacco, tobacco pipes, coach, watches, watch cases, spectacles, spectacle cases, books (the library contained at least 242 volumes), almanacs, paper, pens, ink, combs, ear wires, candles, wax, perfume, frankincense, scissors, smoothing iron, brushes.¹³

Even before the supposed *consumer revolution* wealthy people were spending for decorative materials to create a pleasant domestic environment, and garden space outside the house. They had

¹³ Ornsby, 1878.

a taste for exotic flavors and foodstuffs.¹⁴ They had clocks and watches, books, cabinets, silver and gold items. As scholars such as Lisa Jardine have emphasized, a taste for goods and domestic comforts among the rich extended back as far at least as the Renaissance (Jardine, 1996).

Looking just at the wills of testators, we see among the rich even before 1600, a rich assembly of the objects of consumption. Lady Philippa Smith, widow of an Essex Knight, for example, enumerates in her 1578 will the following objects:

bedstead of walnut tree, carved...mattress of linen cloth...featherbed...blanket of white woollen...red Spanish blanket...coverlet of tapestry...tester of red velvet fringed with silk and copper silver...curtains of red taffeta sarcenet likewise fringed...bolster and two pillows...long cushion of red velvet with copper silver fringed...cupboard cloth of Spanish work...damask table cloth and a towel...dozen damask napkins...two pair of fine sheets and two pillowberes...long table cloth of Holland...short table cloth...French bed of walnut tree...testern of tissue to the same...covering of tapestry...quilt of green sarcenet...five curtains of green sarcenet...chair and two stools...cupboard of walnut tree...table of wainscot...long cushion of tissue...bedstead of walnut tree...two white rugs...court cupboard...chair and two stools...square table of walnut tree...quilt of red, green and yellow damask...long cushion of red satin with copper silver fringe...chair of yellow velvet with two stools...hangings of tapestry...six old needlework cushions...great chest of fir board...ship chest...lesser press...bedstead of walnut tree...tester with curtains of green kersey with copper silver lace...covering with Sir Thomas Smith's arms...quilt of red, blue and green damask...long cushion of tissue...chair and two stools of green kersey with copper silver lace...table and chair of walnut tree...cupboard cloth of Spanish work...two creepers of iron...bedstead with a testern of blue damask and curtains...table with a frame...chair of red damask...quilt of green sarcenet...best bracelets of gold...home-made coverlet...testern and curtains of blue say...quilt of green sarcenet...chair of red velvet and two stools suitable appertaining...cupboard pane of damask edged with silver...fir chest...gilt silver pot...little French gilt salt...tin parcel gilt cups...cap of velvet...brooch of gold...little white silver bowls...bedstead of walnut tree...testern of green and red sarcenet...old chest with iron bars...stone jug footed with

¹⁴The Howard household did not consume tea or coffee, nor is there much sign of earthenware. But tea at least experienced dramatic declines in its price before it began to be widely consumed.

silver...gilt wine silver pot...two partlets and a pair of sleeves of velvet...little chain of gold...bedstead...bedstead...barred chest...parcel gilt cups...bedstead of wainscot...gilt silver cup...six black cassocks...little fir chest...wainscot chair...smock...kercher...tablecloth...smock...kercher...tablecloth...smock...kercher...white silver wine pot (Emmison, 1978, 43-5).

Her husband two years before bequeathed at least 3,000 oz of silver plate (Emmison, 1978, 39-43).

So the supposed *consumer revolution* is not about the discovery of lust for objects. It is about the supposed democratization of that lust. But, as emphasized above, the democratization seen in local probate inventories is an illusion. The average testator of 1750 was at a much higher level in the distribution of wealth within society than the average testator of 1600. We can infer nothing about changing consumer behavior from wills in England, as abundant a source as they are.

Conclusion: Too Much Revolution

The great and undoubted revolution, the Industrial Revolution, has colored and inflected all work on English economic history in the years 1200-1800. The natural tendency has been to find in the years leading up to the Industrial Revolution the changes in the economy that help explain the great event. Since England by 1750 was a prosperous society, with many people living in urban areas, and many employed outside agriculture, there is an assumption that it must be very different in character from the typical pre-industrial society represented by conditions in England before 1500. Even the term “early modern” used to denote the years 1500-1750 carries the implication that this was a transitional regime between the static pre-industrial world, and the dynamic modern world.

Yet the evidence on real wage and real incomes in England, shown for 1600-1800 in figure 4, strongly suggests little long run gain in living standards in England. It has been known since the time of James Thorold Rogers in the nineteenth century that real wages in pre-industrial England were extraordinarily high between 1350 and 1550 by the standards of 1800. Successive refinements of these wage series, and refinements of cost of living indices have done nothing to change that early impression (Clark, 2005, 2007a). Including other elements of income such as land rents, house rents and returns on capital gives an overall estimate of income that is less favorable for 1350-1550. But there was still no gain either in wages or in real incomes between 1500 and 1800 (Clark, 2010, figures 8, 9).

So where do we find ourselves? There is no systematic evidence for the widely accepted claim that there was a *consumer revolution*, meaning a much more rapid rise in possession of consumer goods than in wages or income, in the years 1600-1750. Thus the history profession has embraced not just one, but two, empirically unsupported revolutions for the years 1600-1750: the *consumer revolution* and the *industrious revolution*. This is a situation that Occam's Razor, "entities must not be multiplied beyond necessity," would seem designed to address. There may indeed have been longer term changes in the attitudes and behavior of consumers and producers in the pre-industrial world. But the idea that there was a dramatic and fundamental change in the consumption and production behavior of people in England in the short interval 1600-1750 lacks any empirical foundation.

Sources of will numbers and occupations

A number of local record offices in England list all the wills from their county in Archdeaconry and Commissary courts before 1858 in their online catalogues. These counties include Buckingham, Essex, and Hampshire. For Kent there is available online a listing of all local wills in East Kent, but without any indications of occupations. For both Suffolk and Surrey there is a complete listing of local wills, but only in paper form.

Buckingham: <https://apps2.buckscc.gov.uk/ecommerce/WillsExternal/WillsExternalSearch.aspx>

Essex: <http://seax.essexcc.gov.uk/>

Hampshire: <http://calm.hants.gov.uk/DServe/Advsearch.htm>

Kent: http://www.kentarchaeology.ac/ekwills_a/index.html

Suffolk: Serjeant and Serjeant, 1979, 1984.

<http://nrocat.norfolk.gov.uk/Dserve/public/searches/nroprobate.htm>

Surrey: Webb, 1996-2004.

The source of PCC will numbers in all periods was

<http://www.nationalarchives.gov.uk/documentsonline/wills.asp>

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