

HOW ACCURATELY DO THE HEARTH TAX RETURNS REFLECT WEALTH? A DISCUSSION OF SOME URBAN EVIDENCE

Nigel Goose

Nigel Goose is Professor of Social and Economic History and Director of the Centre for Regional and Local History at the University of Hertfordshire. He has published a number of articles on aspects of population and social structure in early modern English towns arising from his PhD thesis, which compared and contrasted the experiences of Cambridge, Colchester and Reading *circa* 1500-1700.

The Hearth Taxes, levied at the rate of one shilling every six months on the numbers of hearths per household between 1662 and 1689, are well known to and widely used by historians of population and social structure. Enough has been written on the administration of the Hearth Taxes, the instructions issued for their implementation and the complexity and variety of the resultant returns for historians to appreciate that they must be used with some caution.¹ But while it is widely appreciated that some Hearth Tax returns are of better quality in terms of coverage than are others, few have paused to question how accurately these tax assessments reflect wealth. It might be deemed self-evident that the number of hearths in a household (and there is no doubt that the returns do apply to households and not to houses) should, possibly with the occasional exception, give an indication of the size of accommodation occupied, and hence also give an indication of the wealth of the occupier. All other things being equal, the relatively poor might be expected to live in smaller households, and the wealthy to live in larger ones, a *prima facie* conclusion that is certainly suggested by the established relationship between socio-occupational status and mean household size in pre-industrial England.² Again there will be exceptions, and it may not have been uncommon for those of advancing years to retire to a smaller and more manageable dwelling regardless of the material resources still available to them.³ Controlling for age is rarely possible in studies of pre-industrial social structure, and has very rarely been attempted in relation to the Hearth Tax, but we can take solace from the fact that those who were in this age category and financial position are unlikely to form a substantial proportion of the household heads captured in the cross section that the Hearth Taxes provide.⁴

There are, of course, studies that have indeed attempted to validate the Hearth Taxes as indicators of social status and social structure by comparing them with other sources, such as assessments made under the Free and Voluntary Gift and Present of 1661, freeman's registers or other sources providing occupational information, the evidence of vernacular architecture or – surprisingly rarely – probate inventories.⁵ Each approach presents problems.

Architectural studies have indicated that there was no *invariable* relationship between number of hearths and dwelling size, but local variety makes it impossible in the current state of knowledge to say much more than that. Occupational data, when available, is also problematic, for while it is generally possible to identify the relative social position of those with occupational descriptions such as 'gentleman' and 'labourer', the social status associated with many intermediate occupational titles is often far less clear, particularly in the case of craftsmen and tradesmen, which makes it impossible confidently to relate standing as revealed by hearths assessed to status as indicated by occupation. The Free and Voluntary Gift was a socially selective tax which failed to penetrate far down the social hierarchy of most communities. The list for the town of Reading, for example, which usefully gives occupational titles in most instances, includes some 171 names out of a total population of approximately 5,500, just 3 per cent of the population and possibly 14 per cent or so of heads of household; but among these are just three cordwainers (William Cowdrey, William Goodale and Richard Clack), one weaver (George Cole) and not a single labourer.⁶ It is not surprising, therefore, that the Free and Voluntary Gift has been found to show a fairly close correspondence with Hearth Tax assessments, for the relationship between hearths assessed and wealth is likely to be more clear cut towards the top of the social scale than it might be lower down.⁷

What about probate inventories? Once again there are difficulties. Probate evidence is, to some degree at least, socially selective, and although it has been found to encompass quite a wide range of socio-occupational groups it is inevitably skewed towards the wealthy and includes very few at all who one might categorise as poor.⁸ There is also the problem of a time lag between the appearance of a name in a Hearth Tax assessment and the date of death and hence the drawing up of an inventory, for an individual's circumstances might well have changed between those two dates. Property transferred before death will obviously be excluded from an inventory valuation, as will 'transfers' made between death and valuation.⁹ The treatment of debts is often problematic: they are sometimes inconsistently recorded, sometimes recorded as 'doubtful' or 'desperate' and hence possibly uncollectable, while debts owed *by* the deceased are very rarely listed. Inventories can also describe the situation of individuals at very different stages in their life-cycles: young men (occasionally) struggling to establish a business, middle-aged tradesmen at the peak of their success, or elderly men and (more rarely) women living on dwindling savings.¹⁰ Most basically of all, inventories provide an imperfect representation of wealth, for they generally only include moveable goods and exclude fixed property, although leases are often included as part of the valuation. As such, they represent a fundamentally different form of wealth to the fixed property upon which the Hearth Taxes were levied.

These various problems by no means negate the usefulness of probate inventories, however. If collections of inventories are socially biased, they are rarely socially exclusive. To prevent distortion caused by the passage of time, rules need to be applied to limit the inventories that are allowed to qualify for comparison. Substantial transfers before death are more likely to relate to fixed

property than to moveables: if they do relate to moveables they are unlikely severely to distort the value of total possessions. The issue of debts is more problematic, and there is no doubt that the pervasive use of credit and the size of debts, in some instances at least, could cause serious distortion.¹¹ It is also possible that the exclusion of fixed property from inventories could lead to serious undervaluation of a testator's assets. But neither factor renders useless the picture given by the personal assets listed in inventories, for not only does this have significance in itself, but it is also likely that there was, generally at least, a rough and ready correspondence between wealth held in the form of personal assets and wealth held in either fixed property or in the form of debts. In offering appropriate reservations concerning the historical value of the probate inventory, one must not lose sight of the fact that they are documents which provide a unique view of the personal possessions of the individuals for whom they survive, valued by appraisers who were well placed to carry out their task, and hence give an insight into testators' wealth that cannot be equalled by any other extant source.

W.G. Hoskins was an early pioneer of the use of inventories and the first to attempt to compare them with Hearth Taxes: his small sample for Wigston Magna appeared to testify to a strong association between hearths assessed and inventoried wealth.¹² But there is one notable, broadly-based, survey that has compared inventoried wealth with Hearth Tax evidence – Margaret Spufford's study of the county of Cambridgeshire: published as long ago as 1962, the results have recently been presented again in her 2000 Phillimore Lecture to the British Association for Local History.¹³ Here she compared Hearth Tax assessments for Michaelmas 1662, Michaelmas 1664 and Lady Day 1666 with probate inventories proved in the Ely Consistory Court covering the decade 1661-70, hence demanding a very close chronological match which produced 101 rigorous nominal links between the two classes of document.¹⁴ The main conclusion that she reached was the Hearth Tax could indeed 'be used as a general economic guide', for the medians of wealth of those with various numbers of hearths differed widely, although she also added the important rider that, 'The extent of economic and social overlap, and the blurring of economic and social divisions caused by inheritance and personal preference, means that although the tax may be used as a guide to status and wealth in general, it may not safely be used in any individual example'.¹⁵ Writing some 38 years later, she concluded, in very similar terms, that while 'houses with the same numbers of hearths might each shelter an assorted body of people ranging from rich to poor... yet, in general, an incontrovertible association existed between wealth and house size'.¹⁶

It has been pointed out that, despite the breadth of its coverage, the strict standards for nominal linkage applied by Spufford meant that her sample group represents less than one per cent of all the households in the county.¹⁷ Furthermore, although no full occupational breakdown is provided, it is clear that the great majority of her sample was rural – almost inevitably in this overwhelmingly rural county – and there is no mention at all of the city of Cambridge, for which just a handful of Consistory Court probate documents

survive. There are, however, a considerable number of inventories that pertain to the city that have been excluded from Spufford's analysis, for besides the few proved in the Ely Consistory Court there were many others proved in the Archdeaconry Court, which had prime responsibility for the city, and yet more in the University Vice-Chancellor's Court, which handled the testamentary business of employees of Cambridge colleges as well as of those deemed 'privileged persons' of the university by dint of a more indirect economic connection.¹⁸ There is therefore considerable scope for an examination of the urban evidence, and for comparisons to be made with rural Cambridgeshire. The remainder of this article will examine the relationship between the Hearth Tax assessments, house size and personal wealth for the city of Cambridge, supplemented by a similar study of the town of Reading in Berkshire, for which a large sample of archdeaconry and consistory court inventories has also been analysed and compared with extant Hearth Tax data.¹⁹

Hearths and wealth in Cambridge and Reading

Cambridge and Reading were both substantial urban communities, with populations of *circa* 8,000 and 5,500 respectively in the later seventeenth century, and were thus subject to the usual high levels of mobility found in towns of this stature.²⁰ In this context nominal linkage is extremely difficult, and hence to provide an adequate sample the inventories of those dying within 15 years of the relevant tax assessment were used. Because of the problem caused by inconsistent recording of debts and possibly also of leases, both of these categories of wealth were excluded from the analysis, except when making a direct comparison with Spufford's data. For Reading it is unfortunate that no Hearth Tax return that included those exempt from taxation could be traced, while no exemption certificates survive either, the best return available being the list of those taxed for Michaelmas 1664 which included a total of 432 names. For Cambridge the best identified return (which lists both those taxed and those 'discharged by certificate') was that for Lady Day 1674, which listed 1,660 names (1,423 taxed and 257 exempt).²¹ As it was only possible to trace the probate inventory of a single exempt individual in Cambridge, that of Edward Bittany (or Bitteny) of St Peter's parish, 3rd cook to Trinity College, this discrepancy in the quality of the Hearth Tax returns should not unduly prejudice the results.

The first stage of the analysis employed the extant probate inventories on their own, and involved a comparison between personal wealth and the number of rooms listed. Covering the last 30 years of the seventeenth century for Cambridge and the last 40 for Reading they provide quite substantial samples, although both include very few one-roomed dwellings: because inventories are not invariably divided into discrete rooms, it is often difficult to identify one-roomed cottages with confidence. Many inventories which do record rooms, of course, give confusing information, and for this analysis all such cases have been removed from the sample.²² The results presented in Tables 1 and 2 show that houses with up to three rooms most generally indicate a

Table 1 The relationship between personal wealth* and number of rooms in Cambridge 1670–99

Wealth £	Number of rooms													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13+	
1-10	2	21	5	6	1	-	-	-	-	-	-	-	-	35
11-20	-	7	4	10	6	5	-	1	-	-	-	-	-	33
21-30	1	2	8	6	4	2	1	1	-	-	-	-	-	25
31-40	-	1	1	2	-	3	4	3	-	1	-	-	1	16
41-50	-	-	1	2	3	2	1	3	-	-	1	-	-	13
51-60	-	-	-	1	2	2	1	-	1	-	-	-	1	8
61-70	-	-	1	-	-	2	-	2	1	-	-	1	-	7
71-80	-	-	-	-	-	-	2	1	1	-	-	-	-	4
81-90	-	-	-	-	-	1	-	3	1	-	-	1	-	6
91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101-150	-	-	-	-	1	1	2	-	1	1	-	-	-	6
151-200	-	-	-	-	-	1	1	1	3	-	-	-	1	7
201-250	-	-	-	2	-	-	1	-	-	1	-	-	1	5
251-300	-	-	-	-	-	2	-	1	-	1	-	-	-	4
301-350	-	-	-	1	-	-	-	-	-	-	-	-	-	1
351-400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
401-450	-	-	-	-	-	-	-	-	-	-	-	-	-	-
451-500	-	-	-	-	-	-	-	-	1	1	-	-	-	2
501+	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Total	3	31	20	30	17	21	14	16	9	5	1	2	4	173

Note: * excluding debts and leases

modest level of wealth, 93 per cent in this category in Cambridge owning personal wealth of £30 or under and 88 per cent in Reading. At the four-room level the range spreads, to include a handful of individuals with personal wealth valued in excess of £70, although the occupiers of both four and five-roomed dwellings are still quite heavily concentrated at the lower end of the spectrum of wealth, more noticeably in Cambridge than in Reading. Occasionally, however, even occupiers of four-roomed dwellings could exhibit considerable personal wealth by the standards of the day. In Cambridge Thomas King, plumber and glazier of Great St

Table 2 The relationship between personal wealth* and number of rooms in Reading 1660–99

Wealth £	Number of rooms													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13+	
1-10	-	8	7	2	1	3	-	-	-	-	-	-	-	21
11-20	-	2	8	10	6	2	2	3	2	-	-	-	-	35
21-30	-	2	2	3	5	2	1	2	3	-	-	-	-	20
31-40	-	1	1	4	2	6	2	1	-	-	-	1	-	18
41-50	-	-	-	2	2	1	2	1	1	2	-	1	1	13
51-60	-	-	-	1	-	1	-	3	-	-	1	-	-	6
61-70	-	-	2	2	-	-	-	1	-	1	-	1	-	7
71-80	-	-	-	2	1	2	2	-	-	1	-	-	-	8
81-90	-	-	-	-	-	2	1	-	-	-	-	-	-	3
91-100	-	-	-	-	1	-	-	-	1	-	1	-	-	3
101-150	-	-	-	-	3	3	-	3	1	1	1	-	3	15
151-200	-	-	-	-	-	2	-	-	1	-	1	1	2	7
201-250	-	-	-	1	1	-	-	-	1	1	-	-	-	4
251-300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
301-350	-	-	-	-	-	-	1	-	-	-	-	-	-	1
351-400	-	-	-	1	-	-	-	-	-	-	-	-	-	1
401-450	-	-	-	-	-	-	-	-	1	-	-	-	-	1
451-500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
501+	-	-	-	-	1	-	-	-	-	-	1	-	-	2
Total	-	13	20	28	23	24	11	14	11	6	5	4	6	165

Note: * excluding debts and leases

Mary's parish, held net personal wealth of £315/19s/9d, rising to £590/19s/9d if his debts and leases are included; in Reading we find Jonathan Clack (sometimes Clark), maltster, holding £360/5s/0d in moveable wealth, plus a £20 lease and £10 in debts good and bad.²³

Those with six rooms tended to be wealthier, but still approaching one-third possessed personal wealth of £30 or under, and only at the level of nine or ten rooms is more substantial wealth generally to be expected, although even here the range is remarkably wide. In Reading, for example,

Table 3 The numerical relationship between rooms and hearths in Cambridge

No. of hearths	No. of rooms													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13+	
1	-	1	-	-	-	-	-	-	-	-	-	-	-	1
2	-	1	6	4	1	1	-	1	-	-	-	-	-	14
3	-	-	-	2	2	3	1	-	-	-	-	-	-	8
4	-	-	-	3	1	2	-	-	2	-	-	-	-	8
5	-	-	-	-	-	-	1	2	1	-	-	-	-	4
6	-	-	-	-	-	1	1	-	-	-	-	-	-	2
7	-	-	-	-	-	-	-	1	-	-	-	1	-	2
14	-	-	-	-	-	-	-	-	-	1	-	-	-	1
22	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	-	2	6	9	4	7	3	4	3	1	-	1	1	41

Table 4 The numerical relationship between rooms and hearths in Reading

No. of hearths	No. of rooms													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13+	
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	2	1	3	-	-	1	-	-	-	-	7
3	-	-	-	-	-	-	1	1	-	-	-	-	-	2
4	-	-	-	-	1	3	1	-	1	-	-	-	-	6
5	-	-	-	-	-	1	-	-	-	-	1	-	-	2
6	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Total	-	-	-	2	2	7	2	1	2	-	2	-	-	18

five out of 11 occupiers of nine-roomed dwellings held net personal wealth valued at £30 or less: a cordwainer, a glazier, a clothier, a glover and an innkeeper.

Many factors might, of course, interfere with an expected correspondence between house size and wealth. Inventories give no precise information about the *size* of rooms, and nor does the number of rooms reveal anything about the *condition* of a dwelling. As already noted, the wealthy may not always have chosen to occupy a large house: other factors, including old age or family size, may well have been taken into consideration. But in towns there is another

prominent cause of distortion, and that is the large number of inns or victualling houses, which were necessarily commodious though no guarantee of great wealth. Hence in Cambridge the ten-roomed house in the £31-40 category that features in Table 1 was an inn, as were both of those with 12 rooms. In Reading the occupier of a ten-roomed house, worth only £41 in personal wealth, was a freemason and victualler or innkeeper.²⁴ It is unsurprising, therefore, that Tables 1 and 2 do no more than indicate a loose correspondence between house size as measured by the number of rooms and personal wealth, and that the range of wealth possessed by individuals dwelling in houses of various sizes could be quite considerable.

Tables 3 and 4 are the product of nominal linkage between those probate inventories that reveal numbers of rooms clearly, and Hearth Tax assessments. The number that could confidently be linked is very small, if a little larger than Spufford's sample, amounting to approximately 1.5 per cent of households in Reading and 2.3 per cent in Cambridge.²⁵ The association between rooms and hearths, like that between rooms and wealth, is again apparent only in general terms, and the range is again often wide. In the Cambridge sample houses with two hearths had from two to eight rooms, the majority possessing three or four. Most of the three- or four-hearth houses had four to six rooms, though the range spread as far as nine.²⁶ The one household with more hearths than rooms (10 rooms, 14 hearths) was an inn. The small Reading sample suggests that most two-hearth households contained from four to six rooms, the range for three- and four-hearth households running from five to nine. In Reading there are proportionally fewer very small households in this data compared to that for Cambridge, and none at all that was clearly a single-room dwelling.

In Tables 5-7 the two ends of the chain are joined in a direct comparison between number of hearths assessed and personal wealth. The samples remain small, now amounting to approximately 2.8 per cent and 1.9 per cent of Cambridge and Reading households respectively, and hence in these three tables the data is presented by range of numbers of hearths assessed. In each town these ranges are clearly and positively related to both the mean and the median level of personal wealth as given in inventory valuations, with the exception of the 10 plus hearth range in Cambridge, where the sample size is just two, both of whom were innholders.²⁷ One, Mr Thomas Ward of Holy Trinity parish whose premises included as many as 33 rooms and 22 hearths, held net personal assets valued at £218/7s/6d; the other was Thomas Tailor of Great St Mary's who – despite running premises with 10 rooms and 14 hearths – possessed personal net wealth valued at just £33/1s/8d. The spread of wealth to be found for each category of hearths assessed was, however, very broad, although the sample size for Reading is particularly small. The range of wealth is wide for Cambridge too, although it is encouraging that where numbers are largest – in the 1-2 hearths and 3-5 hearths range for Cambridge – there is very little overlap between the upper quartile of the former category and the lower quartile of the latter. The distinction between the 3-5 hearth and 6-9 hearth categories would also have been clearer were it not for the inclusion within the latter group of Henry Heckle, baker of Trinity

Table 5 The relationship between number of hearths and personal wealth* in Cambridge

No. of hearths	Number	Mean (£)	Median (£)	Lower quartile (£)	Upper quartile (£)
1-2	22	20	15	4	29
3-5	20	76	46	28	88
6-9	6	212	122	35	266
10+	2	126	(126)	-	-

Note: *excluding debts and leases

Table 6 The relationship between number of hearths and personal wealth* in Reading

No. of hearths	Number	Mean (£)	Median (£)	Lower quartile (£)	Upper quartile (£)
1-2	11	42	32	14	44
3-5	11	127	72	26	178
6-9	1	(217)	(217)	-	-
10+	-	-	-	-	-

Note: *excluding debts and leases

Table 7 The relationship between number of hearths and range of personal wealth* in Cambridge and Reading

No. of hearths	Cambridge (£)	Reading (£)
1-2	1-66	3-176
3-5	11-458	10-519
6-9	27-700	-
10+	33-218	-

Note: *excluding debts and leases

College and Sarah Fison, widow of Richard Fison baker to Peterhouse, possessing net wealth of just £35/5s/4d and £27/8s/8d respectively, for their ovens would have been included for the purposes of taxation.²⁸ Their households, however, did contain 7 and 6 rooms respectively, and in the case of Heckle his inventory valuation also included debts of £35 and a lease valued at £40.²⁹

Table 8 Detailed breakdown of the relationship between number of hearths and personal wealth in Cambridge, excluding debts and leases

Wealth (£)	Hearths								Total
	1	2	3	4	5	6	7	8+	
Under 10	2	7	-	-	-	-	-	-	9
10-19	-	5	-	2	-	-	-	-	7
20-29	1	2	2	1	-	-	1	-	7
30-39	-	1	2	-	1	-	1	1(14)	6
40-49	-	1	3	1	-	-	-	-	5
50-59	-	-	1	1	1	-	-	-	3
60-69	1	2	-	-	-	-	1	-	4
70-79	-	-	-	-	-	-	-	-	-
80-89	-	-	-	-	1	-	-	-	1
90-99	-	-	-	-	-	-	-	-	-
100-149	-	-	-	-	1	-	-	-	1
150-199	-	-	-	2	-	1	-	-	3
200-249	-	-	-	-	-	-	-	1(22)	1
250-299	-	-	-	-	-	1	-	-	1
300-349	-	-	-	-	-	-	-	-	-
350-399	-	-	-	-	-	-	-	-	-
400-449	-	-	-	-	-	-	-	-	-
450-499	-	-	-	1	-	-	-	-	1
500-549	-	-	-	-	-	-	-	-	-
550-599	-	-	-	-	-	-	-	-	-
600-649	-	-	-	-	-	-	-	-	-
650-699	-	-	-	-	-	-	-	-	-
700+	-	-	-	-	-	-	-	1(9)	1
Total	4	18	8	8	4	2	3	3	50

Hearth Tax assessments and personal wealth in town and countryside

To allow closer comparison with the county-wide data for Cambridgeshire employed by Margaret Spufford, the Cambridge results for matches between hearths and personal wealth are presented in Tables 8 and 9 in the more detailed format she employs in her recent article published in *The Local Historian*, with

Table 9 Detailed breakdown of the relationship between number of hearths and personal wealth in Cambridge, including debts and leases

Wealth (£)	Hearths								Total
	1	2	3	4	5	6	7	8+	
Under 10	1	6	-	-	-	-	-	-	7
10-19	1	4	-	2	-	-	-	-	7
20-29	-	1	1	-	-	-	1	-	3
30-39	-	3	-	-	-	-	-	1(14)	4
40-49	-	1	2	2	-	-	-	-	5
50-59	-	1	2	-	1	-	-	-	4
60-69	2	-	1	-	-	-	-	-	3
70-79	-	-	1	-	-	-	-	-	1
80-89	-	-	-	-	1	-	-	-	1
90-99	-	-	-	-	1	-	-	-	1
100-149	-	2	-	-	-	-	1	-	3
150-199	-	-	-	3	-	-	-	-	3
200-249	-	-	-	-	-	-	1	1(22)	2
250-299	-	-	1	-	-	1	-	-	2
300-349	-	-	-	-	-	-	-	-	-
350-399	-	-	-	-	-	-	-	-	-
400-449	-	-	-	-	1	-	-	-	1
450-499	-	-	-	-	-	-	-	-	-
500-549	-	-	-	-	-	1	-	-	1
550-599	-	-	-	-	-	-	-	-	-
600-649	-	-	-	-	-	-	-	-	-
650-699	-	-	-	1	-	-	-	-	1
700+	-	-	-	-	-	-	-	1(9)	1
Total	4	18	8	8	4	2	3	3	50

Table 8 continuing to exclude debts and leases and Table 9 including both of these forms of wealth. One striking contrast between the Cambridge data and those presented by Spufford is the markedly smaller number of one-hearth households that could be identified and related to an inventory in the town as compared to the county at large, just 4 out of 50 (8 per cent) compared to 38

out of 101 (38 per cent). This might well be the product of the greater fluidity of urban populations, particularly towards the lower end of the social scale, rendering them less easy to trace in inventory evidence, but it might also represent a real difference between the social status of one-hearth households in town and countryside.³⁰ Proportions in the two- and three-hearth categories are similar, the shortfall of one-hearth households in Cambridge being compensated by considerably larger numbers with four hearths or more (40 per cent compared to 16 per cent). While this feature is, once again, partly the product of the number of innkeepers found in the town, who accounted for five out of the eight households with six hearths or more, it cannot be explained in these terms alone.

Looking in general terms at the relationship between inventoried wealth and number of hearths assessed, this more detailed presentation of the data gives no cause to deviate from the conclusion reached above: a rough and ready relative correspondence between Hearth Tax assessment and probate inventory valuation remains, though with a significant range of wealth for each category of hearths and some surprising anomalies, some of which can be explained (such as our innkeepers and bakers discussed above) and some of which remain mysterious. The inclusion of debts and leases in Table 9 fails to subvert this overall impression, although it does have the effect of extending even further the range of wealth, if not the centre of gravity, to be found among those taxed on two, three, four and five hearths. This is an important conclusion, for the manner in which the exclusion of debts *can* impact severely upon inventoried wealth in individual cases might give the opposite impression. Examples such as John Middleton of Cambridge, butcher, whose wealth falls from £278/0s/10d to a mere £28/0s/10d once his debts are omitted – although by no means unique – are the exception rather than the rule.³¹

With the data broken down in this way there are, however, now some evident contrasts with Spufford's county data, for at every level of Hearth Tax assessment median personal wealth was lower in town than in countryside. This is particularly evident in the two-hearth category, for in the town 10 out of the 18 in this group held personal wealth valued at under £20 (56 per cent), whereas across the county two-hearth households tended to display a considerably greater level of personal comfort, with only 5 out of 33 (15 per cent) falling below £20 in terms of assessed personal wealth. Hence in Cambridge the median wealth of those assessed on two hearths was just £15, compared with £60 in the county sample, a contrast which is large enough to suggest that we are dealing with rather different social categories here. Such a view is supported by occupational evidence, for in Cambridgeshire at large the level of median personal wealth held by occupants of two-hearth households was 'double that of the average husbandmen', while in Cambridge two-hearth households included a range of quite humble occupations, including two cordwainers, a tailor, a bricklayer, two porters and a waiter.³² A similar contrast remains at the level of three hearths. In the county at large, for three-hearth households median wealth rises to £140, a figure close to that 'at which the yeomen might be appraised'; in the town it stood at just £53, and

Table 10 Moveable wealth in Cambridgeshire 1661-70, Cambridge 1670-99 and Reading 1660-99, including debts and leases: number and percentage of inventories in different bands of wealth*

Wealth (£)	Cambridgeshire		Cambridge		Reading	
	No.	%	No.	%	No.	%
1-10	28	9.6	33	19.4	10	6.1
11-20	41	14.1	26	15.3	20	12.1
21-30	41	14.1	17	10.0	21	12.7
31-60	52	17.9	33	19.4	36	21.8
61-100	40	13.7	21	12.4	31	18.8
101-300	60	20.6	25	14.7	33	20.0
301-500	16	5.5	8	4.7	9	5.5
501+	13	4.5	7	4.1	5	3.0
Total	291	100.0	170	100.0	165	100.0
1-30	110	37.8	76	44.7	51	30.9

Note: * excludes all one-room dwellings

Source: Cambridgeshire data from Spufford, 'Significance', Table 4, 64.

again this group included a baker, a tailor, a cordwainer and three barbers. For four-hearth houses as well the urban median, at £101, stood well below the rural figure of £300 plus, although the range of wealth found in this category in the town was particularly wide, extending from Richard Billips (elsewhere, Billops alias Billings) of St Benedict's parish, a joiner of 67 years of age at his death, with moveable wealth and debts valued at just £11/6s/4d, to William Graves, senior, of Great St Mary's, a stationer and bookseller with personal wealth of £667/13s/4d, including debts of £10 and a lease valued at £200.³³ Only seven representatives appear in Spufford's data with five or more hearths, but their median wealth 'shot up to well over £500'; in the town there are 12 in this category, with a median level of personal wealth of just £158.³⁴ Only two of these possessed personal wealth in excess of £500: Mr George Foster of St Botolph's parish, gentleman, scholar's servant, and leaseholder of 'The Christopher', whose moveables were valued at £520/10s/4d, including debts of £255; and Mr Thomas Day of Great St Mary's, apothecary, with moveables valued at £1,502/13s/0d, including debts of £802/13s/0d.³⁵

Is this a Cambridgeshire anomaly, or is it a general feature of urban in comparison with rural society? The Reading evidence, which is unfortunately slight, points both ways. At the two-hearth level the median, at £49, stands closer to the Cambridgeshire county figure than it does to that for the town.

The nine individuals represented here were a weaver, a husbandman, a nailer, a saddler, a dyer, a glazier, a barber-surgeon and two grocers. As only two individuals were identified with three hearths (mean and median wealth £55) the data are rather meaningless, but the median wealth of the six assessed on four hearths, at just £104, stood far closer to the urban figure than to that for the county. Again the range found here was very wide indeed, extending from Edward Wilmer of St Mary's parish, scrivener, with moveables valued at just £9/17s/8d, to Robert James the elder, clothier, also of St Mary's, with personal wealth valued at £783/4s/11d, including debts of £225/1s/6d and leases to the value of £354. Although there are only four in the sample, those with five or more hearths also had more in common with residents of the town of Cambridge than with those in the countryside, for their median moveable wealth stood at just £192.

To explore this discrepancy further we return, in Table 10, to the larger sample of inventories included in Tables 1 and 2 above, to examine the relative levels of moveable wealth that the inventories reveal. To render the data comparable with that presented by Spufford, debts and leases have been included in these calculations, while the one-room category – described by Spufford in her tabulation as 'dubious' and omitted from the urban tabulations for the same reason – has been removed from both the urban and the rural data. What now becomes clear is that, with over 19 per cent of the sample for the town of Cambridge lying in the £1-10 category compared to under 10 per cent in Cambridgeshire and just 6 per cent in Reading, there is something unusual about the Cambridge figures. A cursory glance through the list of 33 with this modest level of wealth reveals the heavy presence of menial college servants, for among the 18 whose trade is revealed are two gardeners (one of Sidney Sussex), two beadsmen of Trinity College (one also a carpenter), a porter at Sidney Sussex and a bedder of Magdalene. Four barbers also feature, as well as – unusually for urban inventories – one labourer. It would appear, therefore, that the use of those inventories proved in the University Vice-Chancellor's Court has skewed the sample, resulting in the inclusion of a higher proportion of inventories of men of modest means, and providing greater possibilities of these providing links back to the Hearth Tax.

At higher levels of wealth there is nothing in these figures to suggest fundamental urban/rural contrasts, remembering that the proportions throughout for Cambridge will obviously be affected by the relatively large number of modest wealth-holders included here. There is no reason, therefore, to question the reality of the urban-rural contrast in levels of moveable wealth for those with more than two hearths noted above. While the lower median wealth of two-hearth householders in Cambridge, which was not mirrored in the Reading evidence, can now be explained as a product of skewed data, there is no similar distortion that can explain the lower levels of wealth in town than in countryside found in both Cambridge and Reading for those assessed on three hearths or more.³⁶

Conclusions

There are four main conclusions to be drawn from this discussion, the first of which concerns the procedure of record linkage. Record linkage is without doubt a powerful tool in the armoury of the local population historian. If it finds its ultimate expression in 'total reconstitution', it can also be used more simply but very successfully to test one demographic source against another, and this testing can take either global or nominal form.³⁷ It can be used to discredit, or at least to qualify, the value of an historical source or – as in the present instance – can be used primarily as a means of validation. Nominal record linkage can, however, prove to be exceedingly frustrating: it generally produces very small samples and is incredibly time-consuming.³⁸ And, as recently emphasised elsewhere, this is more true for the early modern than for the modern period, and is particularly true for larger towns as compared with market towns and villages.³⁹ Even in an early modern rural setting, as the relatively small number of matches between the Hearth Taxes and probate evidence achieved for an entire county by Margaret Spufford shows, the nature and survival of the sources, a mobile population and the need for rigour in ensuring correct matches all militate against the generation of anything but small samples. In the case of the urban evidence presented above, one can see that when the focus is upon particular communities, even large communities, the sample size is likely to be tiny. The fact that, in proportional terms, the urban sample used here – for Cambridge at least – was larger than in Spufford's rural survey is largely fortuitous, and was produced by the employment of additional evidence from a special court with only local jurisdiction, while it is also in part the product of a less rigorous methodology which allowed a considerably longer chronological gap between the Hearth Tax and an inventory qualifying as a nominal match. The research and analysis that underpinned the urban material presented here runs to many hundreds of man-hours, and hence researchers must seriously consider the opportunity cost involved when deciding whether or not to attempt nominal linkage work of this type. The rewards can be considerable, but they are hard won.

The second conclusion is that the urban data presented above does support the view that, in general terms at least, the Hearth Taxes can indeed be used in town as well as countryside to indicate relative wealth and social status, but emphasis must be firmly placed upon the phrases 'in general terms' and 'relative wealth' – not singly, but in combination. The range of wealth that could be held by individuals who were assessed on the same number of hearths could be very wide indeed, perhaps wider in the urban evidence than in the rural sample provided by Spufford, and hence they are not at all a safe guide to the wealth of particular individuals.⁴⁰ In towns, this fact is compounded by the influence of specific problematic occupations, notably that of innkeeper and baker. This positive conclusion can be further validated, for all of its vagueness and uncertainty, by occupational evidence where available. Hence in

Cambridge, of 54 one-two hearth householders identified by occupation, 15 followed the (usually) humble trades of cordwainer, tailor or labourer; very prominent among those living in households with the largest number of hearths were apothecaries, vintners, chandlers, doctors, public notaries, brewers and butchers, as well as our problematic innkeepers and bakers.⁴¹

A third conclusion arises from the contrasts discovered between Spufford's data and the urban evidence presented here, and this is that particular numbers of hearths may well indicate different median levels of wealth in town as compared with countryside. Conclusions about the wealth, and therefore possibly also the social standing, of groups assessed on particular numbers of hearths do not, therefore, readily translate from rural to urban society; in both towns, apart from at the two-hearth level in Reading, the evidence examined here suggests that median wealth was consistently lower for each level of Hearth Tax assessment. This again underlines the fact that the Hearth Tax cannot be taken as a general guide to *levels* of wealth, even if it does faithfully reflect the *shape* of local social structures. One might reflect, of course, that this conclusion could have more general implications for the admirable project led by Margaret Spufford to map the Hearth Tax across the country. Can we be sure that differences in the distribution of hearths *between regions* translate directly into differences in wealth, any more than we can between town and countryside within the same county? Do we not need to explore further the influence of vernacular architecture, cultural patterns, topography and demographic pressures? Surely there is a case for testing the Hearth Taxes more widely against probate inventory and other evidence from a variety of regions and types of settlement before drawing conclusions from such evidence, the time-consuming nature of such research notwithstanding?

A final conclusion arises almost as a by-product of this attempt to examine the validity of the Hearth Taxes as indicators of social structure, for it is quite clear that the prime sources used here to achieve this – probate inventories – can themselves vary in quality and coverage.⁴² Surprising as it may seem given the rigour with which most historians appraise the quality of the local sources upon which they rely, few seem to appreciate that collections of probate inventories are not all the same. We have seen here that the University Vice-Chancellor's Court appears to have dealt with an unusually high proportion of inventories exhibited by inhabitants of only modest means, skewing both the hierarchy of wealth that the inventories reveal as well as the levels of wealth revealed for those towards the lower end of the Hearth Tax hierarchy. In this case we are dealing with an exceptional instance, which can be identified and allowed for. But, while accepting that 'there was no single uniform pattern of church administration throughout all 26 dioceses', there was a reasonably clear hierarchy of ecclesiastical courts – in ascending order, archdeaconry, consistory and prerogative – towards which testators of different status would gravitate, by legal requirement and possibly also by choice.⁴³ In Cambridgeshire this hierarchy may not have operated in this way in practice, for the Bishop of Ely's Peculiar jurisdiction, and hence his Consistory Court, encompassed 110 parishes, leaving the town of Cambridge and some 38 more parishes to be dealt with by the Archdeaconry of Ely, creating a geographical rather than a hierarchical

distribution with very little overlap between the two, which is encouraging from the point of view of the comparison and contrast presented here.⁴⁴ Elsewhere, however, it is quite likely that collections of inventories exhibited in archdeaconry courts pertain – in general – to more humble men than do those in consistory courts.⁴⁵ The wealthiest men, however, in both town and country, proved their wills and exhibited their inventories in the Prerogative Courts of Canterbury and York – the great majority at Canterbury – and these do not survive in any quantity, have not been indexed or are not readily available for inspection, and hence have often been ignored by historians working with inventories.⁴⁶ The omission of the very wealthy from the Reading sample, for instance, is quite clear from an analysis of the content of their wills, including those proved in the Prerogative Court of Canterbury, in the later seventeenth century: the top 12 in the period 1660-99 left bequests amounting to between £735 and £2370 *in cash alone*, while just two Reading inventories appear in the sample used here, covering the same period, indicating total moveable assets in excess of £700.⁴⁷ Now there is a sense in which this is encouraging, for if there is a general correspondence between Hearth Tax assessments and the wealth of the middling to middling wealthy as revealed in archdeaconry and consistory court inventories, then one would expect this to be even more marked at the very top of the social scale. But it is worrying too, for it is not clear that the Prerogative Court of Canterbury was used consistently, and if greater or lesser resort was had to it in different localities, this might again skew the sample of inventories exhibited in the lower courts that are available to researchers in local collections. What, for instance, are the implications of the fact that in excess of 50 per cent of extant Reading wills (and presumably also inventories) were processed by the Prerogative Court of Canterbury in the years 1660-99, compared to just 20 per cent of those that survive for Cambridge? In comparing Hearth Taxes with probate inventories, therefore, it is not only the quality and coverage of the various Hearth Tax assessments that must give pause for thought.

NOTES

1. C.A.F. Meekings, *The Surrey Hearth Tax of 1664*, Surrey Record Society, 17 (1940), Introduction; Meekings, 'Dorset Hearth Tax assessments 1662-4', *Dorset Natural History and Archaeological Society* (Dorchester, 1951), 'Introduction'; T. Arkell, 'A student's guide to the Hearth Tax: some truths, half-truths and untruths', in N. Allridge ed., *The Hearth Tax: problems and possibilities*, (Hull, 1984), 23-44; T. Arkell, 'Printed instructions for administering the Hearth tax', in K. Schürer and T. Arkell, eds, *Surveying the people. The interpretation and use of document sources for the study of population in the later seventeenth century*, (Oxford, 1992), 38-64.
2. P. Laslett, 'Size and structure of the household in England over three centuries', *Population Studies*, 23 (1969).
3. An example might be William Stout of Lancaster. Though far from poor, after giving over his trade he gave up housekeeping on more than one occasion to become a lodger: J.D. Marshall, ed., *The autobiography of William Stout of Lancaster*, Chetham Society, 3rd series, 14 (1967), 102, 205, 216.
4. Age as determined by the year the freedom was gained has been compared to Hearth Tax assessments in Chester, and reveals the expected contraction in later life for the majority of craft

- and tradesmen, but continued expansion for the professional and distributive trades. Unfortunately, no indication of sample size is given: N.J. Alldridge, 'House and household in Restoration Chester', *Urban History Yearbook 1983*, (Leicester, 1983), 49-51.
5. A range of such studies are usefully discussed in C. Husbands, 'Hearths, wealth and occupations: an exploration of the Hearth tax in the later seventeenth century', in Schürer and Arkell, eds, *Surveying the people*, 65-77.
 6. Public Record Office (hereafter PRO), E179/243/21: Free and Voluntary Gift assessments may well have varied in their coverage, and these assessments deserve more attention than they have been given to date. This very approximate population estimate is based on parish register baptism evidence and assumes a baptism rate of 30/1000: Berkshire Record Office (hereafter BRO), D/P 96/1/1-4, 97/1/1-2, and G.P. Crawford, ed., *The registers of the parish of St Mary, Reading, 1583-1812*, (Reading, 1892).
 7. Husbands, 'Hearths, wealth and occupations', 71, and sources cited therein.
 8. N. Goose and N. Evans, 'Wills as an historical source', and T. Arkell, 'Interpreting probate inventories', in T. Arkell, N. Evans and N. Goose, eds, *When death do us part: understanding and interpreting the probate records of early modern England*, (Oxford, 2000), 44-5, 73-4.
 9. The will of Thomas Richards senior, cordwainer, of Reading, written in October 1617, lists his shop tools, but they are missing from his inventory of April 1620: BRO, MS wills Berks. (archdeaconry). See also R.P. Garrard, 'English probate inventories and their use in studying the significance of the domestic interior 1570-1700', in A. van der Woude and A. Schuurman, eds, *Probate inventories: a new source for the historical study of wealth, material culture and agricultural development*, (Utrecht, 1980), A.A.G. Bijdragen, 23, 69.
 10. Ambrose Turner of Reading, inventory dated April 1599, was probably a young beginner, possessing just £2 worth of apparel and £5 in the hands of an aunt; the inventory of Ralph Hide, husbandman, dated April 1600, is unusual in that it states that he was 'a young man and had not long been married but remained with his father'; Henry Head is described as a grocer in 1698, but his inventory mentions no shop, wares or debts, and he had probably given over his trade: BRO, MS wills Berks. (archdeaconry). See also J.P.P. Horn, 'The distribution of wealth in the Vale of Berkeley, Gloucestershire, 1660-1700', *Southern History*, 3 (1981), 81-109.
 11. See, for instance, R. Grassby, 'The personal wealth of the business community in seventeenth century England', *Economic History Review*, 23 (1970), Table 1, 223.
 12. W.G. Hoskins, *The Midland peasant*, (London, 1957), 299-301.
 13. H.M. Spufford, 'The significance of the Cambridgeshire Hearth Tax', *Proceedings of the Cambridge Antiquarian Society*, 55 (1962), 53-64; M. Spufford, 'The scope of local history, and the potential of the Hearth Tax returns', *The Local Historian*, 30 (2000), 202-21.
 14. Spufford, 'Significance', 53.
 15. Spufford, 'Significance', 58.
 16. Spufford, 'Scope of local history', 204-5.
 17. Husbands, 'Hearths, wealth and occupations', 70-1.
 18. Cambridge University Library, EPR Archdeaconry, EPR Consistory; University Archives, V.C. probate, bundles 1-17. See also N. Evans, 'The occupations and status of male testators in Cambridgeshire, 1551-1800', in Arkell, Evans and Goose, eds, *When death do us part*, 178-9.
 19. BRO, MS wills Berks. (archdeaconry), 1660-99; Wiltshire County Record Office, Salisbury Consistory Court inventories, 1660-99.
 20. N. Goose, 'Fertility and mortality in pre-industrial English towns from probate and parish register evidence', in Arkell, Evans and Goose, eds, *When death do us part*, Table 10.1, 192.
 21. PRO, E79/244/23 (Cambridge), E179/76/460 (Reading).
 22. Garrets and cellars have been treated as rooms, 'closets' only when they housed a quantity of furniture; stables, barns and outhouses have been excluded. For some discussion of the difficulties here see M.W. Barley, *The English farmhouse and cottage*, (repr. Gloucester, 1987, 1st publ. 1961), 45-7; M.A. Havinden, ed., *Household and farm inventories in Oxfordshire 1550-1590* (London, 1965), esp. 16; J. Thirsk (ed.), *The agrarian history of England and Wales, Vol. IV 1540-1640*, 729 *et sequ.*; Garrard, 'English probate inventories', 62-3; A. Dyer, 'Urban housing: a

- documentary study of four Midland towns 1530-1700', *Post-Medieval Archaeology*, 15 (1981), esp. 208-10. Dyer offers different calculations based upon different interpretations of what constitutes a room. For the purposes of the present analysis, consistency across the sample of inventories is the key factor.
23. Inventories dated 1694 and 1687 respectively.
 24. For a similar situation in Exeter and Chester see W.G. Hoskins, ed., *Exeter in the seventeenth century: tax and rate assessments 1602-1699*, Devon and Cornwall Record Society, new series, 2 (1957), xvii; Alldrige, 'House and household', 42.
 25. These calculations, based upon estimated population sizes, assume 4.5 persons to a household.
 26. This is comparable to Richmond in Yorkshire: R. Fieldhouse, 'The hearth tax and social structure in the borough of Richmond in 1673', *Cleveland and Teeside Local History Bulletin*, 14 (1971), 14-15.
 27. The better measures of central tendency are the medians and quartiles, as means can be significantly affected by extreme values in a distribution: R. Floud, *An introduction to quantitative methods for historians*, (London, 1973), 72.
 28. By the statute of 16 Chas II c.3 any household with three hearths was liable: industrial hearths (such as kilns and furnaces) were not supposed to be taxed, but bakers' ovens were chargeable.
 29. For similar remarks regarding bakers in Chester see Alldrige, 'House and household', 44, 47.
 30. It is also the case that households with just one hearth, at 29 per cent, formed a low proportion of the total in Cambridge compared to the county as a whole, for in Cambridgeshire '30-50 per cent of the houses in each parish had one hearth' – Spufford, 'Significance', 59. The figure was also very low in comparison with the textile town of Colchester, where 46 per cent of households contained only one hearth (calculation from PRO E179/246/22). In this respect, as well as in regard to the proportion of households exempt – 15 per cent in Cambridge and 53 per cent in Colchester – there were clearly pronounced differences in social structure between towns of similar sizes, and not simply between town and country. Cambridge had more in common with York, another trading, service and administrative centre, than it did with textile towns: see D. Hibberd, 'Data-linkage and the Hearth Tax: the case of seventeenth-century York', in Alldrige ed., *The Hearth Tax*, 62.
 31. The same is true of Edward Westley of Little St Mary parish in Cambridge, cutler, tennis court keeper and coroner to Kings College, whose moveable wealth falls from £334/12s/9d to £59/15s/9d once a lease valued at £260 and debts of £14/7s/0d are removed.
 32. Spufford, 'Scope of local history', 205.
 33. Spufford, 'Scope of local history', 205; Billips age was established from a deposition recorded in an occupational database for Cambridge compiled from a wide range of sources.
 34. Spufford, 'Scope of local history', 205.
 35. For the influence of innholders of modest wealth at this level of hearths see above, 50-1.
 36. A possible contributing factor to this discrepancy *may* be the greater prevalence of heated rooms in town as compared to countryside, as found in Warwick in comparison with the rest of Kineton Hundred: P. Styles, *Studies in 17th century West Midlands history*, (Kineton, 1978), 157.
 37. For a 'global' example, N. Goose, 'The Bishops' Census of 1563: a re-examination of its reliability', *Local Population Studies*, 56 (1996), 43-53; for a nominal example, P. Razzell, 'The evaluation of baptism as a form of birth registration through cross-matching census and parish register data: a study in methodology', *Population Studies*, 26 (1972), 121-46. For 'total reconstitution' see, for example B. Reay, *Microhistories: demography, society and culture in rural England, 1800-1939*, (Cambridge, 1996).
 38. For similar concerns in the urban context see C. Galley, *The demography of early modern towns: York in the sixteenth and seventeenth centuries* (Liverpool, 1998), 74 and fn. 39. There is a large literature on record linkage, discussing both possibilities and pitfalls. See, for example, E. A. Wrigley, ed., *Identifying people in the past*, (London, 1973); A. Macfarlane, *Reconstructing historical communities*, (Cambridge, 1977); S. King, 'Multiple-source record linkage in a rural industrial community, 1680-1820', *History and Computing*, 6 (1994), 133-42; P. Tilley and C. French, 'Record linkage for nineteenth-century census returns: automatic or computer-aided?', *History and Computing*, 9 (1997), 122-33.

39. Unpublished paper delivered to first annual LPS/LPSS Conference, University of Hertfordshire, 7 April 2000: see report in *Local Population Studies*, **66** (2001), 11.
40. Alldrige's conclusion for Chester is similarly guarded, while here statistical comparison between Hearth Tax assessments and Poll Tax data failed to establish a necessary correlation: 'House and household', 41-3.
41. N. Goose, 'Economic and social aspects of provincial towns: a comparative study of Cambridge, Colchester and Reading, c.1500-1700', (unpublished Ph.D. thesis, University of Cambridge, 1984), 354-5. Hibberd reached similar conclusions using occupational information for York: 'Data-linkage and the Hearth Tax', 68-9.
42. For some regional differences see Arkell, 'Interpreting probate inventories', 99-102.
43. T. Arkell, 'The probate process', and Goose and Evans, 'Wills as an historical source', in Arkell, Evans and Goose, eds, *When death do us part*, 9, 40.
44. Arkell, 'Probate process', 11.
45. Arkell, 'Probate process', 11.
46. Goose and Evans, 'Wills', 40-4; Arkell, 'Interpreting probate inventories', 73.
47. N.R. Goose. 'Decay and regeneration in seventeenth-century Reading: a study in a changing economy', *Southern History*, **6** (1984), Table 3, 65.