

Revising England's Social Tables 1688-1812*

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What are we to do with those tempting but treacherous social tables drawn up by Gregory King for 1688, Joseph Massie for 1759, and Patrick Colquhoun for 1801-1803 and 1812?¹ They offer unique quantitative views of social structure and income distribution during a statistical Dark Age. Furthermore, each of these observers had socioeconomic information about his time that has not survived.

Yet precocious guesses for political consumption must always be distrusted and these social arithmeticians certainly had axes to grind. King produced figures that warned against "the Vanity of People in overvaluing their own Strength . . . That . . . has influenced all former Calculations of this Kind both at Home and Abroad," and dramatized negative national saving during the war against France.² Massie entitled his social

* This is the first of a pair of articles on Britain's social tables between 1688 and 1913. The sequel is Lindert and Williamson (1983). The authors wish to thank N. F. R. Crafts, Stanley Engerman, James Foreman-Peck, Alice Hanson Jones, Larry Neal, Lawrence Stone, and an anonymous referee for their helpful comments on an earlier draft of this article. They also wish to thank the National Science Foundation for research support, and George Boyer for computer assistance.

¹ See King (in Barnett, 1936, hereafter cited as *Two Tracts*), Massie (1760), and Colquhoun (1806, 1815). Limits of space prevent our dealing here with the sketchy social estimates of William Petty for the 1670s, and those of Pitt, Beeke, and Bell around 1800. For more on all these, see Deane (1955, 1957). In particular, we chose Colquhoun (1806) over Beeke (1800) because the former (a) referred to England and Wales, like King and Massie, (b) was based on the census of 1801 and the poor relief returns of 1802 to 1803, and not just the earliest income-tax returns available to Beeke, and (c) gave more occupational detail.

² *Two Tracts* (p. 13). G. S. Holmes suspected a pessimistic bias in his insightful critique of King's social table (Holmes, 1977).

table "A Computation . . . shewing how much Money a Family of each Rank, Degree or Class hath lost by that rapacious (sugar) monopoly . . ." (Massie, 1760). And Colquhoun hoped his 1801–1803 table would document "the proud height to which the nation has arrived" and "to discover the national resources for a more enlarged and useful employment of the poor" (Colquhoun, 1806, p. 25). Each may well have bent his estimates to reinforce a particular policy recommendation.

While economic and social historians have long been aware of their potential flaws, they have freely exploited these "social tables," rarely offering to revise them. Perhaps the time is now ripe for such revisions since information is now available which was unavailable to King, Massie, and Colquhoun. The new data should improve our guesses, as long as we prudently repair to the original hunches when the new data are meager or unpersuasive. The new data do indeed fall short on a number of counts, and for this reason we can only contemplate revising, and not overturning, the original estimates.

Why should we care about the social arithmetic of these intrepid pioneers? The answer is simple: our hunches about 18th century growth are influenced by these social tables. Most of our guesses about inequality trends are also based on them. It may well be that our views on both of these two issues—early growth and inequality—have been distorted by flaws in the social tables of King, Massie, and Colquhoun, which have never been properly repaired. Indeed, a later paper (Lindert and Williamson, 1983) will offer some revisionist views of both of these two critical issues, based on our efforts here. The exercise turns out to be worth it.

I. KING'S ENGLAND AND WALES, 1688

Wartime financial concerns appear to have motivated the most famous of the social tables. As Lancaster Herald, Gregory King was in a position to scrutinize some official tax returns and was shown summary tabulations from others (Holmes, 1977). His journals blaze a trail from the graduated poll tax and Marriage Duty counts to the social table drawn up in 1696 (Laslett, 1973, pp. 65, 70–75, 270, 280–281 of the *LCC Burns Journal*). The table refers to 1688, the *status quo ante bellum* benchmark for his calculations showing a wartime decline in net national wealth and the difficulties of collecting new taxes.³

A. New Family Counts

We begin with King's estimated number of families by social class. His head counts are reproduced on the left side of Table 1. King's

³ In the Burns Journal, for example, King used his social table to estimate the consumption of, and tax yield from, diet, apparel, and necessaries (p. 65), horse ownership (p. 200), and clothing (p. 211).

population estimate (5,500,520) has withstood subsequent scrutiny (Wrigley and Schofield, 1981, chap. 7), and we offer no revision of it or of King's estimate of "families" (1,390,586, counting vagrants). Difficulties arise, however, when King allocates these family heads to social groups.

Numerous 17th century documents strongly suggest that King grossly overestimated common laborers and paupers, while undercounting artisans. This is certainly true of local late 17th century censuses listing occupations.⁴ It is less evident in the urban Marriage Duty returns. These support King, a predictable result since he himself used Marriage Duty returns from London. It appears that King was less familiar with the village data. In 17 rural areas supplying local censuses, at least 6.5% of men were in manufacturing trades, while others were in building and mining; yet King allocates only 4.3% of his family heads to the broad "Artizans & handicrafts" category. Correspondingly, King's imagination contained larger proportions of common laborers and poor than did any dozen places with surviving counts. King's England and Wales in 1688 was even more rural, less industrial, and filled with more common laborers than was Gloucestershire back in 1608.⁵ It is hard to imagine that Gloucestershire had a more modern occupational mix than England and Wales in 1608, or that there was a strong trend toward agriculture and poverty between 1608 and 1688.

In order to improve our head counts for 1688, one of the present authors analyzed 26 local censuses taken between 1676 and 1705 which give occupations, as well as burial records from 41 parishes covering the period 1685–1714 (Lindert, 1980). Using regression analysis, these parish returns were extended to other places, the resulting predictions summed over all of England and Wales. Carefully comparing King with the new estimates and with other independent clues, we can reach a compromise set of "best guesses," listed in the right-hand column of Table 1.

For the top of society, our regression-based counts by themselves are insufficient grounds for revising King. They are based on too few titled and skilled persons for sharp estimates. Fortunately, however, we have

⁴ The 26 local enumerations with occupations covered the following places (1695 unless otherwise dated): (1) 6 London parishes—St. Andrew Wardrobe, St. Benet Paul's Wharf, St. Lawrence Pountney, St. Mary le Bow, St. Mary Woolchurch Haw, St. Mildred Poultry; (2) parts of 3 large market towns—parts of Shrewsbury, 1698; parts of Kirkby Kendall; Swindon, 1697; (3) 17 rural hamlets and parishes—Adisham, Ash-next-Sandwich, Goodeneston-next-Wingham, and Stodmarsh, Kent, all 1705; Hothorpe, Northamptonshire, 1697; Chilvers Coton, Warwickshire, 1684; Barbon, Burton, Casterton, Dillicar, Lupton, Mansergh, and Middleton, Westmoreland; and Donhead St. Mary, Wiltshire, 1697. A total of 12,050 persons was covered. We are grateful to the Cambridge Group for the History of Population and Social Structure for making copies available to us.

⁵ In 1608, a third of all men in Gloucestershire were in manufacturing trades and another 11% were in commerce, mining, and building trades (Tawney and Tawney, 1934), Table X.

TABLE 1
Revising Gregory King's Head Counts for England and Wales in 1688

King, <i>Two Tracts</i>	Revised estimates	Comments												
A. High titles and skills														
Temporall lords	160	<p>Following the arguments in the text, we make the following changes:</p> <table style="margin-left: 20px;"> <tr> <td>Temporal Lords</td> <td style="text-align: right;">200</td> </tr> <tr> <td>Gentlemen</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td>Clergymen</td> <td style="text-align: right;">2,000</td> </tr> <tr> <td>(lesser)</td> <td style="text-align: right;">10,000</td> </tr> </table> <p>These changes would raise the Group A total by 5040. Yet, as argued in the text, King overstated the numbers in (1) Law, and (2) Sciences and the Arts. Retaining his Group A total of 62,586, we can distribute between these two occupations following King's proportions:</p> <table style="margin-left: 20px;"> <tr> <td>Persons in the Law</td> <td style="text-align: right;">8,062</td> </tr> <tr> <td>Persons in Science & Liberal Arts</td> <td style="text-align: right;">12,898</td> </tr> </table>	Temporal Lords	200	Gentlemen	15,000	Clergymen	2,000	(lesser)	10,000	Persons in the Law	8,062	Persons in Science & Liberal Arts	12,898
Temporal Lords	200													
Gentlemen	15,000													
Clergymen	2,000													
(lesser)	10,000													
Persons in the Law	8,062													
Persons in Science & Liberal Arts	12,898													
Spiritual lords	26													
Baronets	800													
Knights	600													
Esquires	3,000													
Gentlemen	12,000													
Persons in offices (lesser)	5,000 5,000													
Persons in the law	10,000													
Clergy Men (lesser)	2,000 8,000													
Persons in science and liberal arts	16,000													
	<u>62,586</u>													
B. Commerce														
M.'ch. ¹⁵ & traders		<p>We use regression estimates to yield 128,025 in commerce, of which 26,321 are merchants and 101,704 shopkeepers and tradesmen. We retain King's merchants and traders by sea (2000 and 8000). Define two classes of merchants on land numbering 3264 and 13,057, distributed following King's proportions for those "by sea," giving total merchants of 26,321.</p>												
by sea	2,000													
(lesser)	8,000													
by land	3,264													
(lesser)	13,057													
Shopkeep. ¹⁶ & tradesmen	40,000													
	<u>50,000</u>													
	101,704													
	<u>128,025</u>													
C. Industry and the building trades														
Artizans & handicrafts	60,000	<p>As argued in the text, these revised values are derived from the regressions based on local censuses and burial records.</p>												
Manufacturers	6,745													
Manufacturing trades	162,863													
Mining	14,240													
Building trades	73,018													
	<u>60,000</u>													
	256,866													

D. Agriculture (excluding laborers)		
Freeholders	40,000	27,568
(lesser)	140,000	96,490
Farmers	<u>150,000</u>	<u>103,382</u>
	330,000	227,440
E. Military and maritime (excluding traders)		
Naval officers	5,000	5,000
Military officers	4,000	4,000
Common seamen	50,000	50,000
Common soldiers	<u>35,000</u>	<u>35,000</u>
	94,000	94,000
F. Labourers and the poor		
Labour. ^f people & outserv. ¹⁵	364,000	284,997
Cottagers & paupers	400,000	313,183
Vagrants	<u>30,000</u>	<u>23,489</u>
	794,000	621,669
Total family heads (including vagrants)	1,390,586	1,390,586

Excluding laborers and servants, our regression estimates suggest a total of 227,440 in agriculture. Using this regression total, we divide it among King's subgroups following King's proportions.

We retain King's figures.

Based on regression estimates, King's figures for this group are too high, and by about the same amount as the cumulative error in his head counts for groups A–E. Thus, this “residual” subgroup should be 621,669 rather than 794,000. Using King's proportions, this new figure is allocated among the three groups as given in the revised column. The regression estimates give a total of 1,326,898, a close check on King. We accept King's total.

Note. The revised estimates for groups B–D are about 6% below the corresponding figures in Lindert (1980), Table 3. This markdown is in accordance with our decision to defer to the original guesses where the case for revising them is not compelling. King's guess at the total population of England and Wales outside the City of London is as good as, and equals 0.942 times, the Rickman–Deane–Cole population used in 1980 in working from city and county populations to national totals. (The two sets of estimates agreed on the population of the City.) Thus the regression-based occupational shares are here applied to King's total non-City population and not to the Rickman–Deane–Cole total used earlier.

Source. See text and Lindert (1980).

King's notations and Holmes' penetrating critique (1977) to guide our modification of King's tables, and these support the hypothesis that King undercounted titled persons and overcounted professionals. Starting with "Temporall Lords," the 40-odd lay holders of Irish and Scottish peerage whose main estates and residences were in England (Laslett, 1973, p. 280 of *Burns Journal*; Holmes, 1977, p. 58) should be added. King's 12,000 figure for Gentlemen should also be raised to 15,000, based on recent findings of various scholars (Holmes, 1977, p. 57; Mimardiére, 1963, pp. 97-99; Cooper, 1967, especially p. 438).

Within the professions, Harley challenged King's figures for the clergy, to which King gave unconvincing replies (Holmes, 1977, p. 56). We know that there were over 11,000 Church of England parishes in England and Wales as of 1801 (Wrigley and Schofield, 1981, Appendix 7), and there were probably about 9000 in 1688. Vacancies among these seats were almost surely outweighed by the numbers of higher-ranked Church officials plus dissenting clergy. We have accordingly added 2000 lesser clergymen to King's figure, as shown in Table 1. King also appears to have exaggerated numbers in the Law, Sciences, and Liberal Arts, judging from surviving records for London and market towns. We have accordingly scaled these numbers down from 26,000 to a more plausible levels of 15,960, implied by accepting his overall total for all titled, professional, and skilled persons.

King was literally at sea on commercial classes. Merchants appear in his table only as a mere 10,000 "M.^rch.^{ts} & Traders by Sea," and he allowed for only 40,000 shopkeepers and traders. The archives strongly disagree. Guided by regression estimates inflated to national levels, the local archives suggest 26,321 merchants on land and sea and 101,704 shopkeepers and tradesmen, for a total of 128,025 in commerce (plus or minus a wide range of error). Just before his death King virtually agreed with this massive revision, postulating 24,500 merchants and a total of 151,000 persons in all commercial occupations for 1710-1711 (Holmes, 1977, p. 57). Accordingly, we stand by the revisions offered in Table 1.

For the remaining civilian middle and lower classes, King's estimates and ours clash dramatically. The regression estimates repeat what we have already noted above from direct inspection of raw data: King must have underestimated the industrial and building trades, and overstated the numbers in agriculture, common labor, and poverty. His figure of 60,000 artisans in the *Observations* has to be one of his shakiest, as his own notes confirm. Was it really 60,000, or his own alternative guesses of 70,000 (p. 270 of *Burns Journal*) or 100,000 (p. 65 of *Burns Journal*)? All of his guesses for artisans seem too low to us, and we prefer the regression estimates instead. We shall also abandon his implausibly high estimates for freeholders and farmers in favor of the lower totals suggested by the archives and regression.

To square these occupational revisions with King's plausible number of total families requires a reduction in the residual, the numbers in "poverty." The regression estimates based on local archival data suggest the same revision. Indeed, so do the figures King himself assumed for poor relief expenditures and the numbers receiving that relief. King spread Davenant's estimated £665,000 in poor rates over anywhere from 900,000 to 1,300,000 recipients of alms (*Two Tracts*, p. 42; Laslett, 1973, pp. 280–281 of *Burns Journal*; Davenant, 1695, p. 803). The implied average relief per recipient of less than 13 shillings is at odds with much higher estimates reported in parish lists from London, Warwickshire, and Essex.⁶ We infer that King overstated the number of cottagers, paupers, and vagrants, and offer a downward revision in Table 1.

B. New Average Incomes

New evidence suggests that King's guesses on average family income are vindicated for lower-ranked occupations but disproved for the upper classes. His middle class income estimates are left untouched due to a continuing scarcity of data.

Abundant observations on daily wage rates for common labor all seem consistent with King's annual family income of £15 (Rogers, 1963, Vol. VI, pp. 648–649; Brown and Hopkins, 1955, p. 205; Wrightson and Levine, 1979, p. 41; Gilboy, 1934, Appendix II; Lodge, 1927, p. 454 ff). The confirmation cannot be precise since we have only a rough idea of the number of days laborers tended to work per year, or of the number of "normal-time-equivalent" earners there were per family. When combined with King's annual earnings estimate of £15, a rural wage of a shilling a day implies 300 man-days of common labor per rural family. A London wage of 1 shilling 8 pence implies 180 man-days per urban family. A population-weighted average of these two figures might be slightly low, but there is no clear basis for revising King. Thus, we retain his £15 income estimate for laborers and outservants. We find his earnings estimates for seamen and laborers also consistent with wage data for seamen (Davis, 1962, pp. 135–137, 145) and colliers (Ashton and Sykes, 1964, p. 134).

⁶ Parish lists of disbursements to the poor suggest that adult paupers, a large share of them persistently in need and on the rolls, got a 1-shilling weekly allowance (or 52 s./year) plus occasional payments for clothing and the like. See the disbursements for St. Botolphs-without-Bishopsgate, London, 1687, in Guildhall Library, MS 4525, Vol. 7; disbursements for Chilvers Coton, Warwickshire, 1708, in Warwickshire Record Office, MS CR136/V144; and the averages cited for Terling, Essex in the 1690s in Wrightson and Levine (1979), p. 40. The poor relief per capita figures also look low in relation to King's average family income of £15 a year for common laborers.

A later tract by William Clarkson also guessed that the number of paupers relieved in 1688 was lower than King's estimate. Clarkson thought 563,964 were relieved, well below King's 900,000 to 1,300,000. (Clarkson, 1815), p. 14.

In Table 1, King's "Artizans & handicrafts" is broken up into manufacturers, manufacturing trades, and building trades. We have abundant wage data for the building trades, the daily rate for which was 18–20 pence in rural areas and 30 pence in London (Brown and Hopkins, 1955, p. 205; Gilboy, 1934, Appendix II; Rogers, 1963, Vol. VI, pp. 648–649). At 300 days per year, these daily rates translate into annual earnings around £23.7 in the countryside and £37.5 in London, a weighted average settling in around £25. We accept this figure for the building trades. Our 6745 manufacturers, on the other hand, must have had far higher incomes than "artizans," and we assign them the £200 average income that King gave to lesser merchants. For the large number of manufacturing craftsmen in the middle, we use King's £40 average for his "Artizans & handicrafts" as a whole (his 1698 estimate: £38).

Other have attacked King's income figures for the top of society as too pessimistic. Based on surviving estate records, these scholars unanimously agree that King's average of £2800 for lay peers is far too low (Mingay, 1963; Mimardiere, 1963, p. 98; Stone, 1965, p. 562; Thompson, 1966, p. 509; Cooper, 1967, p. 431; Holmes, 1977, pp. 54–55). A conservative upward adjustment is made here: we apply the average income of £6060 established by Professor Stone for 1641 to 1688. King also underrated the baronets, giving them an average income of £880, whereas all 17th century documents suggest averages over £1200 (Aylmer, 1961, pp. 327–331; Mimardiere, 1963, p. 109; Cooper, 1967, pp. 431–433; Holmes, 1977, p. 55; and sources cited there). Again we conservatively bring their average up to £1500, a figure estimated by Aylmer for the eve of the Civil War. The average income for knights should also be raised, from £650 to £800, again to judge from estate records and informed contemporary opinion (Chamberlayne, 1694, p. 442; Holmes, 1977, p. 55). Esquires were also better off than King admitted, probably by 25% (Mimardiere, 1963, pp. 97–99, 137–139; Holmes, 1977, p. 55).

From ordinary gentlemen on down through farmers and manufacturing craftsmen, we cannot shed new light on King's income averages, aside from his own 1698 revisions.⁷ The problem is that these groups did not have enough income to rise into the high tax brackets, nor were they hired by others often enough to leave pay documents. King's averages for the middling groups seem well enough correlated with average probated wealth by occupation (Lindert, 1981, Table 1), but we must stress that we retain his averages for these groups not because they are confirmed but because the jury is still out.

Table 2 presents a revised picture of England and Wales in 1688. It is a more prosperous land than the one seen through King's pessimistic

⁷ An exception is the case of lawyers, for which Holmes (1977), p. 56, again argues that King's average income figure is far too low. In this case we have confined the upward revision to that offered by King in 1698.

TABLE 2
Revising the Social Table for England and Wales, 1688

Class	King (Barnett, <i>Two Tracts</i>)		Revised table	
	No. of families	Average family income (£)	No. of families	Average family income (£)
A. High titles and professions				
Temporal lords	160	2800	200	6060
Spiritual lords	26	1300	26	1300
Baronets	800	880	800	1500
Knights	600	650	600	800
Esquires	3,000	450	3,000	562.5
Gentlemen	12,000	280	15,000	280
Persons in offices, greater	5,000	240	5,000	240
Persons in offices, lesser	5,000	120	5,000	120
Persons in the Law	10,000	140	8,062	154 ^a
Clergymen, greater	2,000	60	2,000	72 ^a
Clergymen, lesser	8,000	45	10,000	50 ^a
Persons in sciences and liberal arts	16,000	60	12,898	60
B. Commerce				
Merchants . . . by sea, greater	2,000	400	2,000	400
Merchants . . . by sea, lesser	8,000	200	8,000	200
Merchants on land, greater			3,264	400
Merchants on land, lesser			13,057	200
Shopkeepers and tradesmen	40,000	45	101,704	45
C. Industry and building				
Artisans and handicrafts	60,000	40	6,745	200
Manufacturing trades			162,863	38 ^a
Building trades			73,018	25
Miners			14,240	15
D. Agriculture (excluding laborers)				
Freeholders, greater	40,000	84	27,568	91 ^a
Freeholders, lesser	140,000	50	96,490	55 ^a
Farmers	150,000	44	103,382	42.5 ^a
E. Military and maritime (excluding traders)				
Naval officers	5,000	80	5,000	80
Military officers	4,000	60	4,000	60
Common seamen	50,000	20	50,000	20
Common soldiers	35,000	14	35,000	14
F. Laborers and the poor				
Laboring people and outservants	364,000	15	284,997	15
Cottagers and paupers	400,000	6.5	313,183	6.5
Vagrants	30,000	2	23,489	2
All Families	1,390,586	31.29 ^b	1,390,586	39.18
Total pre-fisc household income		<u>£43,505,800^c</u>	<u>£54,440,248</u> (up 25.1%)	

^a King's own 1698 revision (Holmes, 1977), pp. 67, 68.

^b £32.17 after correcting for King's multiplication errors. Total population (King) = 5,500,520.

^c £44,735,800 after correcting for King's multiplication errors in three classes (esquires, gentlemen, cottager-paupers).

bifocals, by roughly 25%.⁸ It is less agricultural and more industrial, to judge roughly from the income shares of classes tending to earn different shares of their income from agriculture and the land. And the income gaps between rich and middle and between middle and poor have also been transformed: the richer have got richer, the poor are fewer, and the middle groups more populated. We shall return to these issues after we have scrutinized later social tables in the light of new evidence.

II. MASSIE'S ENGLAND AND WALES, 1759

By all outward appearances, Joseph Massie's social table is suspect. He was a polemicist, and this table was meant as an indictment of the powerful colonial sugar lobby.⁹ His sources could not have been so numerous or reliable as those available to King. He used very round numbers and confusing labels. And his 51 socioeconomic classes are grouped into four large, rather bizarre, categories: "Labouring Families, &c.," "Families which drink Tea or Coffee occasionally," "Families which drink Tea or Coffee in the Morning," and "Families which drink Tea, Coffee, or Chocolate, Morning and Afternoon"—not every social historian's cup of tea. Yet Massie's effort does warrant a serious hearing.

A. *New Family Counts*

In many respects, Massie's guesses for 1759 do not seem so wild. His total number of families is only 4.2% below our best present estimate for 1755 (Lindert, 1980). Most of his estimates for large occupational groupings are also surprisingly close to recent estimates using burials data and regression techniques (Lindert, 1980). Yet he completely omitted any mention of persons in mining, the building trades, or poverty. The last omission is particularly serious, and puzzling from an author who had just penned a set of essays on the topic (Massie, 1758). Yet, the exclusion made sense if the poor consumed no sugar.

If Massie's total number of families is close to the mark, where did he hide all the paupers, miners, and building craftsmen living in England and Wales in the mid 18th century? Comparing Massie's family totals with those estimated for 1755 from burial records (after adjusting the latter for differential death rates) finds him significantly overstating only two occupations: numbers in manufacturing trades and agriculture (his

⁸ Of the increase of 25.1%, the first 2.8% came from correcting King's multiplication errors, the next 5.5% from changes in group average incomes, and the remaining 16.8% from changing the occupational counts.

⁹ See Massie (1760). For an excellent introduction and critique of Massie's table, see Mathias (1957). Readers pursuing Massie's calculations in detail should note the minor omission in Mathias' article which did not reprint Massie's Class 33, Innkeepers and AleSellers (lesser), consisting of 3000 families with an average "income or expence" of £70. Another minor correction: the total income for London manufacturers of wool, silk, etc., should be £367,500, not £375,000.

freeholders, farmers, and husbandmen). In Table 3, we have reassigned his excess in the manufacturing trades to the building crafts, as he may have intended anyway. The excess family heads in agriculture have been used first to take up the remaining slack in the building trades and mining, and then to reveal some of the cottagers and paupers that must have existed in large numbers at that time.¹⁰

B. New Average Incomes

Massie's income estimates all seem a bit low. That, at least, is the verdict returned by a wide range of archival data on wage rates, salaries, and rental incomes.

At the bottom of the pay structure, Massie used weekly rates that cannot be reconciled with daily wage rates unless one assumes a very short work week and no earnings by secondary breadwinners. Here are some comparisons:¹¹

Group	Massie	Other sources		Implied workweek (days)	
	Mean weekly family earnings	Group	Daily wage rate	Assuming 1 bread-winner	Assuming 1.5 bread-winners
Laborers, London	108 d.	Building laborers, London	20-24 d.	4.9	3.3
Laborers, country	60 d.	Non-London laborers, mainly building	13 d.	4.6	3.1
Manufacturers, London (avg of 2 groups)	135 d.	Building craftsmen, London	33 d.	4.1	2.7
Manufacturers, country (avg of 2 groups)	99 d.	Building craftsmen, non-London	20 d.	4.95	3.3

¹⁰ Massie's family counts are adjusted as follows: (1) we accepted the regression estimates (Lindert, 1980, Table 3) for manufacturing (240,475), building trades (111,477), and mining (14,300); (2) we removed what appear to be Massie's excess manufacturing craftsmen (his 308,000 minus our 240,475) from the ranks of his nonmaster manufacturers, scaling each of these groups down by 29.6%; (3) the leftover 67,525 craftsmen were interpreted as being the missing 14,300 miners plus 53,225 building craftsmen; (4) the other 58,252 building craftsmen were taken from the ranks of freeholders, farmers, and husbandmen; (5) we accept the regression-based estimate of only 379,008 freeholders, farmers, and husbandmen, instead of Massie's 565,000; (6) after the 58,252 new building craftsmen have been taken from Massie's extra freeholders, farmers, and husbandmen (565,000 - 379,008 = 185,992), we are left with 127,740 who are allocated to the "cottagers and paupers" class, a class otherwise absent from Massie's table and as a result one of Massie's main mistakes; (7) the total number of families has been slightly expanded by reckoning that the ratio of total families to regression-estimated numbers of men was the same as in 1688; these 64,570 join the other 127,740 to make 192,310 cottagers, paupers, and vagrants; (8) the 192,310 are allocated between "cottagers and paupers" and "vagrants" in the same proportions, and with the same relative earnings, as in King's 1688 table.

¹¹ See Massie (1760), Brown and Hopkins (1955), p. 205, Gilboy (1934), App. II, Rogers (1963), Vol. VII, p. 511, and Eccleston (1976), Appendixes.

TABLE 3
Revising the Social Table for England and Wales, 1759

Class	Joseph Massie		Tentative revisions	
	No. of families	Average family income (£)	No. of families	Average family income (£)
A. High titles and professions				
Temporal lords	10	20,000	10	26,940
	20	10,000	20	13,470
	40	8,000	40	10,776
	80	6,000	80	8,082
	160	4,000	160	5,388
	320	2,000	320	2,694
	640	1,000	640	1,347
	800	800	800	1,078
	1,600	600	1,600	808
	3,200	400	3,200	539
Spiritual lords	4,800	300	4,800	404
	6,400	200	6,400	269
Clergymen, superior	2,000	100	2,000	100
Clergymen, inferior	9,000	50	9,000	50
Persons professing law	12,000	100	12,000	200
Persons professing liberal arts	18,000	60	18,000	60
Civil officers	16,000	60	16,000	60
	(75,070)		(75,070)	
B. Commerce				
Merchants	1,000	600	<i>a</i>	<i>a</i>
Merchants	2,000	400		
Merchants	10,000	200		
Tradesmen	2,500	400		
Tradesmen	5,000	200		
Tradesmen	10,000	100		
Tradesmen	20,000	70		
Tradesmen	125,000	40		
Innkeepers and ale-sellers	2,000	100		
Innkeepers	3,000	70		
Ale-sellers, Cottagers (greater)	20,000	40		
	(200,500)			
C. Industry and building				
Master manufacturers	2,500	200	<i>a</i>	<i>a</i>
Master manufacturers	5,000	100		
Master manufacturers	10,000	70		
Master manufacturers	62,500	40		
Manufacturers of wood, iron, etc. (London)	14,000	30	9,854	41.25
Same (country)	100,000	22.5	70,384	25
Manufacturers of wool, silk, etc. (London)	14,000	26.25	9,853	41.25
Same (country)	100,000	18.75	70,384	25
Building trades (London)	None		3,910	41.25
Building trades (country)	None		107,567	25
Mining	None		14,300	23 ^b
	(308,000)		(366,252)	

TABLE 3—Continued

Class	Joseph Massie		Tentative revisions	
	No. of families	Average family income (£)	No. of families	Average family income (£)
D. Agriculture (excluding laborers)				
Freeholders	30,000	100	20,124	152
Freeholders	60,000	50	40,249	76
Freeholders	120,000	25	80,498	38
Farmers	5,000	150	3,354	150
Farmers	10,000	100	6,708	100
Farmers	20,000	70	13,417	70
Farmers	120,000	40	80,498	40
Husbandmen	200,000	15	134,160	16
	(565,000)		(379,008)	
E. Military and maritime (excluding traders)				
Naval officers	6,000	80	<i>a, c</i>	<i>a, c</i>
Military officers	2,000	100		
Common seamen, fishermen	60,000	20		
Common soldiers	18,000	14		
	(86,000)			
F. Laborers and the poor				
Laborers, London	20,000	22.5	20,000	27.5
Laborers, country	200,000	12.5	200,000	16.25
Ale-sellers, cottagers, lesser	20,000	20	20,000	20
Cottagers & paupers	None		178,892	7 ^d
Vagrants	None		13,418	3.2 ^d
	(240,000)		(432,310)	
All Families ^e	1,474,570	£41.48	1,539,140	£46.37
Total pre-fisc household income		£61,164,500		£71,366,441

^a We retain Massie's estimates.

^b Williamson (1982).

^c Massie's military totals fit the peacetime of 1755, but understate the quick buildup of 1759 itself. Subtracting the official figure of 27,984 civilian seamen in England and Wales from his figure leaves 58,016 in the military, just below the official total of 65,034 given for all Great Britain in 1755 (*Sessional Papers, 1868–1869*, pp. xxxv, 2, 693 ff). The official 1759 figure for army, navy, marines, and ordnance was 176,291 for Great Britain. We view the extra 1759 soldiers and seamen as hidden in Massie's totals for the similarly paid classes from which they were recruited.

^d Assumed to be in the same ratio to common-labor income (non-London) as in King's 1688 table.

^e The total number of families was estimated by assuming that it bore the same ratio (1.0480) to regression-estimated total men as for 1688. See Lindert (1980, Table 3) and Table 1. The extra 64,570 families beyond Massie's total were added to "cottagers and paupers," in view of the nature of his table, as explained in the text.

Note that all revised family counts refer to 1755, while their average incomes are for 1759. The 1755 population was 6,309,470, according to an interpolation between 1751 and 1781 (Deane and Cole, 1969, p. 103).

We know that as a rule laborers and craftsmen worked a 6-day week (Bienefeld, 1972, pp. 36–38) and that wives, children, and other secondary breadwinners made a large contribution to family earnings. Massie's averages are thus replaced with ones based on the daily rates shown here, assuming 300 adult-male-equivalent days per year for each family in these groups.

For other occupations, Massie's income estimates can be compared with independent sources on monthly and annual salaries. His assumed range for master manufacturers cannot be rejected by comparisons with other estimates for highly skilled manufacturing groups (Williamson, 1982), so we retain his figures here. Yet, data on seamen's pay (with victualling, Davis, 1962, pp. 138–137, 145) suggest an 11-month income of about £40, twice Massie's guess. Massie also seems to be low on lawyers' incomes compared with King's 1698 guess of £154 (Holmes, 1977, p. 54), Colquhoun's guess of £350 for 1801–1803, and Chamberlayne's figure for public solicitors in 1755 of £231 (Williamson, 1982). The overall average for 1759 must have been much closer to £200 than to Massie's £100.

The landed classes must also have had greater incomes than Massie guessed. This we gather from comparing Massie's income estimates for landed classes with those of King and Colquhoun:

	King on 1688		Massie on 1759	Colquhoun on 1801–1803
	1696 guess	Revision		
Titled (gentlemen & up)	£341.0	£449.1	£482.6	£1012.6
Freeholders	£ 57.6	£ 63.0	£ 42.9	£ 117.5

The relatively low levels of Massie's guesses are also hard to reconcile with the steady rise in rents per acre¹² on an aggregate stock of land that belonged predominantly to these two social groups. We cannot know exactly how landownership was distributed in 1759, but the rental data prompt us to posit an average income of about £650 for the titled classes and £65 for freeholders.

The upward revisions of incomes and the changes in family counts yield the revised table for 1759, shown in Table 3. The changes raise the level of total household income from Massie's £61.2 million to £71.4 million. This 16.7% increase brings the total nearer to Arthur Young's estimate for 1770 (Deane, 1955). Of the 16.7% increase in total personal income, 13.8% resulted from changing average incomes for Massie's oc-

¹² Here are three series of rents per acre for fixed plots from estate records:

cupational groups, and the other 2.9% from changing occupational family counts and adding new groups.

III. COLQUHOUN ON ENGLAND AND WALES (1801-1803)
AND BRITAIN (1812)

By the start of the 19th century, venturesome scholars had a better data base from which to develop conjectures about the structure of society and the national economy. While flawed, the 1801 Census gave fair population totals and at least some hints about employment distribution. Wartime progressive taxes were evaded, but the system left some clues about large incomes, and in 1802-1803 Parliament surveyed for the first time the number of paupers relieved as well as the amounts spent on them. In the skillful hands of Patrick Colquhoun these materials fostered estimates more accurate than those of King and Massie: Colquhoun's (1806, 1815) social tables pass most of the tests flunked by his predecessors. On the other hand, his pursuit of finer enumerations and his extensions to the whole British Isles have created new problems requiring further corrections.

A. *Colquhoun's Occupational Head Counts for England and Wales, 1801-1803*

Colquhoun's division of families and individuals into sociooccupational groups was inspired by King. Like King's division, his estimates in Table 4 can be tested against burial and local census records (Lindert, 1980, Table 3), and in general his enumerations agree with those records. While

Kingston estate data, mainly Notts (kindly supplied by Gordon Mingay), spliced series	Hooton Pagnall, Yorks (Ruston and Witney, 1934), p. 193	A farm of 225 acres in Norfolk (Thompson, 1907), p. 615
1690-1691 £5.544	from 1621 £2.333	from 1712 £7.111
1730-1739 7.660	from 1705 5.000	from 1722 7.460
1780-1789 11.328	from 1724 5.083	from 1728 8.880
1809-1811 19.911	from 1732 5.166	from 1757 10.660
	from 1763 9.333	from 1770 11.540
	from 1793 16.416	from 1786 15.100
	from 1809 25.000	from 1792 16.880
	from 1812 33.000	from 1799 18.660
	from 1830 25.000	from 1806 17.760
		from 1814 62.200

One can interpolate and extrapolate to estimate the likely rise from 1688 to 1759, and from 1759 to the dates chosen by Colquhoun. The exercise implies far higher incomes for the landed classes in 1759. A similar conclusion is suggested by the aggregate rental income estimates for England and Wales (Deane, 1955, 1973; Feinstein, 1978, pp. 72-73).

TABLE 4
Colquhoun's England and Wales (1801–1803) with Some Revisions
(Revisions italic)

Category	No. of families <i>plus unrelated individuals</i>	Average annual income (£)
A. High titles and professions		
Temporal peers and peeresses	287	8,000
Spiritual lords or bishops	26	4,000
Baronets	540	3,000
Knights	350	1,500
Esquires	6,000	1,500
Gentlemen and ladies living on income	20,000	700
Persons in higher civil offices	2,000	800
Persons in lesser offices	10,500	200
Eminent clergymen	1,000	500
Lesser clergymen	10,000	120
Dissenting clergymen & itinerant preachers	2,500	120
Persons of the law, judges down to clerks	11,000	350
Persons educating youth in universities and chief schools	500	600
Persons . . . in the Education of Youth of both sexes, etc.	20,000	150
Liberal arts and sciences	16,300	260
Persons employed in theatrical pursuits	<i>1,000</i>	200
Persons keeping houses for lunatics	40	500
	<u>102,043</u>	
B. Commerce		
Eminent merchants, bankers, etc.	2,000	2,600
Lesser merchants, trading by sea	13,000	800
Shopkeepers and tradesmen dealing in goods	74,500	150
Clerks and shopmen, to merchants, manufacturers, shopkeepers, etc.	<i>60,000</i>	75
Ship-owners, letting ships for freight only	5,000	500
Principal warehousemen, selling by wholesale	500	800
Innkeepers and publicans, licensed	50,000	100
Hawkers, pedlars, duffers, etc.	<i>800^a</i>	40
	<u>205,800</u>	
C. Industry and building		
Manufacturers employing capital in all branches, etc.	25,000	800
Persons employing capital in building and repairing ships, etc.	300	700
Persons employing capital as tailors, mantua-makers, milliners, etc.	25,000	150
Persons employing professional skill and capital as engineers, surveyors, and master builders, etc.	5,000	200
Umbrella and parasol-makers, lace workers, etc.		
Artisans, handicrafts, mechanics, and laborers, employed in manufactures, buildings, and works of every kind	445,726	55
Laboring people in mines, canals, etc.	40,000	40
	<u>541,026</u>	

TABLE 4—Continued

Category	No. of families plus unrelated individuals	Average annual income (£)
D. Agriculture (excluding laborers)		
Freeholders of the better sort	40,000	200
Lesser freeholders	120,000	90
Farmers	<u>160,000</u>	120
	320,000	
E. Maritime and military (excluding traders)		
Naval officers, marine officers, surgeons, etc.	7,000	149
Military officers, including surgeons, etc.	13,064	139
Marines and seamen, in the Navy and revenue	52,906	38
Seamen in the merchant service, fisheries, rivers, canals, etc.	49,393	40
Common soldiers, including non-commissioned officers and militia	<u>121,985</u>	29
	244,348	
F. Laborers and the poor^b		
Laboring people in husbandry, including earnings of the females	340,000	31
Paupers, producing from their own labors in miscellaneous employments	260,179	10
Vagrants, gypsies, rogues and vagabonds, thieves, swindlers, coiners of base money, in and out of prisons, and common prostitutes (including wives and children	<u>175,218^c</u>	10
	775,397	
G. Confined income earners		
Persons imprisoned for debts	2,000	45
Confined lunatics	<u>2,500</u>	30
	4,500	
Totals of the above, for analysis of inequality		
Families and unrelated individuals	<u>2,193,114</u>	
Gross income	<u>£198,576,509</u>	
H. Groups set aside from analysis of inequality^d		
The King	1	200,000
Military and Naval half-pay officers (pensioned)	4,015	45
Pensioners at Chelsea College, in and out	} 30,500	10
Pensioners of Greenwich Hospital		
Pensioners of the chest at Chatham		
Labor earnings of the above pensioners		10
Persons included in families above with incomes from the funds . . . also trustees, etc.	(50,000)	101.1
Totals for the entire household sector		
Gross income of the household sector	<u>£204,118,139^e</u>	
Average income per unit (families + individuals)	£91.63	
Total population ^f	9,142,000	
Persons per (family or individual) unit		4.17

he may have overstated the numbers in commerce and understated the numbers in industry, our alternate estimates are subject to margins of error wide enough to prevent our discarding his counts for these groups.

The groups for which Colquhoun most clearly missed the mark are the maritime and military occupations. His numbers for sailors and soldiers depart from independent regression-based estimates derived from burial and local census records as well as other archival sources. For example, the fairly reliable "seamen's sixpence" returns offer lower figures for civilian seamen, and these are inserted into our revisions of Colquhoun (Davis, 1956, pp. 339–340). Table 4 also reflects our judgment that Colquhoun overestimated the number of sailors and noncommissioned officers in the Navy and marines, which are more reliably reported by the House of Commons (*Sessional Papers*, 1863–1869, Vol. 2, p. 693

^a For England and Wales, 1801–1803, Colquhoun listed 2500 hawkers, peddlers, duffers, etc., of which only 800 were described as family heads. We use the latter figure here, in view of his deciding later that there were only 1400 persons occupied in this class throughout the British Isles in 1812.

^b In viewing the totals for laborers, one should bear in mind that laborers in manufacturing and building and (for 1801–1803) in mines, canals, etc., have already been counted in group C.

^c Colquhoun considered his vagrants-and-others category comparable in definition to that of Gregory King, yet clearly meant to include some wives and children as well as family heads and unrelated individuals. A convenient arbitrary way to remove the wives and children and other dependents from the total is to make the same percentage reduction in the total numbers that was applied when deriving revised numbers of "family heads" in King's table. Thus drawing on Tables 1 and 2, the ratio of family heads (plus unrelated individuals) to total population in this vagrant class is assumed to be $(23,678/30,000) = 0.78927$, and this ratio is used here.

^d We exclude the royal families from the household sector, for easier comparisons with the estimates for other dates. On the other hand, we include the pensions listed in group H, on the grounds that this best approximates the accumulation of pension rights that should have been, but presumably were not, added into the current incomes of groups listed earlier (especially the military). That is, the pension transfers being received by persons past service are used as a proxy for part of other persons' current earnings. The mysterious item "Persons included in families above with incomes from the funds (etc.*)" is also counted as part of the gross household-sector income, though we do not know which families these persons belonged to. (For purposes of conventional national product accounting, one may wish to follow Phyllis Deane's exclusion of these incomes from the funds, mainly public debt, as a transfer payment rather than as a payment for productive services.) Finally, the gross income measure excludes poor relief, totaling £4,267,000 for England and Wales in 1801 to 1803.

^e This total seems broadly consistent with Beeke's (1800), p. 137, guess that the total income of Great Britain was £218 million, when one allows for the differences in the treatment of Scotland and the fact that Beeke's estimate refers to 1798–1800, when real income and perceived prices might have been a bit lower for each geographic area.

^f The Registrar General's later estimates, as reported in Mitchell (1971), p. 8.

ff).¹³ We have relied on the same official figures in revising his common soldiers totals.

Colquhoun tried to take account of some of the subtleties of household demography, but he was not entirely successful. His definition of family heads excluded unmarried adult males with income (1815, pp. 127–128), and these income earners were identified separately for some occupations but not for others. When these individuals are listed separately, some strange demography often results. If they were all truly unattached individuals, his large estimates of their numbers imply implausibly low dependency ratios for the remaining families in each group. We have augmented some of his family totals with better guesses of occupied individuals living apart, a household-unit concept that seems more comparable to what King and Massie had in mind.¹⁴ These changes are minor, however, and most of his occupational counts are retained, at least for England and Wales in 1801–1803.

B. Average Incomes, 1801–1803

Colquhoun's average income figures for England and Wales cannot be faulted on the basis of other data on wages and salaries. His family income estimate of £31 for laborers in husbandry survives comparison with several other sources supplying wage rates and reasonable assumptions on total number of adult-male-equivalent working days per family (Bowley, 1900, p. 34; Brown and Hopkins, 1955, p. 205; Eccleston, 1976, Appendixes; Richardson, 1977, Appendixes). The £40 annual income figure for laborers in mines and canals is also supported by data on colliers' wages.¹⁵ When it comes to skilled laborers, however,

¹³ Armed forces counts for England and Wales alone are derived by multiplying the 1801–1803 United Kingdom figures by 0.57325, the 1801–1805 population share of England and Wales. An exception is made for officers, where we accepted Colquhoun's judgment that the vast majority had their primary residence in England and Wales.

¹⁴ Specifically, we made the following changes: (a) Clerks and shopmen. We split the implied unmarried men with these occupations in half, making half the heads of one-person families and the other half nonearning dependents, yielding 60,000 families plus unrelated individuals and a total population of (still) 150,000 for England and Wales in 1801 to 1803. The same procedure was followed for the United Kingdom in 1812. (b) Persons in the theater. Here Colquhoun implied that there were no nonearning dependents at all. We halved the number of persons he gave earnings, making them family heads and making the other half nonearning dependents. (c) Colquhoun seems to have had a change of heart about hawkers and peddlers. For England and Wales in 1801 to 1803, he listed 2500 of them, of which 800 were called family heads. Yet for all the British Isles in 1812, he only listed 1400 family heads and no unrelated individuals with these occupations. We incline to his later view, and shall posit only 800 English and Welsh hawkers and peddlers for 1801 to 1803 and 1400 British ones for 1812.

¹⁵ Newcastle colliers in 1800 received from 2 to 2.75 shillings a day, or £30 to 41.25 a year at 6 days a week and 46 weeks a year, a range bracketing Colquhoun's £40 figure (Ashton and Sykes, 1964), pp. 134–141. We find slightly higher daily wages for Wigan in

Colquhoun has hidden behind a cloak of vagueness by lumping together "artisans, handicrafts, mechanics, and labourers employed in manufactures, buildings and works of every kind." The inclusion of common laborers in this aggregate makes it difficult to evaluate his income average of £55, although we suspect it might be a bit low. We have explored the opposite possibility that this average is too high for even the best-paid craftsmen, but the available figures for London artisans, Portsmouth shipwrights, compositors, building craftsmen, and persons in the textile and engineering trades are close enough to Colquhoun's estimates to let him escape unrevised (Bowley, 1900, pp. 60, 119, and 123; Porter, 1851, pp. 456–458; Eccleston, 1976, Appendix I; Brown and Hopkins, 1955, p. 205; see Williamson, 1982). Table 4 also retains his 1801–1803 average incomes for all other occupations.

Taken together, our revisions have cut total personal income by 7.6%, of which 1.9% comes from removing poor-relief transfer payments and the other 5.7% from changing the occupational family counts.

C. Colquhoun's Britain, 1812: Irish Mist?

A decade later, Colquhoun (1815) offered an economic overview of the British Isles. First he constructed a set of wealth accounts, then national income accounts, then another social table similar to that for England and Wales in 1801 to 1803. The statistical annexation of Scotland and Ireland would be welcome if his figures could be trusted. Alas, they cannot.

Lacking an Irish census, Colquhoun guessed that there were 4.5 million Irish in 1811 (1815, p. 10). Later figures by the Registrar General revealed that he missed a quarter of the six million Irish (Deane, 1956, pp. 341–343; Mitchell, 1971, p. 8). This undercount poses obvious problems for all of Colquhoun's economic aggregates for the British Isles. In addition, Colquhoun's treatment of Ireland may have introduced another distortion. Colquhoun's Britain in 1812 was just as industrial and commercial as his England and Wales a decade earlier. It also contained a smaller proportion of paupers, and had about the same average real income. It is hard to see how this could have been, if the Scots had rough parity in terms of income and industrialization and the much poorer Irish were fully a third of the population of the kingdom. Colquhoun certainly underestimated both Irish population and Irish poverty. In addition, perhaps he got *aggregate* British wealth and income right (based on fiscal and commercial returns), but distributed Irish wealth and income over too few people, making Ireland look too rich.

1805 (3 shillings a day; Ashton and Sykes, 1964) and in the North Staffordshire collieries for 1800 to 1802 (3s. 2d. a day; Staffordshire Record Office, Documents D593/M/13/3/7 and D593/M/12/13/1–6), but these independent estimates are not sufficient evidence for revising Colquhoun's average-income figure.

Pending further research on Colquhoun's Irish mistake, we can only set aside his 1812 table. If others wish to revise it, they can begin with his suspect figures for agricultural laborers' incomes. We have compared Colquhoun's £45 average income for laborers in agriculture, mining, and canals, with Bowley's weekly wage rates for agricultural laborers around 1812. Bowley (1900, pp. 34, 50, 57) shows that normal-time agricultural laborers in England and Wales averaged 10–15 shillings a 6-day week while their Scottish counterparts got 10 shillings and those in Ireland only 5 shillings 1 pence. A population-weighted British average is 9.78 shillings per week. If this average is to square with Colquhoun's £45, families in this class would have to have worked more than 90 normal-adult-male-equivalent weeks per year.¹⁶ This implies, in turn, a ratio of family to adult-male earnings equal to about 2. Parish evidence suggests that the true ratio could have been only about two-thirds of that figure (Davies, 1795; Eden, 1797; Kay, 1838; and the special census of Corfe Castle, Dorset in 1790). This large discrepancy suggests that Colquhoun overstated family incomes of agricultural laborers not only for Ireland but for Great Britain as well. A revised figure might be closer to £30, rather than his £45. While this is the only income revision we can pinpoint here, we repeat our warning that all of Colquhoun's 1812 estimates are shaky.

IV. CONCLUDING REMARKS

Revising the classic social tables opens the way for new perspectives on the growth and distribution of the national product of England and Wales before and during the Industrial Revolution. In a sequel article (Lindert and Williamson, 1983) these revised tables are combined with others in order to reinterpret movements in income inequality from 1688 to 1913 and to offer a new hypothesis on the course of 18th-century English growth. The revised tables also offer clues about trends in sectoral output shares.

While we find the tabulated results intriguing, we must stress that this paper has only replaced old rough tentative guesses with new rough tentative guesses. We have made many estimates, and the joint probability of their all being correct is infinitesimally small.

Fortunately, this revisionist exercise is renewable. As data accumulate, others will no doubt revise our revisions. They will be drawn to this task not only by the importance of having an overview of the social structure, but also by the opportunities created by the historical settings that

¹⁶ This estimate is hardly affected by the fact that he included miners and canal workers in this group for 1812. A glance at the numbers of families and average incomes for agricultural laborers and for those in mining and on the canals in 1801 to 1803 England and Wales (Table 4) shows that agricultural earnings must have been above £43 if his all-group average of £45 is correct.

prompted the original guesses. It was those wars against France that exposed the richest veins of data for the early modern era. Social and economic historians will thus gravitate to the end of the 17th century for censuslike returns, to the Seven Years' War for muster rolls, and to the Napoleonic era for early income tax returns, land tax returns, poor relief surveys, and census materials. The most efficient way to shape these materials will probably always follow the path we have trod here: revision of the classic guesses of the informed contemporaries.

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