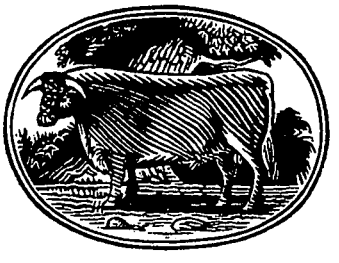
THE AGRICULTURAL HISTORY REVIEW



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The British Agricultural History Society

1999–2000

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The Society aims to promote the study of agricultural history and the history of rural economy and society, amongst other ways, through (a) the publication of *Agricultural History Review* together with supplements and other apppropriate items; (b) the holding of conferences in its own right and in conjunction with other organizations; (c) the promotion of the conservation of historically significant landscapes and the rural environment; (d) the promotion of the teaching of the history of agriculture, the rural economy and society, and the environment, at all levels of education; (e) the promotion of links with societies and institutions in Europe and world-wide which have similar aims and objectives.

The society normally holds three conferences each year: a residential Easter conference (held in Lincolnshire in 1999), a one-day regional autumn conference and a London winter conference on the first Saturday in December. Details of these will be found in the *Review* or on the society's web pages. The society's conferences are open to non-members of the society.

Membership is open to all those who support the aims of the society. The annual subscription of £15 is due on the 1 February in each year. A standing order form is available from the Treasurer. There is a reduced rate for students not in full time employment and those registered unemployed of £5. Full details can be obtained from the Treasurer, BAHS, c/o Department of Economic and Social History, The University of Exeter, Amory Building, Rennes Drive, Exeter, EX4 4RJ (e.mail BAHS@Exeter.ac.uk) to whom all applications for and correspondence concerning membership (including changes of address) should be directed.

Correspondence concerning all aspects of the society's activities, including its conferences, should be directed to the Secretary, BAHS, Department of History, Royal Holloway, Egham, Surrey, TW20 0EX. Advance details of the society's meetings and other information concerning the society can be found on our web pages, http://www.bahs.org.uk/.

The Agricultural History Review
Volume 47 Part I 1999

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The *Review*

With this issue of the *Review*, we change editors, printers and conventions. Hopefully the change of editors will be imperceptible, but the switch over has been the occasion on which the Executive Committee has debated at length the format of the *Review* and decided that it should revert to the single column format employed before the mid-1970s. With the change of printers we are also adopting the practice of many other journals of printing (as far as possible) from authors' own discs. We have also revised the *Review's* footnote conventions. All intending contributors are invited to secure a copy of the *Review's* 'Guidelines for contributors' either from the editors or directly from the Society's web site.

British Agricultural History Society Forthcoming Conferences, 1999–2000

Autumn Conference, 1999

Saturday 11 September 1999 at University College Northampton

POOR RELIEF, SELF HELP AND CHARITY IN THE COUNTRYSIDE
(with particular reference to the Midlands and Eastern England)

Dr Steve Hindle (University of Warwick) * Dr John Broad (University of North London) * Dr Samantha Williams (Goldsmiths' College) * Elizabeth Hurren (University College Northampton) * Bridget Lewis (University College Northampton) * Dr Jeremy Burchardt (University of Reading)

Details and a booking form are available from Noreen Hamblin, School of Humanities, Trinity and All Saints College, Brownberrie Lane, Leeds, LS18 5HD
email n.hamblin@tasc.ac.uk

Winter Conference, 1999

Saturday 4 December at Institute of Historical Research, London

COMMONS AND COMMON RIGHTS

Prof. Christopher Dyer (University of Birmingham) * Dr Steve Hindle (University of Warwick) * Dr Leigh Shaw-Taylor (Jesus College Cambridge) * Prof. Alan Everitt (University of Leicester)

Details and booking form are available from Dr John Broad, Department of History, University of North London, 166–220 Holloway Road, London, N7 8DB
email J.Broad@unl.ac.uk

Advance Notice

THE SOCIETY'S SPRING CONFERENCE, 2000

will be held at Bretton Hall College, near Wakefield, Monday 10 April–Wednesday 12 April. Offers of papers should be sent to the society's secretary, Dr Peter Dewey, email P.Dewey@RHBNC.ac.uk.
Fuller details of all the society's conferences can be found on our web-site
http//www.bahs.org.uk/

The distribution of ridge and furrow in East Anglia: ploughing practice and subsequent land use*

Robert Liddiard

Abstract

Ridge and furrow remains a visible surviving feature of the medieval landscape but outside of the Midland Plain some aspects of the practice are not clearly understood. It is the distribution of ridge and furrow in such an area, in this case East Anglia, that is considered here. Norfolk, Suffolk, and Cambridgeshire retain relatively few examples of ridge and furrow. There is an uneven distribution across the three counties, despite the fact that during the medieval period, open-field agriculture was ubiquitous. It is argued that in the post-medieval period the majority of former open-field land was cross-ploughed and underdrained after enclosure, a practice that removed ridging almost completely. It is concluded that the pattern of post-medieval arable cultivation in East Anglia has largely determined the mid-twentieth century distribution of ridge and furrow, and that the extent of ridged fields in the medieval period was more widespread than has been hitherto imagined.

The earthworks of former arable cultivation known as 'ridge and furrow' are among the most readily visible surviving features of the medieval landscape. Although the ridges we see today date from when the fields in which they lie were put down to grass, normally in the post-medieval period, it is now generally accepted that surviving ridges perpetuate medieval practice and that, although ridging continued into the post-medieval period, its presence indicates medieval open-field cultivation.

Modern distribution maps of ridge and furrow are a combination of two different phenomena. To begin with, the land in question must have been ploughed in ridges, and secondly, this land must be put down to pasture and subsequently remain under grass until such time as the ridging can be identified and recorded. The existence of ridge and furrow in the Midlands is well attested, and it is indeed in the Midlands that most work on this type of earthwork has been conducted. Yet in those areas that are peripheral to the Midland Plain the distribution of ridge and furrow is less clearly understood. East Anglia is a case in point. In the past, some commentators have incorrectly concluded that there is none to be found.[1] Norfolk, Suffolk, and Cambridgeshire all either still retain examples of ridge and furrow or, in other cases, its existence can be inferred, despite its removal by subsequent ploughing. Using East Anglia as a case study, an analysis of surviving ridge and furrow clearly demonstrates that it is the

* I would like to thank Brian Cushion, David Hall, Andrew Rogerson and Tom Williamson for their comments on early drafts of this paper.

[1] D. Hall, *Medieval Fields* (1982), p. 5.

subsequent land use of these areas that has largely determined the mid-twentieth century distribution of ridge and furrow, and not the original extent of ridged fields.

The usual method for generating ridge and furrow distribution maps has been for RAF air photographs to be analysed, and the location of surviving ridges to be plotted on Ordnance Survey maps.[2] Yet as a technique of historical analysis, the distribution map has a number of limitations. In situations where it can never be known exactly what a distribution was in the past, any conclusions based on mapping existing or known sites runs the risk of being called into question when subsequent research adds further information to the coverage and alters the original sample. The disappearance of sites or artifacts, their 'attrition rate', has crucial implications for historical studies. This has recently been seen in the debate over vernacular buildings, where analysis of the attrition rates of buildings has seriously called into question conclusions based on mapping house types.[3] This type of problem is not confined to the study of buildings; it is common to any study that bases its conclusion upon distributions.

Ridge and furrow distribution maps have been produced for Cambridgeshire and for Norfolk, and both maps show an uneven distribution across the respective counties.[4] There are two major concentrations in west Cambridgeshire and west Norfolk (see figure 1). Elsewhere, there is comparatively little evidence of ridging but there is just enough to suggest that originally, ridge and furrow was much more widespread.

It needs to be emphasised at this point that the open-field farmer who cultivated on heavy soil had little alternative to ridge and furrow as far as drainage was concerned. Within the constraints of an open-field system the only other method of drainage possible would have been to plough deep furrows on either side of a strip. This has obvious drawbacks if the surface of the ground was ploughed flat and the soil was prone to waterlogging. It is therefore perhaps significant that Walter of Henley, writing in the thirteenth century, suggested only ridge and furrow for drainage '... that the land, or rydge, which lye as if it were a creast ... to be well furrowed ... so that the ground be delyvered from the water'.[5] This therefore raises the question of why there is little ridge and furrow in areas such as the south Norfolk claylands, where open-fields, albeit of 'irregular' form, survived into the post-medieval period.[6]

At least part of the answer lies not in medieval ploughing practice, but in the subsequent land use and drainage methods used in these areas. The case of Cambridgeshire shows this clearly. Early agricultural writers noticed that far fewer ridges were retained in the east of the county, and explained this by reference to the fact that drainage was better managed here than in the west, and that cross-ploughing and underdrainage had replaced ridge and furrow.[7] Those farmers in the west of the county were severely castigated for continuing to plough in ridges.

2 For example, M. J. Harrison, W. R. Mead and D. J. Pannet, 'A Midland ridge and furrow map', *Geographical J.*, 131 (1965), pp. 365–69.

3 D. Currie, 'Time and Chance. Modelling the attrition of old houses', *Vernacular Architecture*, 19 (1988), pp. 1–9.

4 R. J. Silvester, 'Ridge and Furrow in Norfolk', *Norfolk Arch.*, 40 (1989), pp. 286–96; R. Kain and W. R. Mead, 'Ridge and Furrow in Cambridgeshire', *Proc. of the Cambridge Antiquarian Soc.*, 67 (1977), pp. 131–7.

5 D. Oschinsky (ed.), *Walter of Henley and other treatises on farm management and accounting* (1971), pp. 321–23.

6 K. Skipper, 'Wood-Pasture: the landscape of the Norfolk claylands in the early modern period' (Unpublished MA thesis, University of East Anglia, 1989).

7 Kain and Mead, 'Ridge and Furrow in Cambridgeshire', pp. 135–6.

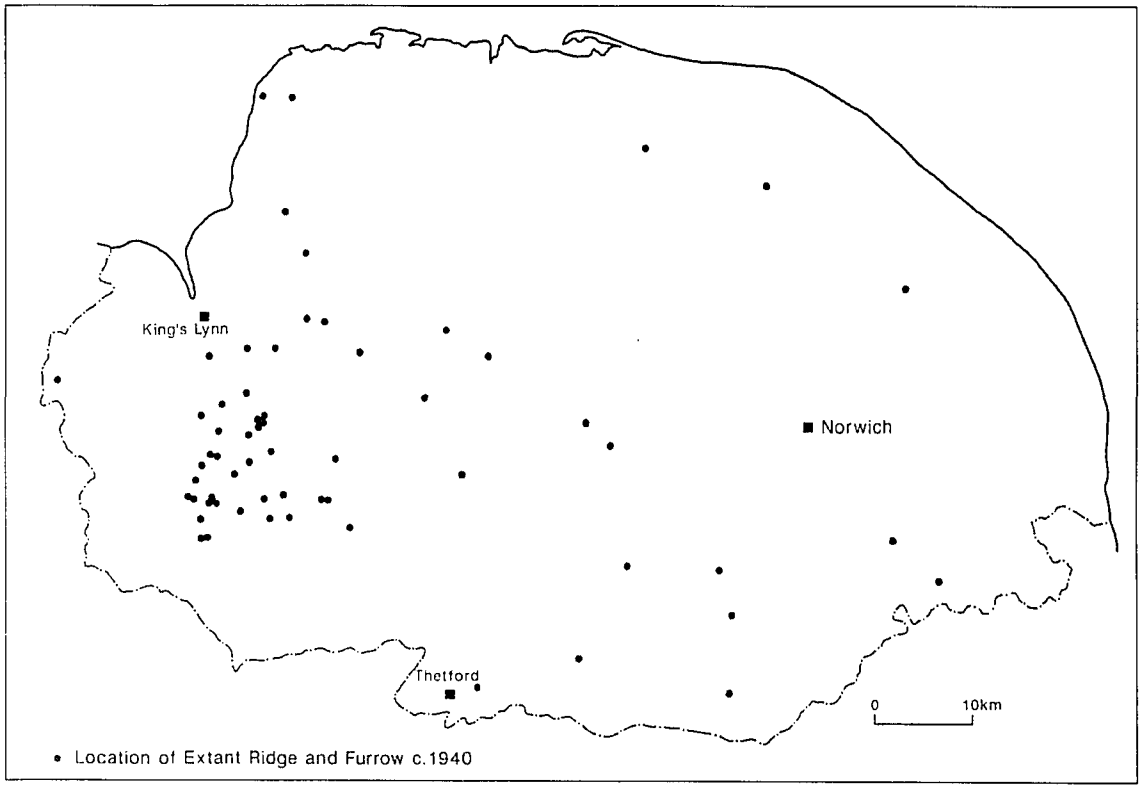


FIGURE 1. Distribution map of Ridge and Furrow in Norfolk. Based on aerial photographs and the Norfolk Sites and Monuments Record

It would appear that the uneven use of hollow draining accounts in the most part for the distribution of ridge and furrow in the county, rather than the original extent of ridged fields.

A similar situation seems to have occurred in Norfolk and Suffolk, but here, the intensification of arable production in the post-medieval period, together with improved drainage techniques, was enough to erase ridge and furrow almost entirely.

The post-medieval period saw the increasing use of the ploughing technique of stitching. Here, a flat surface was retained by cross-ploughing every year. Needless to say, this technique could only be used on enclosed ground. William Folkingham, writing in 1610, commented that 'stitches are common in Norfolk and Suffolk even on their light grounds'. Marshall, writing in 1787, describes the operation, showing it was clearly established as a practice by this time.[8] As stitching is associated with enclosed areas and ridge and furrow with open-field strips; and as enclosure seems to have increased in Norfolk and Suffolk over time; then it follows that while the practice of ridging would have decreased over time, that of stitching and related practices would have increased. Stitching therefore, would have been responsible for the removal of medieval ridge and furrow on enclosed areas.

However, it was the increased use of underdraining in conjunction with cross-ploughing

[8] Folkingham quoted from M. W. Beresford, *History on the Ground. Six studies in maps and landscapes* (1957), p. 83; W. Marshall, *The Rural Economy of Norfolk* (1787), p. 78.

which had the largest impact on ridge and furrow. References to underdraining begin to appear in Norfolk farm accounts from the 1740s, with the biggest drive being at the end of the eighteenth century when it took place on a 'phemonemal scale'.[9] In the minds of the agricultural improvers of the day, ridge and furrow was an unpleasant reminder of medieval practice. Nathaniel Kent commented that 'This, of all methods of draining may safely be called the worst'.[10] Ploughing in ridge and furrow could have no part in the new agricultural order. Needless to say, an area of former ridged open-field that was underdrained and cross-ploughed would leave little or no trace of ridge and furrow, even if it was put down to pasture soon afterwards.

If it is accepted that post-medieval drainage methods can seriously affect modern distributions of ridge and furrow, then the absence of large amounts of ridge and furrow in Norfolk and Suffolk is readily explicable. In both counties there is enough evidence to suggest that ridge and furrow was once much more widespread and that subsequent arable production led to its removal. Ridging has been claimed at the Anglo-Saxon village of West Stow,[11] and a deposition of 1612 concerning a dispute over Brandon warren noted that 'it doth appeare by ridge and furrowe that itt hath bene shiftfield, though now used as warren', an explicit reference to the practice.[12] At Barnham there are soil marks which appear to indicate ploughed out ridge and furrow.[13]

However, it is in Norfolk that the clearest picture of ridge and furrow attrition emerges. West Norfolk retained a greater concentration of ridges into this century than the rest of the county, this despite the fact that irregular open-fields were ubiquitous in the county in the medieval period. However, there are enough surviving examples of ridge and furrow from the south of the county to suggest that ridging was once more widespread. For example, at Tibenham, a small area of ridge and furrow survived into this century before being destroyed after the Second World War.[14] Analysis of the 1840 tithe award map showed the area in question was at that time pasture, but mostly surrounded by arable.[15] It is clear that most of the parish was once open-field and that this small area of ridge and furrow was the remnant of a much wider distribution. In 1839 71.4 per cent of the parish was under arable cultivation, clearly sufficient to have removed most other ridging, and the 1930s land utilisation survey shows that the arable area continued to expand thereafter.[16]

Even more fortuitous is the survival of four ridges in the parkland of Kirby Cane Hall in south Norfolk. Here, the ridges in question escaped being destroyed by being planted with nut trees, which were retained until the area was incorporated into the park. Variations in the surface vegetation adjacent to the surviving ridges indicate that the ridging was once more widespread. Again, it is post-medieval ploughing that removed this ridging, the tithe award map for the parish shows the surrounding areas as being under arable cultivation.[17]

Silvester has argued that the distribution of ridge and furrow in Norfolk is best explained in

9 S. Wade-Martins and T. Williamson (eds), 'The farming journal of Randall Boroughes (1794–1799)', *Norfolk Rec. Soc.*, 58 (1996), p. 27.

10 N. Kent, *Hints to Gentlemen of Landed Property* (1793), pp. 21–2.

11 S. West, 'West Stow: The Anglo-Saxon Village', *East Anglian Archaeology* 24 (Suffolk County Planning Department, 1985), p. 10.

12 PRO, E134/10 Jas 1/East 27, deposition of Nicholas Tilborough. I am grateful to Dr Andy Wood for bringing this reference to my attention.

13 At grid reference TL 845 798.

14 Silvester, 'Ridge and Furrow', p. 292.

15 Norfolk Record Office (NRO), MF 752/578.

16 R. J. P. Kain, *The National Tithe Files Database on CD-ROM*, reference number 6350.

17 NRO, MF 750/333.

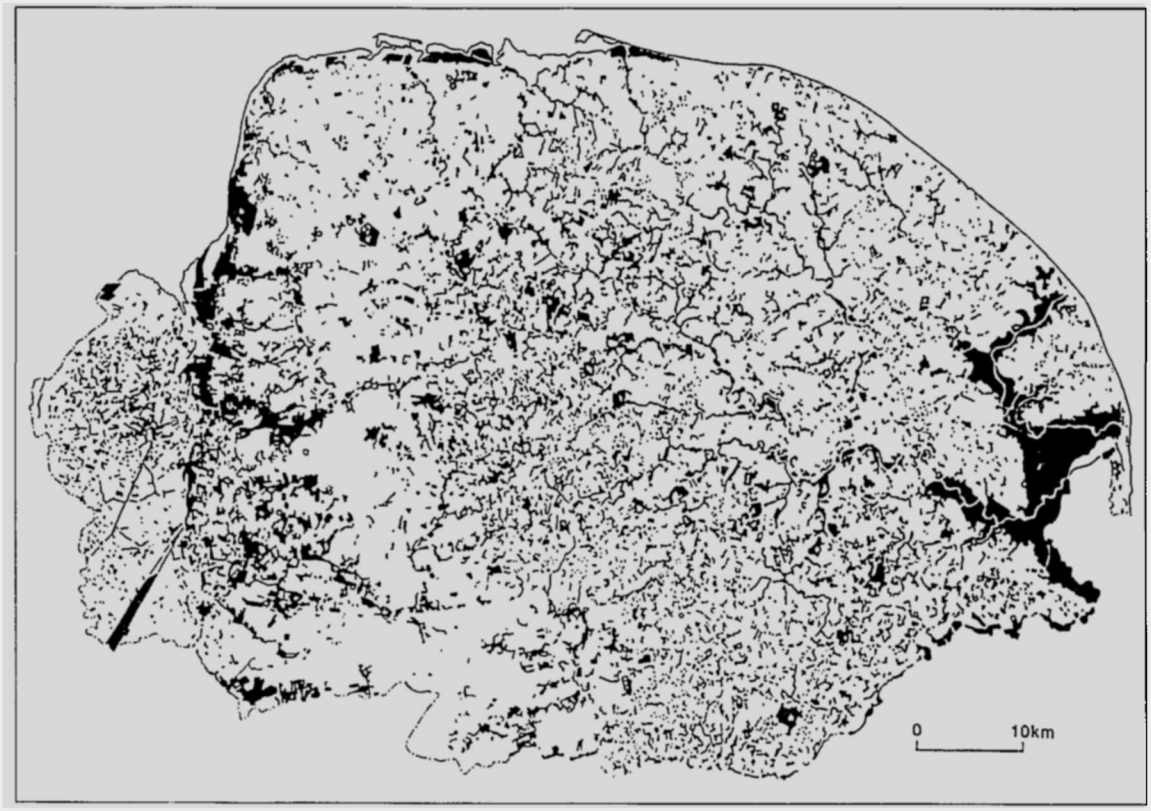


FIGURE 2. Distribution map of pasture in Norfolk in the 1930s. Taken from J. Mosby, *The Land of Britain*, vol 70 (1938)

cultural terms, the practice spreading across the Fens from the Midlands, but failing to fully establish itself in the rest of the county. The evidence presented here would suggest a different conclusion. It would appear that other areas of Norfolk were ridged, but that the ridges have not generally survived. The strong western bias of ridge and furrow in Norfolk is explained by the retention of more areas of permanent pasture in this area than elsewhere in the county. Map evidence, together with information from probate inventories gathered by Mark Overton indicates that from the sixteenth century areas of former open-field were put down to permanent pasture in west Norfolk for the purposes of stock rearing.[18] During the eighteenth and nineteenth centuries there was a general upsurge in arable production in the county, but west Norfolk retained more permanent pasture then elsewhere. This is shown very clearly by mid-nineteenth century tithe award data, and by Mosby's land utilisation survey from the 1930s[19] (see figure 2). Mosby's distribution map of pasture has, not surprisingly, the same general pattern as the ridge and furrow distribution map, showing a large concentration in the west of the county, but declining the further east one moves into the county. Within Norfolk, the

[18] M. Overton, 'Computer analysis of an inconsistent data source: the case of probate inventories', *J. Historical Geography*, 3 (1977), pp. 317–26.

[19] R. Kain, *An atlas and index of the Tithe Files of mid-Nineteenth century England and Wales* (1986), p. 70; J. Mosby, *The Land of Britain: the report of the Land Utilisation Survey. Vol. 70, Norfolk* (1938), endpaper.

distribution of ridge and furrow probably reflects patterns of post-medieval land-use more accurately than it does the original distribution of ridging.

It can be concluded that ridge and furrow was once practiced in East Anglia to a greater extent than the distribution of surviving ridge and furrow would suggest. This is not to suggest that all open-fields in Norfolk and Suffolk were once ridged. Where open-fields were on well-draining soil there may have been no need for ridge and furrow. In the parkland of Houghton Hall for example, there is evidence for headlands but none for ridge and furrow, indicating that the direction of ploughing was alternated each year.[20] What this study has highlighted is the role of post-medieval land use in the survival of ridge and furrow in the landscape. Whereas in the Midlands ridging often continued in conjunction with underdraining,[21] East Anglian farmers seem to have prefered a combination of underdraining and cross-ploughing. As such, this must count as a significant regional variation in ploughing practice that removed ridge and furrow almost completely. Where ridging did survive it was either because of particular land-use, for example in west Norfolk, or was purely fortuitous. In Norfolk and Suffolk the Agricultural Revolution brought with it the destruction of one of the most characteristic features of the medieval landscape.

[20] T. Williamson, pers. comm.

[21] E. Kerridge, 'Ridge and Furrow and agrarian history' *AgHR* 3 (1955), pp. 14–36.

New estimates of land productivity in Belgium, 1750–1850*

Guy Dejongh

Abstract

Most previous studies of Belgian land productivity in the eighteenth century have focused on the Flemish region, notably the provinces of Brabant, East and West Flanders. The evolution of crop yields in the other provinces has scarcely been considered. By constructing a new series of yield estimates for all provinces within Belgium, this article seeks to fill an important gap in rural historigraphy and sheds new light on the internal dynamics of Belgian agriculture during a period of fundamental economic change, 1750–1850. Our estimates show a noticeable increase in arable crop yields in the southern Low Countries in the second half of the eighteenth century. Although land productivity responded positively to rapid population growth and rising prices after 1750, it realised a less marked rate of increase. The increase in yield after 1750 can therefore not be attributed to an 'agricultural revolution': the term 'growth acceleration' seems a more appropriate description of the agricultural growth process.

In his study of the evolution of yield ratios between 800 and 1800, Slicher van Bath concluded that land productivity in the North Sea area (England, Belgium and the Netherlands) rose faster than in the remainder of the European continent.[1] Furthermore, his estimates made it clear that the increase of land productivity was most pronounced in periods of growing population pressure and rising prices (1500–1650 and after 1750). This hypothesis will be evaluated on the basis of new estimates of Belgian land productivity in the period from 1750 to 1850.

Most previous studies of Belgian land productivity in the eighteenth century have focused on the Flemish region, in particular the provinces of Brabant, East Flanders and West Flanders.[2]

* This paper was prepared for the fourth CORN Meeting on 'The Comparative History of Land Productivity and Agro-Systems in the North Sea Area', held at Exeter, 3–4 May 1997. I am grateful to Prof. em. Herman van der Wee, Prof. Erik Buyst, Dr. Bruno Blondé, Dr. Edwin Horlins, Dr. Michelangelo van Meerten and all the members of the Leuven Workshop in Quantitative Economic History (Vincent Duchêne, Sven Geyssens, Wim Peeters, Antoon Soete, Bart Van der Herten) for their interesting comments on an earlier draft of this paper.

[1] B. H. Slicher van Bath, 'The yields of different crops, mainly cereals in relation to the seed *c.* 810–1820', in *Acta Historiae Neerlandica*, 2 (1967), pp. 78–97.

[2] For instance, J. Blomme, 'Bevolking, landbouw en rurale industrie in het Land van Waas, 18e eeuw', in *Annalen van de Koninklijke Oudheidkundige Kring van het Land van Waas*, 87 (1984), pp. 119–243; H. van der Wee and E. Van Cauwenberghe (eds), *Productivity of land and agricultural innovation in the Low Countries, 1250–1800* (Leuven, 1978); P. Vandewalle, *Quatre siècles d'agriculture dans la région de Dunkerque, 1590–1990* (Ghent, 1994); H. Van Isterdael, 'De opbrengst factoren in het Land van Aalst (17de–19de eeuw)', in J. Craeybeckx and F. Daelemans (eds), *Bijdragen tot de geschiedenis van Vlaanderen en Brabant*, I (Brussels, 1983), pp. 147–165; A. Verhulst and C. Vandenbroeke (eds), *Landbouwproduktiviteit in Vlaanderen en Brabant 14de–18de eeuw* (Ghent, 1979).

The evolution of crop yields in the other provinces has scarcely been considered. Interregional yield comparisons or approximate national estimates have not yet been worked out. This lacuna must be ascribed to the discontinuity in the approaches which historians have applied to Belgian rural history. Most studies of the agricultural development of Belgium during the ancien régime have adopted a regional approach, while rural studies concerned with the nineteenth and twentieth centuries have generally been undertaken at the national level. By constructing a new series of yield estimates for all the provinces within Belgium, this paper attempts to fill an important gap in rural historiography and to shed new light on the internal dynamics of Belgian agriculture during a period of fundamental economic change, 1750–1850.

The paper is subdivided in six parts. Section one considers the main hypotheses for the development of agrarian productivity in eighteenth-century Belgium. In section two we discuss the sources which are available for the measurement of land productivity in Habsburg Belgium and their reliability. The third section describes the methods employed to calculate the gross crop yields at the regional (provincial) and national level.[3] Section four reviews the results. In section five the development of arable productivity in the 1760–1850 period is interpreted in a broader context. We end with a short conclusion.

I

Within the debate on the agricultural development of Belgium between 1750 and 1850, three different hypotheses can be distinguished. The first, 'optimistic' hypothesis, emphasises that the unprecedented population increase since 1750 had a positive effect on the agricultural development of the southern Low Countries and prompted an 'agricultural revolution'.[4] Contrary to the (neo-)malthusian model, population growth is seen as the major stimulus of agrarian innovation and specialisation. The rapid demographic expansion of the southern Netherlands boosted the prices of agrarian products, generated an extreme subdivision of peasant holdings and accelerated proto-industrial growth in the countryside. This process led to a more intensive tilling of the soil, an extension of the cultivated area, the introduction of new arable crops, the spead of improved crop-rotation systems, the development of better stock-breeding and manuring methods, and the optimisation of farming tools. The large-scale implementation of these improvements caused a revolutionary increase of total agricultural output, which was seen as the driving force of Belgium's early industrialisation.[5] The steep increase of agrarian output appeared, for instance, in the positive balance of trade for grain. Despite the excessive rise in domestic demand, the southern Low Countries still managed to export considerable amounts of grain during the period.

[3] The yield figures are expressed in metric measures. For the recalculation of these data in British units of measurement the following equivalents have to be used: 1 hectare (ha) = 2.47 acres, 1 hectoliter (hl) = 2.78 bushels and 1 kg = 2.25 pounds. In early nineteenth-century Belgium 1 hl of wheat weighted 78 kg, 1 hl of rye 71 kg, 1 hl of spelt 44 kg, 1 hl of barley 61 kg, 1 hl of oats 44 kg and 1 hl of buckwheat 63 kg.

[4] For instance H. Pirenne, *Geschiedenis van België van het begin tot heden* (4 vols, 5th edn, Brussels 1928), III, pp. 142–3.

[5] J. Craeybeckx, 'De agrarische wortels van de Industriële Omwenteling', in *Belgisch Tijdschrift voor Filologie en Geschiedenis*, 41 (1963), pp. 426–38.

The most prominent advocate of the 'agricultural revolution' theory has been Herman Van der Wee. He has argued that the increased diversification of arable production in particular prompted a substantial increase in Flemish land productivity.[6] The most important innovation in this respect was the general adoption of potatoes in the rotation scheme. Another supporter of the optimistic view has been Phil Kint. Kint observed that even in the highly productive province of East Flanders, land productivity increased rapidly during the first half of the nineteenth century.[7] Other scholars have sought to explain the rapid growth of agricultural output in terms of the expansion of the cultivated area since 1750. Confronted with the challenge of feeding a continuously growing population, the Austrian government ordered the systematic reclamation and development of common wastelands and fallow. According to Joseph Roland, this policy initiated an agricultural revolution in the province of Namur.[8]

The second, 'pessimistic' hypothesis stresses that the adoption of new arable crops with higher yields per unit of area, like potatoes, reflected the technical incapacity of traditional cereal cultivation to increase its productivity. Because of the weak growth of cereal productivity, the expansion of potato production was necessary to ease the Malthusian tension between the increasing demand for food and limited supply of land after 1750. This argument was put forward by the Ghent historians Chris Vandenbroeke and Willy Vanderpijpen.[9] According to their analysis of a substantial number of probate inventories, gross cereal yields in Flanders did not increase between the middle of the seventeenth century and the end of the ancien régime. It was only after 1850 that average yields grew rapidly and then due to the more generalized use of chemical fertilisers. Their study also revealed a continuous increase in the amount of seed sown per unit of area, which suggested that net productivity slackened.[10] Finally, they demonstrated that the evolution of cereal yields could not keep pace with demographic growth. This cast doubt on the positive relationship between land productivity and population development. On the basis of these arguments, both scholars rejected the traditional post-1750 agricultural revolution. They went so far as to affirm Morineau's idea of an 'immobilité multiséculaire' or complete stagnation of agrarian development in Flanders between 1600 and 1850.[11]

More recently there has been a growing consensus amongst rural historians that Belgian agriculture developed rather gradually when seen from a long term perspective. As in England,

[6] H. van der Wee, 'The agricultural development of the Low Countries as revealed by the tithe and rent statistics', in van der Wee and van Cauwenberghe (eds), *Productivity of land*, pp. 19–22.

[7] P. Kint, *Prometheus aangevuurd door Demeter. De economische ontwikkeling van de landbouw in Oost-Vlaanderen 1815–1850* (Amsterdam, 1989), pp. 83–95. Kint's yield estimates for East Flanders were criticized by M. Goossens, *The economic development of Belgian agriculture, 1812–1846* (Leuven, 1993), p. 86.

[8] J. Roland, 'La révolution agricole au XVIIIe siècle, spécialement dans la province de Namur' in *Annales de la Fédération Archéologique et Historique de Belgique. XXXIme Session. Congrès de Namur 1938*, 31 (1938), pp. 361–6.

[9] C. Vandenbroeke and W. Vanderpijpen, 'The Agricultural Revolution in Flanders and in Belgium: myth or reality?', in van der Wee and van Cauwenberghe (eds), *Productivity of land*, pp. 163–170. Their view was affirmed by A. Verhulst, 'Agrarian Revolutions: myth or reality?', *Sartonia*, 2 (1989), pp. 71–95.

[10] For rye and wheat, the quantity of seed used per hectare increased from 1.0 to 1.2 hl in about 1656–1665 to 1.5 to 2.0 hl between 1812 and 1825.

[11] M. Morineau, *Les faux-semblants d'un démarrage économique: agriculture et démographie en France au XVIIIe siècle* (Paris, 1971).

this view has arisen out of new research on medieval agrarian history.[12] Several scholars have demonstrated that Flemish medieval agriculture was much more varied, dynamic and flexible than had been previously accepted.[13] Emphasis was laid on the fact that urban and commercial expansion in the thirteenth century stimulated the demand for agricultural products, which caused a rapid increase in prices. This encouraged farmers to diversify and intensify their rotation systems. Over the following centuries, systems of land cultivation were gradually improved and diffused across the Flemish countryside. Under the stimulus of renewed population growth, progressive farming techniques were also adopted in most of the Walloon provinces (Luxembourg, Namur and Liège) during the last quarter of the eighteenth century. Across this region the enlargement of total agricultural acreage due to the incorporation of potatoes, industrial and animal feed crops in the rotation system induced a considerable expansion of arable production. This raises the question of whether the term agricultural revolution should not be used to characterize the agrarian growth process which occured in the peripheral regions of Belgium after 1750. The term 'growth acceleration' seems more appropriate as a description of the agricultural development of the Flanders region.

II

There are two problems with measuring land productivity of Belgium during the Austrian Régime. The first is the absence of direct yield data in contemporary sources. After the late Middle Ages, the large landowners (nobility and clergy) switched over from the direct exploitation of their estates to a system of leasing. As a result, the eighteenth-century accounts of ecclesiastical institutions and noble families do not contain reliable estimates of farm production and productivity. The second problem is that some series of sources cover only a small part of the actual Belgian territory (e.g. probate inventories). The two types of sources available to the historian will be described and their utility assessed.

(i) Flemish probate inventories[14]

Although it is beyond dispute that probate inventories are the richest source for the measurement of land productivity in the past, some limitations remain.[15] The most crucial drawback concerns the geographical distribution of the inventories. Inventories are not available for the whole of modern Belgium, but were only produced in the former county of Flanders (the provinces

[12] For England we have drawn on B. M. S. Campbell, 'Progressiveness and backwardness in thirteenth- and early fourteenth-century English agriculture: the verdict of recent research', in J. M. Duvosquel and E. Thoen (eds), *Peasants and townsmen in medieval Europe. Studia in honorem Adriaan Verhulst* (Ghent, 1995), pp. 541–59.

[13] E. Thoen, 'Technique agricole, cultures nouvelles et économie rurale en Flandre au bas moyen âge', in *Flaran* 12 (Auch, 1992), pp. 51–67.

[14] C. Schelstraete, H. Kintaert and D. de Ruyck, *Het einde van de onveranderlijkheid. Arbeid, bezit en woonomstandigheden in het Land van Nevele tijdens de 17e en 18e eeuw* (Nevele, 1986), pp. 15–17.

[15] Some of these critical comments on the use of probate inventories for the measurement of land productivity were put forward by M. Overton, 'English probate inventories and the measurement of agricultural change', 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*, AAG Bijdagen, 23 (Wageningen, 1980), pp. 210–14.

of East and West Flanders), parts of the duchy of Brabant (Antwerp and eastern Brabant) and Hainaut (the Mouscron region). In addition, the arable crop valuations contained in the inventories are often incomplete or imprecise. Sometimes no indication is given of the area of the sown parcels or no distinction is made between the value of different crops which were sown on the same area of land.

A further problem is that of seasonality. The date of the inventory determines its usefulness for the calculation of average crop yields. The most complete and accurate inventories were drawn up in the summer months (May to September). Inventories drawn up in the autumn and spring months are less useful. We also have to bear in mind that the appraisers applied two different methods to estimate the value of land. Besides the real or anticipated sale value of the crop, they often took the costs of production as the reference base.[16] These cost-of-production valuations assessed the cost of manuring, labour and sowing-seed. It is, however, unclear to what extent the appraisers included other input costs, like transport or the wages of day labourers, and deducted taxes such as tithes.

(ii) The cadastral survey of the duchy of Luxembourg, 1766[17]

The Theresian cadastral survey of the Luxembourg-Agimont region was the result of a change in central government policy after the peace treaty of Aix-La-Chapelle (1748). Influenced by mercantilist ideas, the domestic policy of the Habsburg monarchy concentrated thereafter on the consolidation of government power, the modernisation of institutions and the reorganisation of public finance. This gave rise to the creation of a more efficient administrative apparatus, the development of purposive economic intervention and a policy of fiscal reform. In order to improve policy making and stimulate national welfare, new series of economic statistics and cadastral surveys were compiled. As far as the cadastral enquiries are concerned, those for the duchy of Luxembourg (1766) and county of Limbourg (1787) merit special attention.

The purpose of the Luxembourg cadastral survey was to determine the fiscal value of immovable goods and property rights in order to introduce an equitable system of taxation. Tax reform in Luxembourg gained a high priority on the political agenda because the public debt in Luxembourg had risen rapidly since the Seven Years' War (1756–63). Furthermore, tax inequalities were more pronounced here than in the rest of the southern Netherlands because the system of taxation still relied on a contribution scale devised in 1624. This scale no longer corresponded to the economic reality of the eighteenth century.

The Luxembourg cadastral survey, which was completed over five years (1766–1771), grew into the most ambitious cadastral operation ever attempted in the southern Low Countries. It offers an insight into the structure of land holding and land use for an area of nearly 10,000 km².

[16] Robert Allen worked out a method to calculate cereal crop yields from the cost-of-production valuations. His technique was criticized by both Paul Glennie and Mark Overton. See R. C. Allen, 'Inferring yields from probate inventories', *J. Economic History (JEcH)*, 48 (1988), pp. 117–125; P. Glennie, 'Measuring crop yields in early modern England', in B. M. S. Campbell and M. Overton (eds), *Land, Labour and Livestock. Historical studies in European agricultural productivity* (1991), pp. 260–63; M. Overton, 'Re-estimating crop yields from probate inventories', in *JEcH*, 50 (1990), pp. 931–5.

[17] The following account is based on C. de Moreau de Gerbehaye, *L'abrogation des privilèges fiscaux et ses antécedents. La lente maturation du cadastre thérésien au duché de Luxembourg (1684–1774)* (Brussels, 1994).

Measures of land productivity can be estimated from data on the annual income of taxable land. These data were registered in the so-called 'Etats d'estimation des biens fonds'. Although the calculation of annual income was primarily based on the rents and selling price of land, some of these documents (like those of the Orchimont district) contain quantitative indications of gross cereal yields per unit of area. A second series of yield data can be found in the summary reports that the local Luxembourg authorities made up by order of the 'Conseil des Finances'. These reports indicate the average rents and selling prices of arable land, pasture land, woods and waste land in the different districts of the duchy.[18]

III

As in most other European countries, land productivity in Belgian agriculture during the ancien régime is usually calculated in two ways. The first approach relates the output of a particular crop to the area on which it was grown. The gross yield per cropped area is expressed in units of volume or weight (hectolitres or kilograms per hectare). Yields estimated in this way are a reliable indicator of the physical productivity of the cropped parcels of land. They fail, however, to measure total land productivity, because no account is taken of the share of fallow and fodder area in the arable land and the frequency with which the land was cropped.[19] In the second approach, the crop yields are computed in output per units of sown seeds. In historical literature the gross individual crop yield per seed is indicated as the yield ratio. The difference between the two measures of land productivity lies in the fact that the yield ratios are related to the sowing density. An increase in the amount of seed used in sowing, which could generate higher gross yields per cropped area, resulted in a decrease of the yield ratio. Because the gross yield per cropped area is the most common yardstick to measure land productivity in the past, we have decided to calculate Belgian arable productivity in this way. This makes our data comparable with most yield estimates for other European nations

(i) Yield estimates on the basis of Flemish probate inventories

Estimates of gross crop yields in the provinces of Antwerp, Brabant, East and West Flanders about 1760 relies on the analysis of probate inventories. We have selected for study the inventories of 18 villages from East Flanders and 17 from West Flanders. In order to enhance the statistical value of the estimates, we ensured that the three main Flemish soil types – sandy, sandy loam region and Polders – were represented in the sample.[20] For the Antwerp province

18 These reports were published by R. Dendel, 'Une enquête sur l'agriculture luxembourgeoise en 1764', *Tijdschrift van de Belgische Vereniging voor Aardrijkskundige Studies*, 27 (1938), pp. 35–46. The reports for the district of La Roche and Marche are of great importance.

19 M. Overton and B. M. S. Campbell, 'Productivity change in European agricultural development', in Overton and Campbell (eds), *Land, Labour and Livestock*, pp. 7–13. The various measures of land productivity are formalised in M. Overton, *Agricultural Revolution in England. The transformation of the agrarian economy 1500–1850* (1996), p. 71.

20 The probate inventories for East and West Flanders used in this study are to be found in the Public Record Offices of Beveren, Bruges, Ghent and the City Archives of Aalst. The full references of these documents may be found in G. Dejongh, 'De ontwikkeling van de akkerbouwproduktiviteit in de Belgische landbouw, 1750–1850', in *Bijdragen tot de Geschiedenis*, 79 (1996), p. 208.

a similar sampling method was followed. The inventories of 13 villages, situated in the Kempen, Polders and sandy soil region, formed the basis for the calculation of mean arable crop yields. The reconstruction of land productivity in Brabant posed more problems because all the available probate inventories are drawn from the eastern part of the province. It was only possible to use the inventories of four villages in the sandy loam region.[21] Through a lack of alternative source material, the sandy and loam region could not be integrated into the sample, which makes the Brabant estimates statistically less reliable.

For each commune in the sample, we gathered the valuations of grown crops from the probate inventories for 1760–1770. Two categories of inventories were excluded: the post-harvest inventories (from October to March) and all inventories with imprecise crop valuations. A ten-year period was chosen in order to obtain a significant number of yield observations and minimize the biasing effect of extreme good or bad harvest years on the estimate of mean crop yields. Our sample consists of 530 probate inventories: 74 for the Antwerp province, 58 for Brabant, 235 for East Flanders and 163 for West Flanders.

The reconstruction of gross output per unit of area on the basis of the crop valuations in the inventories was carried out as follows. First, we converted the area of the sown parcels of land from the old system of measurement ('bunder, dagwand, roede') to the metric system (hectare). Second, the given price value for each crop was divided by the actual urban market price per unit of volume. Therefore we used the mean yearly crop prices that were registered at the nearest urban market in the same year as the inventory.[22] The division of the two sets of data gave us the harvested volumes in old measure units ('viertel, halster, razier'). These figures were in turn converted to hectolitres.[23] Finally, the volume figures were related to the area of the lots and expressed as yields per hectare.

This technique of yield calculation could not be applied strictly due to the absence of market price series for several Flemish and Brabantine towns. As a result we had to use a divergent set of prices to deflate the crop values mentioned in the probate inventories. In order to get a better idea of the effect of the price series employed on our yield estimates, we calculated the statistical correlation between the absolute differences in the mean yearly rye prices of ten Flemish and Brabantine cities during the second half of the eighteenth century. The price data were taken from the grain price registers of the Central Custom Office of the Austrian Netherlands, the 'Bureau de Régie des Droits d'Entrée et de Sortie'.[24]

In general the mean rye prices in five Brabantine cities (Antwerp, Lier, Malines, Brussels, Tirlemont) and five Flemish cities (Ghent, Sint-Niklaas, Bruges, Ypres, Courtrai) were closely

[21] The probate inventories for Antwerp and Brabant are to be found in the General Public Records Office Brussels and the Public Records Office Antwerp. Again, see Dejongh, 'De ontwikkeling', p. 208 for full references.

[22] We took the price series from J. Ruwet, E. Helin, F. Ladrier and L. van Buyten (eds), *Marché des céréales à Ruremonde, Luxembourg, Namur and Diest aux XVIIe et XVIIIe siècles* (Louvain, 1966) and C. Verlinden (ed.), *Dokumenten voor de geschiedenis van prijzen en lonen in Vlaanderen en Brabant* (4 vols, Bruges, 1959–1973).

[23] The conversion of the old obsolete units is based on P. Vandewalle, *Oude maten, gewichten en muntstelsels in Vlaanderen, Brabant en Limburg* (Ghent, 1984).

[24] The prices were published by C. Vandenbroeke, 'Het prijsonderzoek van de regering voor de steden in de Oostenrijkse Nederlanden voor graangewassen, vlas en garen (1765–1794)', in Verlinden (ed.), *Dokumenten*, IV, pp. 7–74.

correlated. The 37 pairs of coefficients between nine of the ten cities ranged narrowly from 0.70 to 0.95, with just eight correlations below this range. The price homogenity was weak for Ypres, a city on the outermost edge of Flanders. A comparison between the rye prices in Ypres and the Brabantine cities, for instance, produced correlation coefficients of only 0.36 to 0.57. Because we always used the prices of urban markets within the same administrative region, the relative differences in crop prices had a marginal effect on our yield estimates. This was well illustrated when the main crop yields in one sample village were computed on the basis of the prices of several urban markets.[25] This test showed that the effect of the divergence of market prices on our estimates of Flemish and Brabantine land productivity was, at most, 10 per cent.

In order to match our yield data to Goossens' figures for the 1812–1846 period, it was necessary to make an estimate of the mean crop yields in a 'normal' harvest year.[26] Therefore we had to remove the outliers in our database. A comparison with the minimal and maximal yield results in different studies on eighteenth- and early nineteenth-century Belgian agriculture showed that these outliers were the result of exceptional harvest yields or valuation errors made by the appraisers. They did not correspond to normal levels of land productivity.

A two-step procedure was followed to cancel out the biasing effect of the least reliable yield data. First, the sample mean crop yields and standard deviation of the sample mean was calculated on a ten-years' basis. Second, we imposed for every crop variety an upper and lower yield limit. Assuming that the data were distributed normally around the decennial sample mean, the yield values that were higher than the sum of the sample mean and standard deviation or lower than the difference between these two were removed from our database. All yield values that laid within the intervals were judged representative and retained to measure land productivity in a normal harvest year.[27]

Finally we aggregated the mean crop yields of the sample villages to the provincial level. Therefore, the yield data were grouped by soil type. This made it possible to compute the mean physical productivity of arable crops per soil region. The crop yields per soil region were extrapolated to the provincial level by weighting them with the relative share of each region in the total arable area per province.[28] Ideally the yield figures would have been weighted with the arable crop distribution in every soil region. However, given the quality of our data, such a calculation was not possible.

25 See Dejongh, 'De ontwikkeling', p. 211.

26 Goossens, *Economic development*, pp. 84–5.

27 An alternative method of neutralizing the biasing effect of unreliable yield data is to classify the yield figures in categories of normal, good and bad harvests. We can argue, for instance, that the individual crop yields which vary between 85 and 115 per cent of the sample mean yield must be considered as normal. When the yield figures are higher than 115 or lower than 85 per cent of the sample mean, they may be considered as good and bad harvest results. For this technique see B. H. Slicher van Bath, 'Les problèmes fondamentaux de la société pré-industrielle en Europe occidentale', *AAG Bijdragen*, 12 (1965), p. 11.

28 The share of the different soil regions in total arable land between 1760–1770 was calculated by G. Dejongh, *Krachtlijnen in de ontwikkeling van het agrarische bodemgebruik in België, 1750–1850* (Centre for Economic Studies, Catholic University of Leuven, Research paper 96.01, 1996), p. 47.

The described method is expressed in the following equations:

$$YC^i \text{ Antwerp} = 0.55\ YC^i_K + 0.41\ YC^i_S + 0.04\ YC^i_P$$
$$YC^i \text{ East Flanders} = 0.62\ YC^i_S + 0.29\ YC^i_{SL} + 0.09\ YC^i_P$$
$$YC^i \text{ West Flanders} = 0.22\ YC^i_S + 0.58\ YC^i_{SL} + 0.20\ YC^i_P$$

where: YC^i = Gross individual crop yield per unit cropped area
K = Kempen
P = Polders
S = Sandy region
SL = Sandy loam region

(ii) Yield estimates on the basis of the Luxembourg cadastral survey of 1766

There are two types of documents in the cadastral archives of 1766 which inform us about land productivity in Luxembourg: the 'Etats d'estimations des biens fonds' and summary reports made up by the local authorities in the different districts of the duchy of Luxembourg. According to the 'Etats d'estimation' of the Orchimont district, mean yields of spelt and oats in the Ardennes amounted to 9.7 and 13.1 hectolitres per hectare. For the Famenne region we have used the productivity data in the survey report of Abbot Jaumain (1764). He estimated the gross yield of spelt and oats in a normal harvest year at 9.7 hl/ha.[29] As Goossens and Dejongh have already established that at the beginning of the nineteenth century, the mean yield of rye and oats in the Jura was 18 and 26 per cent higher than in the Ardennes,[30] we have assumed the same ratio in output for 1760, so that the average yield in this region is estimated at 8.0 hl/ha for rye and 9.7 hl/ha for oats.

The average land productivity at the provincial level was calculated in the same way as for the provinces of Antwerp, East and West Flanders. The mean crop yield per soil region were aggregated on the basis of the distribution of total cultivated land over the different soil regions. This gives the following result.

$$YC^i \text{ Luxembourg} = 0.51\ YC^i_A + 0.12\ YC^i_F + 0.37\ YC^i_J$$

where: YC^i = Gross individual crop yield per unit cropped area
A = Ardennes
F = Famenne
J = Jura

(iii) Yield estimates on the basis of literature and approximate extrapolations

For the former principality of Liège, consisting of the provinces of Limburg and Liège, almost no archival sources have been found which contain quantitative information on land productivity. For the Limburg province we have only discovered data for the commune of Lommel, situated in the Kempen. The aldermen's acts of this commune mention a mean rye and buckwheat yield

[29] The 'Etats d'estimation' of the Orchimont district are to be found in the General Public Records Office Namur, Tabelles cadastrales de 1766, nos 19–86.

[30] M. Goossens and G. Dejongh, *Agriculture in figures. Belgian agricultural and cadastral statistics of the period 1801–1825* (Leuven, 1997), p. 134 (table 6).

of 10 hl/ha about 1760.[31] These figures correspond strongly with the mean productivity levels in other Kempen communes during the first two decades of the nineteenth century.[32] Because several studies confirm that land productivity in the Kempen stagnated under the Habsburg regime, the yield figures of Lommel may be considered to be representative for the whole region.[33] The productivity figures for the sandy loam and loam region were equated with the mean crop yields in the sandy loam region of Brabant. According to the early nineteenth-century estimates this extrapolation seems plausible. For the calculation of land productivity at the provincial level, the crop yields of the different soil regions were weighted in the same way as for the other provinces. In short:

$$YC^i \text{ Limburg} = 0.45\ YC^i_K + 0.55\ YC^i_{(SL+L)}$$

where: YC^i = Gross individual crop yield per unit cropped area
K = Kempen
SL + L = Sandy loam and Loam region

The gaps in our estimates were filled up on the basis of several rural studies. This point can be clarified with some examples. Goossens' estimates show that the mean potato yields in the provinces of Namur and Luxembourg about 1812 were identical (105 hl/ha).[34] Considering that one hectare of potato land in Luxembourg produced 100 kilograms of potatoes *c.* 1760, the same level of physical productivity may be assumed for the province of Namur.[35] Furthermore, we have noticed that the gross yields of barley and oats in Hainault during the French Period were similar (27–28 hl/ha). We have assumed that this yield convergence also applied in the Austrian period. A similar method of calculation was used for the reconstruction of the wheat and oats yields in the province of Limburg.

The results of our calculations and those of Goossens are presented in tables 1 (cereal crops) and 3 (industrial crops and potatoes).[36] The yields that were computed on the basis of literature and extrapolations are quoted in *italics*. The '-' sign means either that a certain crop variety was not cultivated in the province or no reliable yield estimates could be made. The national crop yield data for 1812 and 1846 differ from Goossens' published figures because they have been recalculated on the basis of the productivity data of only those provinces for which mean gross yields for 1760 were estimated.

31 Public Records Office Hasselt, Old Communal Archives, Lommel, no. 10.

32 Goossens and Dejongh, *Agriculture in figures*, p. 133 (table 3).

33 The stagnation of land productivity in the thinly-populated and slightly urbanised Kempen region during the second half of the 18th century is pointed out by R. Knaepen, *Mol-Baelen-Desschel 1559–1795* (Mol, 1982), p. 283 and E. Vanhaute, *Heiboeren. Bevolking, arbeid en inkomen in de 19de eeuwse Kempen* (Brussels, 1992), pp. 98–9.

34 Goossens, *Economic development*, p. 89.

35 The potato yield in Luxembourg is derived from F. Pirotte, *La terre de Durbuy aux XVIIe et XVIIIe siècles* (Louvain, 1974), pp. 161–3.

36 Our calculations only relate to 1760. The yield data for the two other benchmark years (1812, 1846) are taken from Goossens, *Economic development*, pp. 85–91.

TABLE 1. Gross cereal crop yields in Belgian agriculture, 1760–1846 (hl/ha)

Province	*year*	*rye (hl/ha)*		*wheat (hl/ha)*		*maslin (hl/ha)*		*buckwheat (hl/ha)*		*barley (hl/ha)*		*oats (hl/ha)*	
Antwerp	1760	12.5	100	13.7	100	–	–	–	–	20.2	100	22.3	100
	1812	16.7	134	15.5	113	16.5	–	22.7	–	25.0	124	29.7	133
	1846	18.3	146	17.8	130	19.0	–	23.1	–	29.9	148	36.2	162
Brabant	1760	12.7	100	11.8	100	11.8	100	13.0	100	20.3	100	19.6	100
	1812	13.2	104	12.2	103	12.4	105	14.1	108	21.6	106	22.0	112
	1846	16.7	131	16.4	139	17.1	146	18.7	144	28.3	139	33.3	170
Limburg	1760	11.5	100	*11.0*	100	–	–	11.8	100	*11.0*	100	*14.0*	100
	1812	14.4	125	12.7	115	–	–	15.5	131	13.1	119	17.6	126
	1846	15.4	134	17.2	156	18.7	–	16.7	142	24.7	225	27.6	197
East Flanders	1760	16.2	100	14.7	100	15.9	100	16.0	100	22.5	100	25.8	100
	1812	19.9	123	18.8	128	17.8	112	19.8	124	23.0	102	26.0	101
	1846	21.6	133	20.0	137	21.1	133	21.2	133	32.9	146	36.8	143
West Flanders	1760	13.3	100	13.4	100	13.5	100	12.3	100	23.4	100	25.2	100
	1812	16.6	124	15.4	115	17.7	131	15.9	129	29.5	126	32.7	130
	1846	21.2	159	20.1	150	20.0	148	23.6	191	41.1	175	37.1	148
Hainault	1760	18.9	100	14.9	100	–	–	*13.0*	100	*20.0*	100	21.1	100
	1812	24.0	127	18.0	121	20.0	–	16.0	123	27.1	136	28.0	133
	1846	20.3	107	19.7	132	18.9	–	19.0	146	36.3	182	38.8	184
Liège	1760	–	–	–	–	–	–	–	–	–	–	–	–
	1812	16.7	–	13.5	–	14.8	–	–	–	18.1	–	25.7	–
	1846	17.9	–	17.4	–	19.0	–	18.8	–	19.9	–	26.1	–
Luxembourg	1760	10.3	100	*7.0*	100	–	–	–	–	*9.0*	100	10.6	100
	1812	12.5	121	7.8	111	8.6	–	5.5	–	10.0	111	13.4	126
	1846	19.3	187	14.8	211	15.4	–	13.3	–	17.2	191	24.6	232
Namur	1760	11.5	100	*12.0*	100	–	–	–	–	–	–	*20.0*	100
	1812	14.0	122	12.6	105	–	–	–	–	17.5	–	26.9	135
	1846	16.9	147	15.9	133	18.8	–	20.4	–	23.5	–	25.7	129
BELGIUM	1760	13.3	100	12.3	100	13.7	100	13.2	100	18.1	100	19.8	100
	1812	16.4	123	14.1	115	16.0	116	16.3	123	21.3	118	24.5	124
	1846	18.7	140	17.7	144	19.4	141	19.8	151	30.1	166	32.5	164

Note: Indices 1760 = 100.

Source: 1760, derived from probate inventories as described in text: 1812 and 1846, recalculated from Goossens, *Economic Development*, as decribed in text.

IV

This part of the paper is subdivided into three sections. The first describes the development of cereal crop yields between 1750–1850 and draws a comparison between our estimates and some long-term series on Flemish cereal yields. A second section concerns the evolution of industrial crop and potato yields during the eighteenth and nineteenth centuries. In the third section, growth in arable productivity is linked to the movement of population and agrarian prices.

(i) Cereal crop yields

Table 1 shows how the mean cereal crop yields in Belgian agriculture increased between 16 and 24 per cent during the second half of the eighteenth century. With the exception of rye, the productivity of bread cereals (wheat and maslin) saw a less pronounced increase (16 to 17 per cent) than those for buckwheat, barley and oats (18 to 24 per cent). This tendency continued through the first half of the nineteenth century.[37] By 1846 the average yields of maslin and wheat had increased by 21 and 26 per cent respectively compared with the beginning of the century. The yields of oats and barley went up by no less than 33 and 41 per cent!

An interregional comparison of productivity levels points to a strong continuity during the 1760–1850 period. Around 1760, as in the first half of the nineteenth century, the provinces of East Flanders and Hainault had the highest yields per hectare. The provinces of Antwerp, Brabant and East Flanders occupied a middle position with a mean rye and wheat yield of 12–13 hl/ha. In the southern regions (Luxembourg and Namur) and the northeast periphery of modern Belgium (Limburg), cereal production failed to reach a productivity threshold of 12 hl/ha for rye and wheat, and 20 hl/ha for oats and barley.

The cereal productivity data are a good parameter of the progressiveness and backwardness of arable farming systems about 1760. In the provinces with the lowest cereal yields (especially Luxembourg and Namur), the agricultural economy was relatively underdeveloped.[38] Two and three-year crop-rotation systems predominated. Furthermore, the wasteland or outfield area ('terres sarts'), which produced one cereal crop every 10 to 30 years, still covered a large part of total agricultural area. Technological progress was seriously hampered by the poor soil quality, the low population pressure, the deficient transport network and institutional constraints, such as the persistence of communal property rights and feudal obligations. The agriculture in the provinces with high average crop yields per sown area (in particular East and West Flanders) was characterized by intensive cultivation and efficient crop-rotation systems. The progressiveness of Flemish arable farming under the Habsburg regime was mainly the result of natural environmental advantages, the high population pressure, the predominance of small farming units, the dense urban network and the good market access.

When examining the relative increases in cereal productivity between 1760 and 1810, we notice that the evolution of cereal yields was strongly diversified by region. Of the provinces with the highest productivity levels, Hainault was the most dynamic. In East Flanders, on the other hand, the oat and barley yields had reached a temporary ceiling by around 1760, while the yields of

[37] *Ibid*, pp. 85–8.

[38] C. Billen, 'Des campagnes sous le joug des traditions', in H. Hasquin (ed.), *La Wallonie. Les pays et les hommes* (2 vols, Brussels, 1975), pp. 295–311.

bread cereals still increased. In the first half of the nineteenth century, an inverse movement took place. Within the middle category of provinces, the yield development in Antwerp and West Flanders stands out when compared with the situation in Brabant. During the period under consideration, West Flanders registered a remarkable increase in cereal yields per sown area (25 per cent for rye, 31 per cent for maslin, 26 per cent for barley and 30 per cent for oats). In contrast with East Flanders, West Flemish agriculture succeeded in maintaining the increases in oat and barley yields into the middle of the nineteenth century. The productivity trend in Antwerp followed that in West Flanders, except that the mean rye yield showed a stronger increase (34 per cent). Diametrically opposed to this was the development in the province of Brabant. This region recorded the weakest productivity growth nationally (only 3 to 12 per cent). Finally, in the provinces with the lowest productivity levels (Limburg, Luxembourg and Namur) we observe a striking homogeneity in the evolution of the mean yields per hectare.

(ii) Long-term development of cereal crop yields

The comparison of our estimates with long-term yield series concentrates on the county of Flanders, because it is the only region for which such series are available. The main aim of this long-term comparison is to answer the question of whether the development of arable productivity in eighteenth-century Flanders had a revolutionary, gradual or stagnant character. Although several scholars have put forward different views on this topic, the debate remains inconclusive.

Flemish agriculture had already realised high crop yields by the late Middle Ages. The mean rye yield in the chancellery of Audenaerde (sandy loam region) during the period 1450–1560 was approximately 13–16 hl/ha. This was at most 20 per cent lower than, and in the best harvest years similar to, the mean rye yields of the East Flemish sandy loam region around 1760 (16.5 hl/ha).[39] A second example concerns the Polders around Bruges. In this region, the rye and wheat yields in the second half of the fourteenth century already fluctuated between 11–14 hl/ha and 11–13 hl/ha.[40] Compared with the average productivity level in the West Flemish Polders around 1760 (14 hl/ha), this was already remarkably high.

When interpreting the estimates of Flemish yields in the Middle Ages and early modern period, we must take account of the crop-rotation system. Tits-Dieuaide, for example, calculated that the rye and wheat yields in Brabant during the second half of the fifteenth century amounted to 18 to 20 hl/ha.[41] According to our estimates, the mean gross yield of both crops about 1760 was 12 to 13 hl/ha, or 50–55 per cent lower than 300 years before! Because fallow land still played an important role in fifteenth-century Brabant agriculture, the real gross yields per unit of *arable* area was, however, much lower than Tits-Dieuaide's figures suggest.[42]

Vandenbroeke's estimates for the chancellery of Alost, in the East Flemish sandy loam region,

[39] E. Thoen, *Landbouwekonomie en bevolking in Vlaanderen gedurende de late Middeleeuwen en het begin van de Moderne Tijden*, II (2 vols, Ghent, 1988), p. 813.

[40] J. Mertens, *De laat-middeleeuwse landbouweconomie in enkele gemeenten van het Brugse platteland* (Brussels, 1970), pp. 78–9 and pp. 155–162.

[41] M-J. Tits-Dieuaide, *La formation des prix céréaliers en Brabant et en Flandre au XVe siècle* (Brussels, 1975), pp. 93–6.

[42] The same accounts for A. Derville, 'Le rendement du blé dans la région lilloise (1285–1541)', in *Bulletin de la Commission Historique du Département du Nord*, 40 (1975–6), p. 35.

also confirmed that Flemish agriculture traditionally recorded high yields. His data on gross rye yields for the period between 1620 and 1790 are shown in table 2.[43] According to Vandenbroeke, the development of arable productivity in East Flemish agriculture after 1760 was far from revolutionary. He deduced this from the fact that the mean cereal yields in earlier periods equalled those of the late eighteenth century (e.g. in 1656–65) and even exceeded them (1716–45). Moreover, he emphasized that the amount of sowing seed used after 1750 showed an upward trend. The tendency towards a more dense sowing after 1750 pointed to a technical incapacity of cereal cultivation to increase the mean productivity per hectare.

TABLE 2. Mean gross rye yields in the Land of Alost (East Flanders), 1626–1825

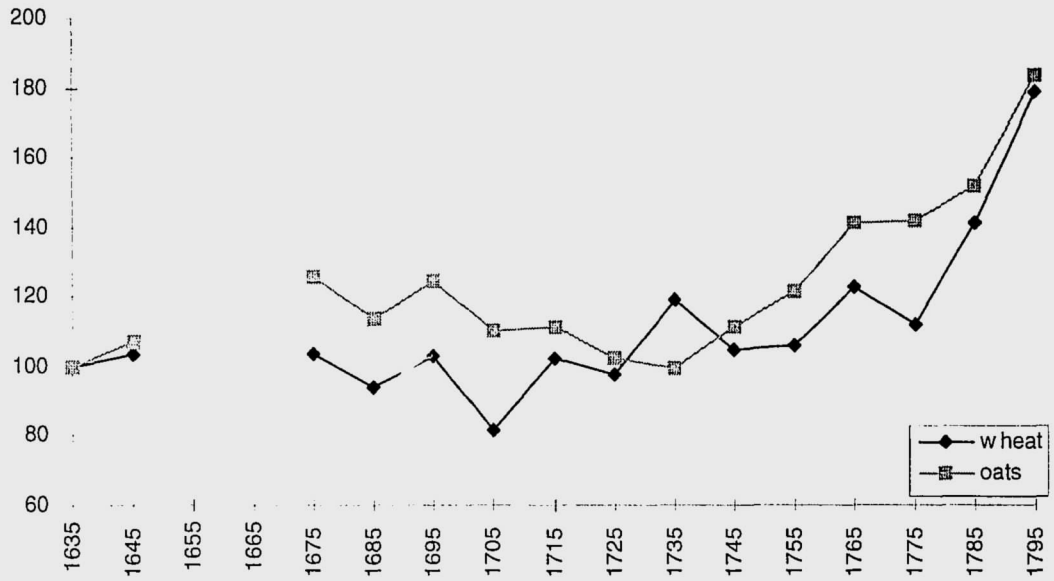
period	*rye yield (hl/ha)*	*index*	*period*	*rye yield (hl/ha)*	*index*
1626–1635	14.37	100	1716–1725	19.59	136
1641–1650	14.23	99	1726–1735	19.93	139
1646–1655	16.03	112	1736–1745	19.73	137
1656–1665	17.29	120	1746–1755	18.76	131
1666–1675	15.25	106	1756–1765	18.42	128
1676–1685	16.22	113	1766–1775	18.87	131
1686–1695	13.70	95	1776–1785	21.50	150
1696–1705	15.94	111	1786–1795	17.19	120
1706–1715	14.99	104	1805–1815	18.10	126
			1812–1825	20.51	143

Note: 1626–1635 = 100.

Source: C. Vandenbroeke, 'Graanopbrengsten en oogstschommelingen in Zuid-Vlaanderen (17e-begin 19e eeuw)', in A. Verhulst and C. Vandenbroeke (eds), *Landbouwproduktiviteit in Vlaanderen en Brabant 14de–18de eeuw* (Ghent, 1979), pp. 385–7.

Although Flemish agriculture had already recorded high crop yields since the late Middle Ages, there was still room for a real increase in cereal productivity after 1760. Vandenbroeke's hypothesis, that since the beginning of the seventeenth century crop yields in Flanders showed an 'extremely stable character', is open to criticism on several grounds. First, the author limited his analysis to the evolution of bread cereal yields in the region around Alost during the seventeenth and eighteenth centuries. He considered his estimates as being representative for the entire Flemish countryside, which we might question. Second, he paid too little attention to the important changes in land productivity that took place during the first half of the eighteenth century. Third, when a comparison is made between Vandenbroeke's data for the seventeenth century and the late medieval levels of land productivity in the same region, we notice that the idea of an intersecular stability of cereal yields conflicts with historical reality. Available estimates for Ninove, near Alost, make clear that the mean gross yield of one hectare

[43] C. Vandenbroeke, 'Graanopbrengsten en oogstschommelingen in Zuid-Vlaanderen (17e-begin 19e eeuw)', in Verhulst and Vandenbroeke (eds), *Landbouwproduktiviteit*, pp. 385–7.



Note: 10-year means; 1625–1635 = 100

Source: P. Vandewalle, *Quatre siècles d'agriculture dans la région de Dunkerque, 1590–1990. Une etude statistique* (Ghent, 1994), pp. 458–467

FIGURE 1. Index of mean gross yields of wheat and oats in the region of Dunkerque, 1635–1795

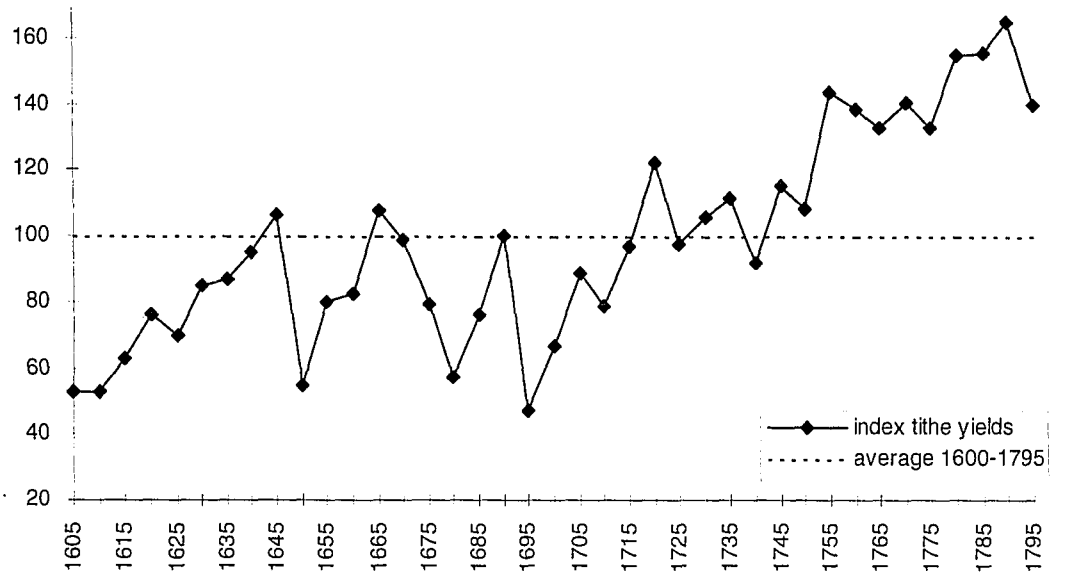
of rye in the beginning of the fifteenth century amounted to 11 or 12 hectolitres.[44] This is significantly lower than Vandenbroeke's calculations of the average productivity level in the first decades of the seventeenth century (14 to 16 hl/ha).

Furthermore, the long-term evolution of crop yields in other Flemish regions deviated from that of the Alost model constructed by Vandenbroeke. In the Land of Waas (sandy region), for instance, mean cereal yields continued to increase significantly after 1750. During the second half of the eighteenth century, rye yields amounted to approximately 18 hl/ha. This comes down to a growth of 20 to 40 per cent compared with the periods between 1700–1717 (c. 15 hl/ha) and 1720–1739 (*c.* 13 hl/ha).[45] Even in the polders of West Flanders there was an increase in yields during the Habsburg regime. Vandewalle's estimates for French Flanders display a strong productivity growth in the period 1755–1795. Whereas the rye and oat yields about 1756–1765 were approximately 14 hl/ha and 30 hl/ha, they had already increased to 20 hl/ha and 38 hl/ha respectively at the eve of the nineteenth century (see figure 1).

Data drawn from tithe returns also makes it certain that the gross yields of arable crops in Flanders did not stagnate after 1750. Before describing these, we need to offer a few cautionary comments concerning the utility of tithe data for an analysis of arable productivity. For several

[44] E. Van Cauwenberghe and H. Van der Wee, 'Productivity, evolution of rents and farm sizes in the Southern Netherlands agriculture from the fourteenth to the seventeenth century', in van der Wee and Cauwenberghe (eds), *Productivity of land*, p. 131.

[45] J. Blomme, 'Bevolking, landbouw en rurale industrie', pp. 181–4.



Note: 5-year means; 1600–1795 = 100.

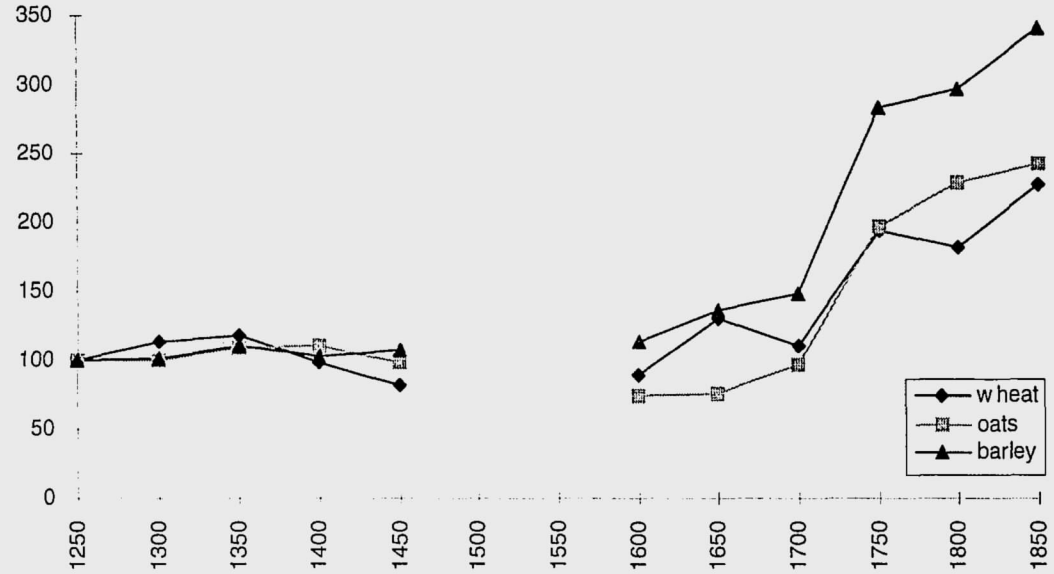
Source: E. Thoen, 'Landbouwproduktie en bevolking in enkele gemeenten ten zuiden van Gent gedurende het Ancien Régime (14e–18e eeuw)', in A. Verhulst and C. Vandenbroeke (eds), *Landbouwproduktiviteit in Vlaanderen en Brabant, 14de–18de eeuw* (Ghent, 1979), pp. 177–195.

FIGURE 2. Index of tithe yields of the Chapter of Saint Bavo in Ghent, 1605–1795

reasons the tithe documents of the southern Low Countries cannot be used to calculate harvest yields in the past. First, the ratio of tithes to the gross output on the titheable area did not equal 10 per cent, but fluctuated between 10 and 20 per cent. Furthermore, the actual area of a tithe domain and the ratio of crops subject to tithes in the total exploited acreage can rarely be ascertained from the accounts of the ecclesiastical tithe owners. There may have been changes in the assessment base and the titheable area which are unknown to us. Moreover, the people liable to pay tithes had to carry out a number of additional obligations for the institutions receiving the tithes. It is impossible to express these obligations in terms of money. In some cases, tithes were farmed out together with other taxes or separate parcels of land. Finally, we must bear in mind that crop damage due to unfavourable weather conditions or war was seldom proportionally deducted from the agreed rental.

Provided that the tithe series cover several centuries and all data are converted into fixed volume units or into monetary terms, the series enable us to reconstruct long-term trends in arable production. With regard to the county of Flanders, the tithe data show a remarkable output increase since the second half of the eighteenth century. This appears, for instance, from the tithe yields of the Chapter of Saint Bavo in Ghent (figure 2).[46] According to this data, arable production in the sandy and sandy loam regions of East Flanders rose 50 per cent between 1750

[46] E. Thoen, 'Landbouwproduktie en bevolking in enkele gemeenten ten zuiden van Gent gedurende het Ancien Régime (14e–18e eeuw)', in Verhulst and Vandenbroeke (eds), *Landbouwproduktiviteit*, pp. 177–195.



Note: 1250 = 100.

Source: B. M. S. Campbell and M. Overton, 'A new perspective on medieval and early modern agriculture: six centuries of Norfolk farming, 1250–1850', *Past and Present* 141 (1993), pp. 70–1.

FIGURE 3. Index of mean gross yields of wheat, oats and barley in Norfolk, 1250–1850

and 1790.[47] If we accept that the fallow land in both areas was almost completely exhausted and total cultivated acreage increased only by 7 to 8 per cent between 1760 and 1830, the upward trend of tithe returns must have been mainly due to the combined effect of a more efficient output structure and increased land productivity.[48]

In short, the ceiling which the Flemish cereal yields had reached in the course of the seventeenth century was gradually exceeded during the first half of the eighteenth century. The yield rise continued after 1750 and accelerated from the beginning of the nineteenth century onwards. The hypothesis of a long-term stability in agricultural productivity during the ancien régime – referred to in the literature as 'immobilisme pluriséculaire' – needs to be rejected for the county of Flanders.

Several other progressive rural areas in Western Europe experienced a development of land productivity analogous to that in Flanders. The most striking example in this connection was the East Anglian county of Norfolk, another area with fertile loam soils. As in Flanders, the agriculture of this region had already developed in a progressive way during the Middle Ages. By the last quarter of the thirteenth century, for instance, the fallow was gradually eliminated and more intensive and diversified systems of crop rotation were adopted. Campbell and

[47] The upward trend of tithe returns since 1750 has also been noticed for other regions in the Austrian Netherlands, e.g. south east Brabant. See F. Daelemans, 'De tienden van het Sint-Geertrudekapittel van Nijvel (15e–18e eeuw)', in Verhulst and Vandenbroeke (eds), *Landbouwproduktiviteit*, pp. 221–3.

[48] Dejongh, *Krachtlijnen in de ontwikkeling*, p. 47.

Overton have constructed an impressive long-term series of gross cereal yield data for Norfolk. Their estimates, which cover a period of six centuries, are reproduced in figure 3.[49]

The Norfolk estimates show, on the one hand, that there was a positive correlation between the general population trend and the evolution of cereal yields. Cereal yields increased in periods of demographic growth and went down when population pressure decreased. On the other hand, gross cereal yields appeared to be extremely high during the Middle Ages, as was the case in Flanders (up to 17 hl/ha for wheat in the period between 1275 and 1350!). Until the end of the 17th century, the mean grain yields fluctuated around the medieval levels. From the beginning of the eighteenth century, a new phase of accelerated growth became apparent and the medieval productivity levels were dramatically exceeded.

A second example is the Ile-de-France, the region around Paris. In 1540–1600, the mean wheat yield in this region amounted to 18 hl/ha. This level remained nearly constant until the middle of the eighteenth century. Because of the increased specialization and commercialization of farming due to rapid demographic expansion, crop yields shot up after 1750. By the end of the ancien régime, they reached an historic record of 24 to 25 hl/ha.[50]

(iii) Potato and industrial crop yields

The expansion of potato cultivation in the Austrian Netherlands provided a strong stimulus for growth in agricultural productivity. In yield per unit area, the productivity of potatoes was eight to nine times higher than that of wheat. As may be seen from table 3, the mean gross yield of potatoes was 110 hl/ha, compared with 13 hl/ha for rye and 12 hl/ha for wheat.[51] Given that the calorific value of potatoes was 25 per cent of that of rye and wheat, one hectare of potatoes could feed twice as many people as one hectare of bread grains. In this way, the potato cultivation guaranteed a noticeable expansion of the primary food supply. Furthermore, potatoes were rich in vitamin C, so that they contributed to a qualitative improvement in the daily menu of the rural population.[52]

Although most of our yield data for potatoes are based upon approximate estimates, we can draw a number of conclusions. We note, for example, that the average national potato yield during the period 1760–1812 increased by only 20 per cent. This is a modest growth compared with the development which occurred during the first half of the 19th century (51 per cent). Moreover, the pattern of regional productivity of potato cultivation around 1750 showed little similarity to that of the cereal crops. In the provinces of Luxembourg and Namur, which traditionally recorded the lowest cereal yields, the yield of potatoes fluctuated around the same level as that of the more progressive agricultural regions, such as Brabant and Hainault.

[49] B. M. S. Campbell and M. Overton, 'A new perspective on medieval and early modern agriculture: six centuries of Norfolk farming, 1250–1850', *Past and Present*, 141 (1993), pp. 70–1.

[50] J. M. Moriceau, 'Au rendez-vous de la "Révolution Agricole" dans la France du XVIIIe siècle', in *Annales. Histoire. Sciences Sociales*, 49 (1994), pp. 33–5. J. M. Chevet, 'Production et productivité: un modèle de développement économique des campagnes de la région parisienne aux XVIIIe et XIXe siècles', *Histoire et Mesure*, 9 (1994), pp. 105–8, also noticed a considerable yield rise in the Paris region during the eighteenth century.

[51] C. Vandenbroeke, *Agriculture et alimentation* (Ghent and Leuven, 1975), pp. 272–3.

[52] More information on the importance of potato cultivation can be found in C. Vandenbroeke, 'La culture de la pomme de terre en Belgique (XVIIe–XIXe siècles)', in *Flaran* 12 (Auch, 1992), pp. 126–8.

TABLE 3. Gross industrial crop and potato yields in Belgian agriculture, 1760–1846 (hl/ha and kg/ha).

province	*year*	*flax (kg/ha)*		*coleseed (hl/ha)*		*potatoes (hl/ha)*	
Antwerp	1760	–	–	–	–	*120.0*	100
	1812	400	–	16.2	–	153.7	128
	1846	504	–	20.3	–	230.4	192
Brabant	1760	308	100	–	–	*100.0*	100
	1812	400	130	18.7	–	122.6	123
	1846	496	161	17.4	–	197.1	197
Limburg	1760	–	–	–	–	*100.0*	100
	1812	431	–	7.5	–	139.3	139
	1846	404	–	14.8	–	184.3	184
East Flanders	1760	321	100	–	–	141.2	100
	1812	450	140	18.0	–	158.8	112
	1846	641	200	21.1	–	202.4	143
West Flanders	1760	323	100	15.1	100	121.9	100
	1812	400	124	16.4	108	154.0	126
	1846	584	181	22.9	152	218.9	180
Hainault	1760	320	100	–	–	*100.0*	100
	1812	431	135	23.6	–	120.0	120
	1846	564	176	19.2	–	184.1	184
Liège	1760	–	–	–	–	–	–
	1812	350	–	19.4	–	119.7	–
	1846	444	–	15.5	–	233.2	–
Luxembourg	1760	–	–	–	–	98.0	100
	1812	250	–	3.2	–	105.0	107
	1846	306	–	9.6	–	184.1	188
Namur	1760	–	–	–	–	*100.0*	100
	1812	250	–	10.0	–	105.0	105
	1846	467	–	12.8	–	159.0	159
BELGIUM	1760	318	100	15.1	100	110.5	100
	1812	420	132	16.4	108	132.3	120
	1846	571	180	22.9	152	195.0	177

Note: indices 1760 = 100.

Source: see text.

The evolution of potato yields between 1760 and 1812 also deviated sharply from that of cereal crop yields. In the majority of regions, potato yields per hectare increased less than the productivity of the most important cereals. This was especially true for the present day regions of Wallonia and the province of East Flanders.

As for the yield of industrial crops also presented in table 3, the productivity of flax cultivation in the provinces of East Flanders, West Flanders and Hainault in the mid-eighteenth century was characterized by a strong homogeneity. In these three regions the mean flax yield around 1760 amounted to approximately 320 hl/ha. In terms of yield rise, the fastest growth is seen in East Flanders and Hainault (35 to 40 per cent). With an increase of only 24 per cent over 60 years, West Flanders was clearly lagging behind developments elsewhere.

V

In order to broaden our understanding of the development of land productivity, we have compared our yield estimates with estimates of population growth and cereal price series. The comparison between the yield data in tables 1 and 3 with the population figures presented in table 4 makes it clear that the demographic boom and increased demand for food after 1750 had a stimulating effect on Belgian land productivity. Arable productivity responded to population increase in a 'Boserupian' rather than a 'Malthusian' way. This was confirmed by the fact that during the second half of the eighteenth century the southern Low Countries evolved from a grain-importing to a grain-exporting country.

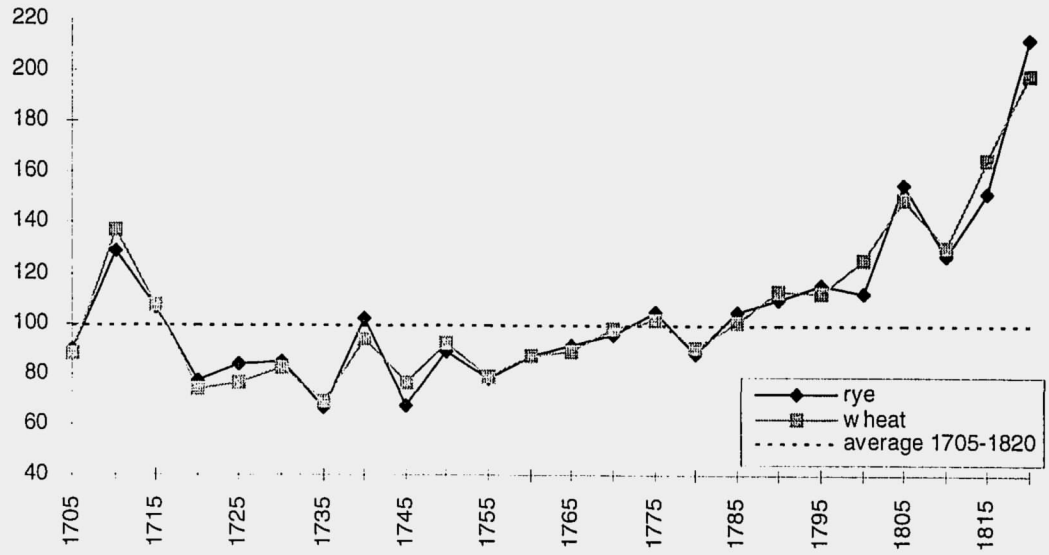
TABLE 4. Demographic development of Belgium, 1700–1800

Province	*Absolute numbers*			*Index*		
	1700	*1750*	*1806*	*1700*	*1750*	*1806*
Antwerp	225,000	212,500	284,600	106	100	134
Brabant	255,000	287,700	432,000	89	100	150
Limburg	96,000	103,000	129,000	93	100	125
East Flanders	345,000	450,000	573,500	77	100	127
West Flanders	305,000	380,000	491,100	80	100	129
Hainault	295,000	380,000	472,400	78	100	124
Liège	213,000	265,000	293,000	80	100	111
Luxembourg	76,000	85,000	123,600	89	100	145
Namur	85,000	116,000	143,700	73	100	124
BELGIUM	1,895,000	2,279,200	2,942,900	83	100	129

Source: P. M. M. Klep, 'Population estimates of Belgium by province (1375–1831)', in *Historiens et populations. Liber amicorum Etienne Hélin* (Louvain-la-Neuve, 1991), pp. 496, 505.

The increase in cereal crop productivity, however, was lower than the average national population growth. Compared with a demographic growth of 29 per cent between 1750 and 1806, cereal crops recorded a yield increase of 16 to 24 per cent. If we take the yield of rye, the increase in crop yields kept up with the average demographic growth in only four of the nine provinces (Antwerp, Limburg, Hainault and Namur).

A second way to evaluate the trend in Belgian land productivity lies in the comparison between the development of cereal yields and the fluctuations in cereal prices. As the market prices of cereal crops were the most important incentive for the farmers to maximize the



Note: average 1705–1820 = 100.

Source: C. Verlinden (ed.), Dokumenten voor de geschiedenis van prijzen en lonen in Vlaanderen en Brabant (4 vols, Bruges, 1959–1973) and J. Ruwet, E. Helin, F. Ladrier and L. van Buyten (eds), *Marché des céréales à Ruremonde, Luxembourg, Namur and Diest aux XVIIe et XVIIIe siècles* (Louvain, 1966)

FIGURE 4. Index of mean urban rye and wheat prices in the southern Low Countries, 1705–1820

productivity of the arable land, we can investigate whether there was a significant correlation between both variables. Within the framework of this research, we present, in figure 4, the trend in market prices for the two major bread cereals (rye and wheat) for 1705–1820. This was calculated from the market prices series for eleven cities in six different provinces: Antwerp (province of Antwerp), Brussels, Diest and Louvain (Brabant), Eeklo, Ghent and Audenaerde (East Flanders), Bruges and Courtrai (West Flanders), Luxembourg (Luxembourg) and Namur (Namur).[53] The evolution of nominal rye and wheat prices was expressed in five-year indices, whereby the average of all years was equated to 100.

Figure 4 demonstrates how nominal rye and wheat prices saw an almost uninterrupted growth between 1735 and 1820. Only in the years 1775–1780 and 1805–1810 did the prices dip below the average of the previous period. Where the population of this period increased by almost 30 per cent, the prices of rye and wheat jumped by 139 and 115 per cent respectively. In short, although there was a positive correlation between the movement of population, prices and land productivity, the latter realized a less marked increase. If an agricultural revolution is defined in terms of a sudden and rapid productivity growth, the increase of gross crop yields since 1750 can not be typified as revolutionary. It seems preferable to talk about a period of 'growth acceleration'.

What agricultural or technical factors made possible the increase in average crop yields after 1750? It may be assumed that more intensive soil cultivation and improved methods of fertilisation were largely responsible for a real increase in land productivity. The better fertilisation

[53] The price data were derived from Ruwet *et al* (eds), *Marché des céréales* and Verlinden (ed.), *Dokumenten*.

must be attributed to the adoption of more progressive crop rotations, the generalization of stall feeding and increasing use of urban manure. The relative importance of these factors was regionally differentiated. In the provinces of Brabant, East and West Flanders, the accounts and lease registers of a number of towns reveal that the value of the urban manure concession rose rapidly after 1750. This points to a sharp increase of the demand for urban manure at the countryside. Because urban manure was qualitatively superior to traditional farm manure, it certainly contributed to a new upswing of land productivity.[54] In the southern provinces, the yield rise was mainly the result of the gradual elimination of the fallow area. The abolition of the feudal prohibitions on breaking the fallow permitted an increasing share of former fallow land to be cultivated with animal feed crops, such as clover and turnips. This led to both a qualitative improvement and a substantial expansion of manure production.

The impact of the increased seed sown, on the other hand, has not yet been fully explored. Vandenbroeke defended the idea that the increase in productivity was partly due to a denser sowing of cereal crops.[55] Goossens has calculated that at the beginning of the nineteenth century, the quantity of seed sown had a significant influence only on the average yield level for rye. For other crops, it did not appear to be a very effective means of increasing land productivity.

VI

Our estimates show a noticeable increase in arable crop yields in the southern Low Countries in the second half of the eighteenth century. This casts serious doubts on the hypothesis of an intersecular stability in arable productivity throughout the ancien régime. Although land productivity responded positively to the rapid population growth and rising prices after 1750, it realised a less marked rate of increase. The increase in yield since 1750 cannot, therefore, be attributed to an agricultural revolution. The term 'growth acceleration' seems more appropriate for the description of the agricultural growth process which occurred in the period 1700–1850. So far as Flanders is concerned, a long-term comparison reveals that the breakthrough in land productivity came in the first decades of the eighteenth century. The yield rise continued after 1750 and accelerated from the beginning of the nineteenth century.

We might end with two observations which serve as both cautions but also suggestions for future work in this field. First, we have to bear in mind that land productivity is only a partial measure of total agricultural productivity. Livestock, labour and total factor productivity must also be considered to elaborate a consistent explanatory model of agricultural development. Second, the terms which are used to evaluate agricultural growth in the past must be defined more clearly. The question arises, for instance, of the criteria on which agrarian progress may be called revolutionary. Are population figures and price data a sufficient reference base? By establishing a more standardized conceptual framework, it will be possible, in the future, to work out profound comparisons of agricultural productivity over time and space.

[54] Goossens, *Economic development*, pp. 287–292.

[55] C. Vandenbroeke, 'Graanopbrengsten en oogstschommelingen', pp. 387–9 and Goossens, *Economic development*, p. 270.

Varietal innovation and the competitiveness of the British cereals sector, 1760–1930*

John R. Walton

Abstract

Varietal innovation is a neglected aspect of British agricultural history. This paper traces the origins of the varietal proliferation which occurred during the nineteenth century to late-eighteenth century advances in breeding science and to the growth of international commerce in cereals for consumption. It has been generally assumed that, in technical terms, high farming served the needs of cereals and livestock production with equal effectiveness and without prejudice to their character. In fact, this system helped establish a drift from the cereal varieties most suitable for human consumption to those better adapted to livestock. The consequential changes, which varied from cereal to cereal, form the main subject of this paper. The paper concludes by identifying shortcomings in the standard view that British farmers in the late nineteenth century were the passive victims of cheap wheat imports.

For upwards of half a century before 1765, Britain was a net exporter of cereals.[1] By 1925, imports supplied some 80 per cent of domestic demand for wheat and flour, 42 per cent of barley, and 8 per cent of oats.[2] In general, historians have not thought rising levels of import penetration, in both cereals and livestock, incompatible with a positive gloss on the achievements of British agriculture in the eighteenth and nineteenth centuries. The concept of the agricultural revolution survives. Its most recent advocate attaches particular significance to the rising productivity curve of the century after 1750, which had several components, including increasing yields per acre of the major cereal crops.[3]

This paper examines one important feature of the home cereals sector, the innovation and diffusion of new cereal varieties. During the period under review, most varieties originated either as introductions from foreign sources, or as selections of individual plants growing in stands of indigenous crops. The first experimental use of hybridization in the breeding of cereals

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1 A. H. John, 'English agricultural improvement and grain exports, 1660–1765', in D. C. Coleman and A. H. John (eds), *Trade, government and economy in pre-industrial England. Essays presented to F. J. Fisher* (1976), pp. 48–9; D. Ormrod, *English grain exports and the structure of agrarian capitalism, 1700–1760* (1985).

2 Ministry of Agriculture and Fisheries, *The agricultural output and food supplies of Great Britain* (1929), pp. 19–25.

3 M. Overton, *Agricultural Revolution in England. The transformation of the agrarian economy, 1500–1850* (1996).

predates by some sixty years the rediscovery and republication of Mendel's work in 1901.[4] Plant breeders began to apply the technique with increasing frequency and considerable commercial success during the last quarter of the nineteenth century. But acceptance of hybridization as the standard source of commercially-attractive variation in cereals only came with the growth of government-funded research in pure and applied genetics during the twentieth century. This development has attracted a good deal of attention, including recent work on Britain by Clive Holmes and Paolo Palladino.[5] The same could not be said for the history of crop improvement in the preceding period, which remains substantially unexplored.[6] The first two sections of the paper examine the flow of new cereal varieties from 1760 and the factors which gave rise to it. The third and fourth sections explore the contrasting competitive consequences of varietal innovation for British oats, barley and wheat producers.

I

Introduction and selection in one form or another are as old as agriculture itself. But the regular introduction of unfamiliar varieties from overseas and the frequent selection, multiplication, and distribution of superior specimens from existing stocks, demand certain preconditions which seem not to have been extensively exploited in Britain much before the second half of the eighteenth century. So far as introductions are concerned, the evidence for negligible activity before the mid-eighteenth century is reasonably clear. Thirsk, Thick, and Ambrosoli have documented the flow of introduced species of fodder crops, industrial crops and vegetables during the seventeenth century, but say virtually nothing about the introduction of unfamiliar varieties of established cereal species.[7] It may be deduced either that such introductions did not

[4] P. Shirreff, *Improvement of the cereals and an essay on the Wheat Fly* (Edinburgh, 1873), pp. 26–9; D. J. Browne, 'The production of new varieties by cross-fecundation', *Report of the Commissioner of Patents for 1855: agriculture* (Washington DC, 1856), p. 182; H. Evershed, 'Varieties of wheat and methods of improving them', *J. Royal Agricultural Society of England* (hereafter *JRASE*), 2nd ser., 25 (1889), p. 257; R. H. Biffen and F. Engledow, *Wheat-breeding investigations at the Plant Breeding Institute, Cambridge* (1926), pp. 10–11.

[5] C. J. Holmes, 'Science and practice in English arable farming, 1910–1950', in D. J. Oddy and D. S. Miller (eds), *Diet and health in early modern Britain* (1985), pp. 5–31; P. Palladino, 'Between craft and science: plant breeding, Mendelian theory, and the universities in Britain, 1900–1920', *Technology and Culture* 34 (1993), pp. 300–323; *idem*, 'Wizards and devotees: on the Mendelian theory of inheritance and the professionalization of agricultural science in Great Britain and the United States, 1880–1930', *History of Science* 33 (1994), pp. 409–44; *idem*, 'Science, technology and the economy: plant breeding in Great Britain, 1920–1970', *Economic History Rev.* (hereafter *EcHR*), 2nd ser., 49 (1996), pp. 116–36. On the United States see J. A. Clark, 'Improvement in wheat', *USDA Yearbook 1936*, p. 211; J. R. Kloppenburg, *First the seed: the political economy of plant biotechnology, 1492–2000* (1988), pp. 12, 68.

[6] The contribution of Paul Brassley, 'Crop varieties', to E. J. T. Collins (ed.), *Agrarian History of England and Wales, VII, 1850–1914* (forthcoming), ch. 8, is the main exception. See also Jonathan Brown and H. A. Beecham, 'Arable farming', in G. E. Mingay (ed.), *Agrarian History of England and Wales, VI, 1750–1850* (1989), pp. 292–3.

[7] J. Thirsk, 'Agricultural innovations and their diffusion' in J. Thirsk (ed.), *Agrarian History of England and Wales, V, 1640–1750* (2 vols, 1985), II, pp. 533–89; M. Thick, 'Market gardening in England and Wales' in Thirsk (ed.), *Agrarian History* V (ii), pp. 503–32; M. Ambrosoli, *The wild and the sown. Botany and agriculture in Western Europe* (1997). Their one reference to an introduced cereal is to wheat grains brought by an Italian gentleman from Italy to Obadiah Walker of University College, Oxford: Thirsk, 'Agricultural innovations', p. 557.

occur, or that if they did occur, they failed to make their mark and were lost. From the mid-eighteenth century, the international diffusion of scientific curiosity encouraged the exchange of cereal seed in small quantities suitable for experimental sowing. During the late eighteenth century, Britain's agriculturalists were recipients of unfamiliar varieties of diverse provenance. Examples recorded in the periodical literature include a 'new sort of wheat' grown near Washington DC and presented to the York Agricultural Society for distribution to its members in 1802, and 'an Egyptian wheat' 'received from a friend' by Lord St. Leger in 1792.[8] Some landowners were able to make informal comparative trials of newly introduced varieties. In 1771, Sir Digby Legard of Ganton, Yorkshire drilled two pecks of Siberian spring wheat, which he found 'superior to the common spring wheat but greatly inferior to some wheat of Switzerland sent to me by the Society of Arts and sown on land contiguous.'[9] After one or two harvests, the seed of varieties which seemed successful might be distributed throughout and beyond the locality which had first received it. One A. Hunter, place of residence unspecified, related how in May 1767 he had received 'a moderate wine-glassful' of Siberian barley from a member of the Society of Arts 'with the information that a foreign nobleman had presented it to the Society'. By 1769, the glassful had been turned into a harvest of 36 bushels, 20 of which were, it was claimed, 'under skilful culture' in 'many parts of' the recipient's unnamed county, in the counties of Kent, Surrey, York and Durham, 'in two or three counties in Wales, six or seven in Ireland and some in Scotland'.[10]

The role of continental Europe as a source of new varieties received further support from the increasing flow of grain imported into Britain for consumption. Regular continental importations, beginning in 1765, established a recognized channel of varietal innovation.[11] Grain trade middlemen living on the continent sent samples of interesting looking grains to contacts in Britain. According to folk history, it was such an individual who at some unspecified date in the first half of the nineteenth century dispatched to Scotland a sample of a variety which had originated in Polish Galicia. From Glasgow, part of the sample found its way to Ontario, and was sown by one David Fife on the assumption that it was a winter wheat. One plant survived the winter, and from grains of that plant, Red Fife, the foundation of the north American hard spring wheat industry, was born.[12]

For those living in Britain, the markets trading in these imported grains were an important source of new material. Mark Lane, already the centre of the London seed trade in the seventeenth century,[13] attracted the curious or those looking to make a quick speculative profit from the exotic as an increasing diversity of imported grains began to be traded on the London corn exchange. Although we naturally assume that buyers in grain markets supply the consumer, a grain sample is of as much interest to the seedsman as to the miller, and in technical terms

[8] *Agricultural Magazine* (hereafter *Agric. Mag.*), 7 (1802), p. 382; 9 (1803), p. 111.

[9] *Agric. Mag.* 8 (1803), p. 423.

[10] *Agric. Mag.* 8 (1803), pp. 359–364.

[11] B. R. Mitchell, *Abstract of British historical statistics* (1962), pp. 94–5.

[12] The folk histories of outstandingly successful varieties agree on the substantive issues though details vary from one account to another. This version of the history of Red Fife appears in Clark, 'Improvement in wheat', pp. 214–5. C. R. Ball, 'The history of American wheat improvement', *Agricultural History* (hereafter *Ag. Hist.*) 4 (1930), p. 68, and J. Percival, *Wheat in Great Britain* (Shinfield, 1934), p. 64 date the Ontario importation to 1842.

[13] Thick, 'Market gardening', p. 528.

serves the seedsman's requirements every bit as well. In all likelihood, the London corn exchange was the source of the 'new Syrian wheat seed', which a London seedsman advertised for sale in the Oxford newspaper, *Jackson's Oxford Journal*, in October 1794, and of the Moldavian barley which another London dealer offered the Oxford reading public, with exaggerated claims regarding its yield and malting properties, in March 1797.[14] There is no evidence that either had the least impact on what was sown in the fields of the south Midlands in the late eighteenth century, and it is possible that the varieties may have been entirely valueless in that local context. However, they do remind us that when a country imports cereals for consumption, it also presents its cereal producers with what in effect are unfamiliar varieties of seed. The London corn exchange continued to channel new cereal varieties into British agriculture well into the nineteenth century. In 1852, the London market was specifically mentioned as the source of four wheat varieties in the collection of Edinburgh seedsman, Peter Lawson.[15]

As to the possibilities of selection, the situation before 1750 is less clear. Certainly, such evidence as there is could bear the interpretation of an emergent varietal cereal culture if one wished to impose such an interpretation upon it. But it is more plausibly interpreted otherwise. A true variety arises either from the multiplication of seed saved from a 'sport', a single plant mutation showing commercially attractive characteristics, or from the reservation and multiplication of seed selected from attractive plants growing in varied crops of a mixed, landrace character.[16] There is some seventeenth-century evidence of selection of this kind, most notably in four references in Robert Plot's *Natural History of Oxfordshire*.[17] However, in general, the observations of seventeenth-century writers are better interpreted as references to locally distinct landraces, which appeared unfamiliar both to travelling observers new to their districts and to locals when traded outside their districts of origin. The practice of regularly taking seed from a distance, noted and advocated by agricultural writers from classical times onwards, does not deserve to be represented as a scientifically well-founded practice, whatever its merits empirically and in specific instances.[18]

In selection as in introduction, the second half of the eighteenth century appears to have been a turning-point. A highly significant development took place on the farm of Robert Bakewell at Dishley, Leicestershire. The first systematic application to cereals of the principles of careful selection and close in-breeding which Bakewell used with greatest success on the New Leicester sheep dates to the 1830s.[19] But there was a developing awareness, towards the end of

[14] *Jackson's Oxford J.*, 8 Oct. 1794, 25 Mar. 1797.

[15] P. Lawson and Son, *Synopsis of the vegetable products of Scotland in the Royal Botanic Garden of Kew* (Edinburgh, 1852), pp. 29, 32, 46.

[16] According to F. N. Briggs and P. F. Knowles, *Introduction to plant breeding* (New York, 1967), p. 116, a landrace or land-variety has three principal attributes: 'it is endemic to an area, with its origins sometimes going back several hundred years; it is a mixtures of types; and it is well adapted to the environment'.

[17] R. Plot, *A natural history of Oxfordshire* (1667), pp. 150–3; R. C. Allen, *Enclosure and the yeoman. The agricultural development of the south Midlands, 1450–1850* (1992), p. 207.

[18] J. Thirsk and J. P. Cooper (eds), *Seventeenth-century economic documents* (1972), pp. 150–4, 170–3; D. Woodward (ed.), *The farming and memorandum books of Henry Best of Elmswell* (1984), pp. 48, 104–6; Ambrosoli, *The wild and the sown*, p. 353.

[19] For a full discussion and contextualisation of Bakewell's activities, N. Russell, *Like engend'ring like. Heredity and animal breeding in early modern England* (1986), pp. 196–215.

Bakewell's career as a breeder, that frequent renewal of seed, hitherto promoted as best practice, imposed upon cereals producers an agenda entirely at odds with that which was creating the improved varieties of farm livestock. William Marshall was an early convert to the new line of thinking. A passage in his *Rural Economy of Yorkshire* of 1788 contrasted the former practice of crossing cattle with the work of modern breeders who 'pick out the fairest of the particular breed or variety they want to improve, and prosecute the improvement with these selected individuals'. The cereal farmer was advised to do likewise, and 'select such individual plants as excel in vigour and productiveness, under a moral certainty that such individuals are peculiarly adapted to his soil and situation'.[20] The theme was taken up in the 1807 encyclopedia, *The Complete Farmer*, whose anonymous author, commenting on the suggestion that seed should be changed every two to three years, observed: 'The practice is as little founded on propriety as a change of livestock once every two years would be, and will never be the means of advancing corn to a high pitch of excellence. On the contrary, when corn farmers become wise enough to apply Bakewell's method of improving cattle to the raising of seed grain, the advance will be rapid indeed.'[21]

It began to be recognized that the supposed advantages of seed changing were not absolute. Seed brought from one environment to another, and especially from a harsh to a less harsh area, generally performed impressively in its first season but a great deal less so thereafter as the negative consequences of its lack of adaptation to the new environment began to outweigh the positive, necessitating another change of seed. Some specialist seed producing areas, like Burwell in Cambridgeshire, were supported by a reputation for pure seed well selected.[22] The reputation of the chalk downlands of south central England probably owed something to the low susceptibility of those soils to seed-borne fungal disease. But sound husbandry practices applied to home-grown seed could be as effective. During the course of the nineteenth century, agricultural writers on both sides of the Atlantic advocated conscientious seed reservation for cereals. 'The practice of annual selection should be handed down by the farmer to his posterity as an inheritance more valuable than ... gold'.[23] The argument did not extend to the fodder grasses. If allowed to run to seed so that the seed might be saved for sowing a new grass crop, grass not only loses nutritive value but also exhausts soil fertility when one of its supposed functions is to restore it.[24]

The new emphasis on the selection and reservation of seed was associated with two significant developments in cereal breeding. First, the rate of identification of commercially-attractive 'sports' increased. The origins of the more successful and influential of these varieties became legendary. They include the Potato oat, allegedly first identified as a single plant in a Cumberland potato field in 1788, Spalding wheat discovered by a farm labourer at Barningham, Suffolk

[20] W. Marshall, *The rural economy of Yorkshire* (2 vols, 1788), I, p. 9. The point was reiterated in *idem*, *The review and abstract of the county reports of the Board of Agriculture* (5 vols, 1818), I, p. 74; II, p. 281; V, p. 133.

[21] Anon., *The complete farmer* (2 vols, 1807), I, n. p.

[22] Evershed, 'Varieties of wheat', p. 248; H. R. Haggard, *Rural England* (2 vols, 1906), II, pp. 17–19.

[23] W. M. King, 'Report of the chief of the seed division', *Report of the Commissioner of Agriculture* (Washington DC, 1885), p. 55.

[24] R. Brown, *General view of the agriculture of the West Riding of Yorkshire* (1799), p. 109; C. Cadle, 'The improvement of grasslands', *JRASE* 2nd ser., 5 (1869), p. 323; R. A. Oakley, 'The seed supply of the nation', *USDA Yearbook 1917*, pp. 509–10.

circa 1834, and the several varieties of wheat and oats selected by Patrick Shirreff in East Lothian and adjacent counties between 1819 and 1857.[25] Identification of the highly successful and influential Chevalier barley, at Debenham, Suffolk, is generally dated to 1819 or 1820, and the beginnings of its distribution to other areas to 1826 or 1827.[26]

The other development occurred as people began to act on the suggestion that individual plant selection could be applied constructively to the variability found in established landrace crops. The first successful pioneer of the approach was John (later Sir John) Le Couteur, of Belle Vue, Jersey (1794–1875), author of *On the Varieties, Properties and Classification of Wheat* (1836).[27] He wrote no parallel volume documenting his work as the leading improver of the Jersey breed of cattle, but it is clear that both breeding programmes date to the early 1830s and involved similar principles of selection.[28] Twenty-three different wheat varieties were identified in a single field, 14 of which were isolated and multiplied, each duly revealing distinctive morphological, growth and yield characteristics. A number enjoyed extended periods of popularity in mainland Britain.

II

From the mid-1830s onwards, new cereal varieties became available to the British farmer at a markedly increased rate. Fields of old-established heterogenous cereals began to give way to stands of single varieties, some introduced from overseas, others derived by combing established domestic crops for attractive variation and then multiplying these selections. The process was greatly assisted by the reproductive mechanisms of wheat, barley, and oats, which are almost entirely self-fertile crops. Within each floret, the anthers release pollen onto the female stigma, initiating the development of the grain, before the florets open sufficiently to allow pollen to be carried to neighbouring florets.[29] Precocious dehiscence of the anthers (the technical term for this process) ensures that cross-pollination in all three cereals is extremely rare, less than a fraction of 1 per cent according to an estimate reported in 1960.[30] Low levels of outcrossing over long periods of time create the variation on which selection acts to produce landraces

25 H. Hunter, *Oats: their varieties and characteristics* (1924), p. 14; Evershed, 'Varieties of wheat', p. 247; R. A. Peachey, *Cereal varieties in Great Britain* (1951), pp. 135, 187; J. C. Morton, *Cyclopedia of agriculture* (2 vols, Glasgow, 1855), I, p. 483; H. Raynbird, 'On the farming of Suffolk', *JRASE* 8 (1847), p. 301; Shirreff, *Improvement of cereals*, pp. 1–7; *idem*, 'On the Hopetoun wheat, and on comparative trials of wheat', *JRASE* 2 (1841), p. 344. For a fuller survey see Brassley, 'Crop varieties'.

26 E. S. Beaven, *Barley: fifty years of observation and experiment* (1947), pp. 90–2; H. Hunter, 'Developments in plant breeding', in [Anon., ed.], *Agriculture in the twentieth century: essays on research, practice and organization to be presented to Sir Daniel Hall* (1939), p. 224; P. Pusey, 'Some introductory remarks on the present state of agriculture as a science in England', *JRASE* 1 (1840), p. 11.

27 For a full biography see J. Stevens, *Victorian voices: an introduction to the papers of Sir John Le Couteur, QADC, FRS* (St Helier, 1969). An earlier instance, involving the identification of 11 apparently unenduring varieties by 'a gentleman of Great Bardfield', Essex, is referred to in Marshall, *Review and Abstract*, III, pp. 484–5.

28 E. P. Prentice, *American dairy cattle their past and future* (New York, 1942), pp. 340–9; J. Le Couteur, 'On the Jersey, misnamed Alderney cow', *JRASE* 5 (1845), pp. 43–50; Stevens, *Victorian voices*, pp. 199–212.

29 C. G. Hervey-Murray, *The identification of cereal varieties* (1980), pp. 20–1.

30 R. W. Allard, *Principles of plant breeding* (New York, 1960), p. 39.

attuned to their environments.[31] However in the shorter term, levels of outcrossing are sufficiently low not to threaten the integrity of varieties multiplied up from single-plant selections or introductions.

During the nineteenth century, this fact gradually registered with plant breeders, whose chequer-board trial plots would have been scenes of botanical mayhem had out-crossing been at all common. For Le Couteur, writing in 1840, one of the merits of Talavera wheat was that it was not 'at all likely to become intermixed by fecundation from other varieties, though sown about the same period, as it will, in such cases, flower a fortnight or three weeks before them'.[32] But by 1860, Patrick Shirreff had concluded that cross-fertilization was rare irrespective of flowering habit, albeit something he attempted to exploit by isolating promising-looking natural hybrids whenever he found them in his trial plots. He lamented that few corn growers were 'aware that the cereals possess both sexes in one blossom, through which alone they produce seeds'.[33] By the early twentieth century, plant breeders were convinced that under Britain's climatic regime outcrossing was virtually unknown. Biffen and Engledow reported that in 1924, the trial plots at the Plant Breeding Institute in Cambridge yielded a diverse harvest of hybrid and parental wheat cultivars totalling some 70,000 plants, only three of which showed evidence of natural hybridization.[34]

Self-fertilization brought the possibility of varietal proliferation. In the majority of cases, those aspects of a plant's appearance or phenotype which made it an attractive subject for selection were expressions of the plant's genotype.[35] Seed reservation over several seasons therefore enabled a varietal innovator to put into circulation limited quantities of seed of a new variety bearing the character of the plant originally selected. The initial years of seed multiplication were usually sufficient to bring to light any serious disparities between the message of the original phenotype and the medium of the genotype. These disparities were most likely to occur where a selection turned out to be a natural hybrid of recent origin. Probably for this reason, one of Le Couteur's original selections proved 'incorrigibly sportive' in Charles Darwin's words, and was rejected.[36] Genuine 'sports', that is single-plant mutations, and selections drawn from long-established landraces whose variability reflected an extended history of limited natural outcrossing were much less likely to be problematic.

In the last quarter of the century, as the possibilities of introduction and selection were gradually exhausted, breeders turned to hybridization as a source of new varieties. This

[31] The selection might be both natural and artificial. If seed is reserved at random from and is representative of a mixed landrace crop (i.e. is as natural as the artificial act of seed-saving can be), then any plant which, as a consequence of natural hybridization, has a heavier than average yield or better disease resistance will contribute more to the seed supply than other plants. Its genotype will gain greater representation in the next crop. Artificial selection might further increase the contribution of such plants to the seed mix.

[32] Le Couteur, 'On pure and improved varieties of wheat lately introduced into England', *JRASE* 1 (1840), p. 120.

[33] Shirreff, *Improvement of cereals*, pp. 10, 34, 97.

[34] Biffen and Engledow, *Wheat-breeding investigations*, p. 40.

[35] R. N. Jones and A. Karp, *Introducing genetics* (1986), pp. 311, 315 define 'genotype' as 'the genetic constitution of an individual', and 'phenotype' as the 'appearance and function of an organism as a result of its genotype and its environment'.

[36] C. Darwin, *The variation of animals and plants under domestication* (2 vols, 1905 edn,), I, pp. 386–7; J. Le Couteur, *On the varieties, properties and classification of wheat* (Jersey, 1836), pp. 64–5.

necessitated more elaborate, purposive breeding programmes, not least to ensure that the new variety was both breeding true and purveying the desired qualities. After 1901, increasing familiarity with Mendel's ratios and the associated concepts of dominance and recession assisted the creation of useful new hybrid varieties with stable characteristics.[37] By 1926, Biffen and Engledow could confidently attribute the 'rogues' appearing in field crops of the newer hybrids not to reversion, as farmers believed, but to cross-contamination of saved seed by threshing machines as they travelled from farm to farm. All but about 1 per cent of the so-called rogues were in fact commonly cultivated varieties.[38] The genotypes of the new hybrids were stable.

In commercial terms, the supply of new varieties of seed corn to farmers presented some difficult paradoxes. Before hybridization became the standard route to varietal innovation, new varieties offering powerful commercial advantages could be identified with relative ease by individuals who knew what they were looking for. Four or five years of seed multiplication, again at no great expense to the innovator, culminated in the limited release of seed onto the market, at which point pricing became an important strategic issue. The breeder was confronted by the catch–22 of the agricultural seed trade before breeders' rights, namely that if a new variety did prove successful, then its originator soon ceased to be the sole supplier as the market began to receive seed from the crops of his early purchasers, and the price of seed began to fall. Some breeders responded to this paradox by pitching their initial seed releases at highly ambitious levels, courting the risk of choking off demand, especially if the breeder's aspirations were not matched by the true commercial qualities of the variety. Market failure was the fate of a six-rowed black barley, said to have been discovered as a single ear lying on the floor of a Cheltenham tobacconist's shop where it had fallen from a sailor's clothing. In 1847, the variety was mentioned in the *Farmer's Magazine* and advertised at high prices in the *Gardener's Chronicle*, but nothing was heard of it thereafter.[39] In other instances, ambitious initial prices appear to have helped publicize the new variety and did little to damage its marketability, largely because there appears to have been some truth in the claims which were made for its commercial prospects. Providence barley, multiplied from a sport found in a garden at Lytchett Heath, Dorset in 1835, was first offered to the public at 18d. per ounce or £528 per quarter.[40] Despite this outrageous initial price, the variety gained support from farmers in southern England, and was recorded in three Oxfordshire farm sales in 1843 and 1844 (figure 2).

However, most introducers of new varieties were motivated by considerations other than monetary gain, and the progress of the varieties was therefore not constrained by pricing policies designed to secure it. In a life of public service, like Le Couteur's, plant and animal breeding was seen as a means of supplying a public good. It is significant that Le Couteur's book on wheat concludes with an account of a visit to a farm school in Brittany, and a plea for agricultural

37 The significance of the Mendelian rediscovery was quickly recognized. See, for example, T. B. Wood and R. C. Punnett, 'Heredity in plants and animals: Mendel's principles and their bearing on agricultural problems', *Trans. Highland and Agricultural Society of Scotland* (hereafter *THASS*), 5th ser., 20 (1908), pp. 36–86. An extensive recent literature on the rediscovery includes Bert Theunissen, 'Knowledge is power: Hugo de Vries on science, heredity and social problems', *British J. History of Science* 27 (1994), pp. 291–311.

38 Biffen and Engledow, *Wheat-breeding investigations*, p. 41.

39 *Farmer's Magazine* (hereafter *FM*), 2nd ser., 16 (1847), pp. 546–7; *Gardener's Chronicle and Agricultural Gazette*, 23 Jan. 1847, p. 50; 27 Nov. 1847, p. 787.

40 *Mark Lane Express*, 24 Feb. 1840, p. 6; Lawson, *Vegetable products of Scotland*, p. 77.

education on similar lines in the United Kingdom. If the intangible rewards of public service were not thought adequate, then plant breeders enjoyed the prospect that their varieties, if successful, might carry their reputations and sometimes their names throughout the length and breadth of the land. Of the 179 varieties of wheat, 42 of barley and 53 of oats listed in the Lawson inventory, 17, 5, and 3 respectively (that is rather more than 9 per cent of all varieties) are identified by personal name, either that of the genuine introducer or of an adopter and promoter of the variety.[41]

Once put into circulation, there was nothing to prevent a new variety with attractive qualities passing rapidly from farm to farm. An impressive crop advertised its advantages to neighbours, who could then buy seed grain reserved from the same crop. Biffen and Engledow estimated that at least 70 per cent of purchased seed wheat, that is to say seed not reserved from crops grown on farm, was traded between farms.[42] In these circumstances, it is not surprising that the major garden seed houses, like Sutton, Webb or Carter, initially focused their agricultural activities on the supply of grass seeds and of turnip, swede and mangold seed. From the point of view of the commercial seed supplier, fodder crops offered two advantages. Not only was there a greater expectation that farmers would buy this seed every time they required it, but suppliers of grass seed, much in demand during the secular arable retreat of the late nineteenth century, were able to develop and promote complex proprietary mixtures over which they effectively asserted intellectual property rights. In 1869, the Gloucester firm of Wheeler was said to supply a different grass mixture for each of Britain's geological formations.[43] Towards the end of the century, these firms also increasingly offered cereal seed as their own branded product. In this context, their rights were more difficult to uphold because complex mixtures were not involved, and any purchaser could, after a season, sell seed in competition with the original supplier using the same brand identity. Advertising suggests that by 1890 each of the major seed suppliers had spawned up to half a dozen unofficial multipliers whose cereal varieties were warranted solely by the assurance that the seed on offer had been grown from seed bought from the stated source within the last couple of seasons. Occasionally, these claims were even endorsed by the original supplier.[44]

The major commercial seed houses therefore appear to have developed a niche role as informal guarantors of quality in agricultural seed supply. Some had joined the campaign for the 1869 Adulteration of Seeds Act, which finally outlawed the profiteering frauds devised by wholesalers of imported grass and turnip seeds, like dyeing inferior clover seed to give it the appearance of something better, and adulterating turnip seed with killed rape seed.[45] During the second half of the nineteenth century, a reputation for quality in existing seed lines, first

[41] Lawson, *Vegetable products of Scotland.*

[42] Biffen and Engledow, *Wheat-breeding investigations*, p. 61.

[43] Cadle, 'Grass lands', p. 333. A. N. McAlpine, 'The nature and construction of grass mixtures', *THASS*, 5th ser., 1 (1889), pp. 132–62 underlines the problems for farmers wishing to devise their own seed mixtures. The geography of British clover seed production in the early 1830s may be reconstructed from the evidence of witnesses to the SC on Agriculture (BPP, 1836, VIII). Ministry of Agriculture and Fisheries, *Report on the agricultural seed-growing industry in Great Britain* (1921), identifies the main British production zones for clover and grass seed in the early twentieth century.

[44] *Mark Lane Express*, 10 Mar. 1890, pp. 310–11; 6 Oct. 1890, p. 422; 24 Feb. 1890, p. 241.

[45] BPP, 1868–9, IX, Report of the SC on the Seeds Adulteration Bill, QQ 6, 9, 29, 335; Ambrosoli, *The wild and the sown*, pp. 380–4.

garden seed, then grass and turnip seed, was used as the basis for building a similar reputation in the new line of cereal seed. Quality was also the cornerstone of the business of the small group of commercial suppliers who had always specialized in cereal seed, even where, as in the notable case of Hallett of Brighton, the supplier believed quality a secondary attraction of his offerings. The basis of both Hallett's method and his sales pitch was a system of pedigree breeding, as he styled it, under which he applied to several existing improved varieties growing in his trial plots successive selections of the largest ear of the largest plant, each selection grown on at the generous spacing of one foot between plants.[46] In effect, this was a Lamarckian programme of selection based on nurture rather than nature, conducted under conditions highly unrepresentative of normal field culture.[47] That Hallett's business flourished throughout the entire second half of the nineteenth century owed less to his pedigree method itself, than to the level of seed purity it fortuitously guaranteed, and to the happy choice of some of the varieties to which it was applied. As late as 1890, Hallett's Pedigree Chevalier was the preferred barley of many brewers.[48]

It is clear, then, that in the nineteenth century there were few constraints on either the identification or the diffusion of new cereal varieties. The flow of varieties was facilitated both by the ease with which they could be identified and by the gains in standing, if not substance, that those responsible might expect in return for their efforts. Ease of varietal identification and introduction was matched by the free dissemination of varieties once in circulation. Cereal growers never had to look far for cereal seed. If dissatisfied with seed reserved from their own crops, then other seed could be bought from neighbours, or from corn exchanges, corn merchants or millers. Farmers acquiring seed in this way may well have made the transition from a mixed landrace to an unmixed single variety without knowing what the variety was. As late as 1926, Biffen and Engledow noted of seed wheat traded between farms that 'whatever the variety may be, it is often nameless so far as the contracting parties are concerned'.[49] Conversely, the same or very similar varieties might be known by a number of names. A further source of confusion was the tendency of some varieties to reveal their unsuitability to a new environment by a marked change of phenotype. For instance, some of the Scottish white wheats were said to turn red when grown in southern England.[50] The specialist seed suppliers were important in offering direction to the confused, the assurance of quality to those who sought it,[51] and seed grown at a distance to those who believed that frequent changes of seed were the essence of sound husbandry. Otherwise, they were tangential to the routine conduct of a cereal agriculture which adopted a variety-based mode of production during the nineteenth century largely through its customary habits of seed reservation and supply. By 1852, Peter Lawson was already speaking of the traditional wheat landraces of eastern Scotland

46 F. F. Hallett, 'On "pedigree" in wheat as a means of increasing the crop', *JRASE* 22 (1861), pp. 371–81.

47 Evershed, 'Varieties of wheat', pp. 251–3; Biffen and Engledow, *Wheat-breeding investigations*, pp. 7–8; Allard, *Principles of plant breeding*, p. 51.

48 *Mark Lane Express*, 3 Mar. 1890, p. 282.

49 Biffen and Engledow, *Wheat-breeding investigations*, p. 61.

50 Shirreff, *Improvement of cereals*, pp. 4–5.

51 This was the essential message conveyed by the advertising of the major British seed suppliers. Commercial sources of seed in Ireland appear to have been enduringly problematic. See J. P. Huttman, 'The impact of land reform on agricultural production in Ireland', *Ag. Hist.* 46 (1972), pp. 359–60.

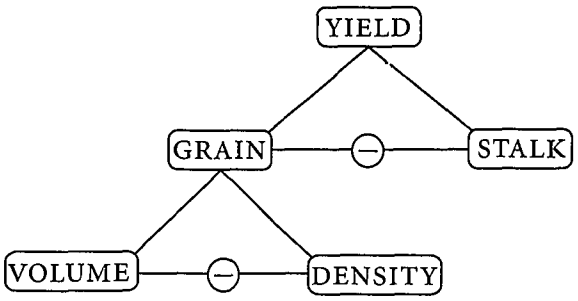


FIGURE 1. Components of yield in ninteenth-century cereal varieties.

as residuals. Common White Winter Wheat was 'the name given to whatever white wheat is generally cultivated in any district where its culture may not have been superseded by one or more of the superior and less mixed varieties: ... its cultivation is now giving place to varieties less mixed, which produce superior samples'.[52] Mixed landraces survived longest on the cultivable margins of cereal agriculture where their unique environmental adaptation scored over other considerations. Daniel Hall observed mixed, localized varieties of barley growing in mid Wales circa 1911.[53] The same area contributed a number of mixed landraces to John Percival's inventory of British wheats, published in 1934.[54]

III

The process of varietal change which was made possible by the developments outlined in the previous sections adds a new dimension to our understanding of the competitive difficulties of the British cereals sector during the nineteenth century. It is standard practice among agricultural historians to equate the productivity of cereals solely with the yield of the grain measured in volume per unit of area, typically bushels per acre. Yet, as figure 1 reminds us, a cereal plant produces both grain and stalk, and the latter may be as important to the grower as the former. Caird believed that the choice of one type of grain over another 'depends much on the local value of the different kinds of straw'.[55] Also, the 'yield' of the grain should be measured by both volume and density, for example pounds per bushel, if a plant's productivity in grain is to be expressed in both quantitative and qualitative terms. In general, varieties with the heaviest yields of stalk have the lightest grain yields and vice-versa. Increasing the 'harvest index' (the proportion of total shoot weight accounted for by the grain) has been one of the main objectives of breeders of new varieties in recent times, but was of dubious benefit when straw was in demand and before herbicides afforded effective control of the weed competition suffered by short-straw varieties.[56] Figure 1 also indicates that a similar inverse relationship exists between the volume and the density of the grain, at least in the context of pre-twentieth-century plant science. In

52 Lawson, *Vegetable products of Scotland*, p. 45.
53 A. D. Hall, *A pilgrimage of British farming, 1910–1912* (1913), pp. 328–9.
54 Percival, *Wheat*, pp. 95–7, 104–5.
55 J. Caird, *The landed interest and the supply of food* (1882), p. 36.
56 L. T. Evans, *Crop evolution, adaptation and yield* (1993), pp. 238–45, 28.

general, varieties with the highest volumetric yields had the lowest densities. As Edward Roberts put it in 1847, 'the most prolific are also very frequently of a coarse quality, and commonly lose in price what they gain in quantity'.[57]

The productivity of a cereal was as multi-faceted as its intended uses, which could not be equally well served by any single variety. Varietal choice was therefore partly determined by environmental suitability, partly by an estimation as to what was likely to produce the best overall return on the crop, given its intended uses. Compromise was an essential part of the decision. For example, there was no single variety of wheat capable of producing a heavy straw yield and a large volume of grain at the high bushel weights most desired by the baker. This fact is essential to a proper understanding of the implications for the British cereals sector of the high-input, high-output arable livestock fattening systems of nineteenth-century high farming.

High farming was an elaboration and intensification of the mixed farming tradition which had been the main foundation of agricultural progress in Britain since at least the seventeenth century.[58] It has been assumed that high farming shared with earlier mixed farming arrangements the ability to promote simultaneous increases in the output of livestock and cereals. Its 'expanding circle' is generally supposed to have applied to both livestock and cereals without prejudice to the character of either. As E. L. Jones puts it, 'the greater the scale of feeding farm-grown and bought-in fodder and the heavier the applications of farm-produced and purchased fertilizer, the more the saleable produce, and the more manure for the next round of cropping', resulting in both 'high yields of grain and of fodder crops for the stock'.[59] In fact, high fertilizer doses applied to nineteenth-century cereal varieties tended, while increasing the 'yield', either to reduce the harvest index (i.e. to increase the proportion of stalk to grain) or to increase the volume of the grain at the expense of its density, thereby shifting the character of the crop to something better suited to consumption by animals than by humans.[60] The trend, intensified by the choice of varieties known to respond positively to this treatment, would be particularly welcome in a mixed farming system focused more on livestock than on grain production. Jones suggests that this was a characteristic of high farming from the 1850s onwards. He does not take account of earlier evidence such as that more recently surveyed by Andrew Copus, who detects a transition in southern England as early as 1815.[61] The direct feeding of the

57 E. Roberts, 'On the management of wheat', *JRASE* 8 (1847), p. 71.

58 Overton, *Agricultural Revolution*; B. M. S. Campbell and M. Overton, 'A new perspective on medieval and early modern agriculture: six centuries of Norfolk farming, *c.* 1250–*c.* 1850', *Past and Present* 141 (1993), pp. 38–105.

59 E. L. Jones, 'The changing basis of English agricultural prosperity, 1853–73', *AgHR* 10 (1962), p. 104.

60 For a general discussion of the impact of nitrogen on the harvest index, see Evans, *Crop evolution*, pp. 241–2. For recognition of this point in the nineteenth-century literature, see John Morton, *The nature and property of soils* (1842), pp. 164, 166. Morton argues that manure should be applied to green fodder not cereals: 'large quantities of manure produce an over-abundance of straw'. The proportionately greater increase of straw than grain is documented in John Hannam, 'Report of experiments on the actual and comparative effects of special manures', *FM* 2nd ser., 9 (1844), pp. 503–17.

61 Jones, 'Changing basis'; A. K. Copus, 'Changing markets and the response of agriculture in southern England, 1750–1900' (unpublished Ph.D., University of Wales, 1986), esp. chs 7 and 8. A. R. Wilkes, 'Adjustments in arable farming after the Napoleonic Wars', *AgHR* 28 (1980), pp. 90–103 treats the cereal agriculture of the period 1815–46 as something which existed in opposition to livestock farming, not recognizing the extent to which they were integrated.

grain of wheat and barley to livestock is well documented during the depression of the 1830s.[62] A witness to the 1847–8 Select Committee on Agricultural Customs noted a greater inclination to feed stock on corn than formerly with 'much progress in the last 10 to 15 years'.[63] It is also clear that by the late 1830s and 1840s, chopped straw was being widely used in yard- or stall-based livestock fattening systems, and that its various benefits were well understood: savings in fodder crop consumption especially of turnips and hay; provision of the roughage necessary for the successful digestion by ruminants of fodder crops, oil-cake and other purchased feeds; and a key role both as feed and litter in the creation and subsequent conservation of manure.[64] By the 1840s, chaff machines for cutting straw and hay figured in about a quarter of farm sales held in Oxfordshire and a rather greater proportion in Shropshire.[65] The 1830s and 1840s also saw rapid displacement of reaping by sickle by mowing by scythe, a change which was welcomed at the time as much for the consequent increase in the quantity of straw recovered in the harvest as for anything else.[66] Lease covenants generally prohibited the removal of straw from farms, except where a nearby town or city supplied an off-farm demand and the loss of this manurial ingredient could be rectified by the purchase of equivalent quantities of town manure. A straw market existed and straw had a defined monetary value only for farmers in these situations.[67] This may explain why straw is sometimes not explicitly itemized and often not costed in reports on feeding experiments where it was evidently used. Such omissions should not be taken as evidence that it had negligible or zero value.[68]

62 BPP, 1836, VIII, QQ 560, 822, 826, 939–40, 4185, 4188–9, 7804–5.

63 BPP, 1847–8, VII, SC on Agricultural Customs, witness Thomas Chandler, farmer, Warminster, QQ 5448–9.

64 For example, BPP, 1836, VIII, Q. 10207; BPP, 1847–8, VII, QQ 266–9, 420, 496, 1647, 2135; *FM* 3 (1835), p. 383 (report that sheep of Berkshire are 'already at straw'). *FM* 6 (1837), pp. 99–100 (on stall feeding as practised in Norfolk). C. Hillyard, 'Essay on stall feeding cattle', *FM* new ser., 3 (1839), p. 406 (in Norfolk the common practice is to give store beast in fold yard eating straw as much linseed oil as they will eat). *FM*, 2nd ser., 3 (1841), pp. 380–1 (South Wiltshire and Warminster Farmers' Club resolve that the 'saving of hay is great by permitting straw to be cut and used with it'). *FM*, 2nd ser., 6 (1842), p. 15 (Leominster Farmers' Club discusses the diets of farm horses and resolves that the best comprise wheat straw, hay or clover cut into chaff, and oats. 'It is also resolved that the animal is less likely to be affected by wind and that his general condition when kept on cut food is greatly improved'). *FM*, 2nd ser., 8 (1843), p. 436 (a speaker to Swansea Farmers' Club advises mixing clover hay with barley and oat straw). See also William Youatt, *The complete grazier* (9th edn, 1851, p. 78) for the role of straw in aiding the digestion of linseed cake and C. W. Johnson, *The modern dairy and cowkeeper* (1850), p. 32 on the value of straw in the digestive process.

65 J. R. Walton, 'Mechanization in agriculture: a study of the adoption process', in H. S. A. Fox and R. A. Butlin (eds), *Change in the countryside* (1979), p. 25.

66 *FM*, 2nd ser., 3 (1841), pp. 34, 133, 153, 259, 280; 4 (1841), p. 368; 6 (1842), p. 13; 10 (1844), pp. 545–6; 20 (1849), pp. 263–4. E. J. T. Collins, 'Harvest technology and labour supply in Britain, 1790–1870', *EcHR* 2nd ser., 22 (1969), pp. 453–73 emphasizes gains in labour productivity.

67 BPP, 1836, VIII, QQ 2455, 4064, 4240; *FM* 6 (1837), p. 318; Henry Stephens, *Book of the farm* (2 vols, 2nd edn, Edinburgh, 1851), I, p. 459; C. W. Johnson, 'On farm leases', *FM* 2nd ser., 14 (1846), pp. 108–110; 21 (1850), p. 57. On the volatility of the straw market and its impact on the farmers of south Lancashire during the late century depression, see Alistair Mutch, 'Farmers' organizations and agricultural depression in Lancashire, 1890–1900', *AgHR* 31 (1983), p. 28.

68 *FM*, 2nd ser., 3 (1841), p. 216, 'not knowing what to say for the barn chaff, I put nil'; 17 (1848), pp. 97–9, report on the feeding experiments of John Hutton, Sowber Hill, Thirsk. For a full statistical survey of published nineteenth-century feeding experiments on cattle, see H. Ingle,

The creeping subservience of cereals farming to the demands of livestock production proceeded so far as the crop's other requirements and the market mechanisms which expressed them allowed. This varied from one cereal to another as, consequently, did the extent and character of varietal change. Traditionally consumed on farm and by livestock to a much greater extent than barley and wheat, oats did not experience the kind of varietal changes associated with a fundamental shift in the function of the crop. A rash of new varieties appeared between the 1820s and the 1840s to give the 53 of Lawson's 1852 list.[69] But the newcomers did not alter the strong existing preference for established varieties supplying a straw with good feeding qualities. So far as farmers in Scotland and the north of England were concerned, this often meant continued cultivation of the old Potato oat, which, notwithstanding its modest bushel yield, gave both a quality grain (this variety was the premium grade in published nineteenth-century price quotations),[70] and a palatable straw. As late as 1910, James Hendrick could remark that 'it is a common opinion among practical men that the straw of the new varieties is of poorer quality than that of well-known old varieties like the Potato and the Sandy'.[71] The new varieties included successful hybrids such as Abundance.[72]

Barley and barley straw were extensively fed, but varietal choice was to a large extent determined by the requirements of the malting trade, at least in those areas where barley of good malting quality could be grown. Several new varieties selected for their malting properties were offered to and tried by farmers during the 1830s and 1840s. For example, Annat, which originated as three ears selected at Annat Gardens, Perthshire in the harvest of 1830, was available in field quantities of seed by 1837.[73] In February 1840 a member of the Isle of Thanet Farmers' Club in Kent was able to report to the club on his experience of the variety.[74] As in similar gatherings elsewhere, but especially up and down the eastern side of Britain, opinion favoured Chevalier, which became the dominant barley variety of nineteenth-century Britain.

The diffusion of Chevalier from its Suffolk place of origin appears to have been rapid during the mid-1830s. In 1834, the *Farmer's Magazine* harvest report for Kent spoke of the 'lately introduced' Chevalier having been 'sown this year to a very great extent', while east of Scotland reports from Brechin and Kirkcaldy in the same year noted that the Chevalier had lived up to expectations but that little would come to market as the bulk of the crop was to be retained for seed.[75] In the following year, Chevalier was mentioned in published harvest reports from Oxfordshire, Berkshire, Tyneside and Glamorgan as if it were no longer a trial growth in those areas. In the Carse of Gowrie it was said to have had a fair trial 'with results such as to ensure an extended culture'.[76] In 1837, classes for Chevalier were included in seed competitions

'Cattle-feeding experiments in Britain: a review of over 200 trials made in the years 1833–1908', *THASS*, 5th ser., 21 (1909), pp. 196–254, and on sheep, *idem*, 'Sheep-feeding experiments in Britain: a review of over 190 trials made in the years 1844–1909', *THASS*, 5th ser., 22 (1910), pp. 178–257.

69 Lawson, *Vegetable products of Scotland*. For an account of varieties recently introduced to and cultivated in Perthshire, see *FM* 3 (1835), p. 501.

70 See London prices as given in the *Mark Lane Express* from the first issue in 1832, also London prices in *Exley and Dimsdale's Corn Exchange Circular* from 1825, and in *Blackwood's Edinburgh Magazine* from 1817.

71 James Hendrick, 'The composition of oats and its variations', *THASS*, 5th ser., 22 (1910), pp. 16–27.

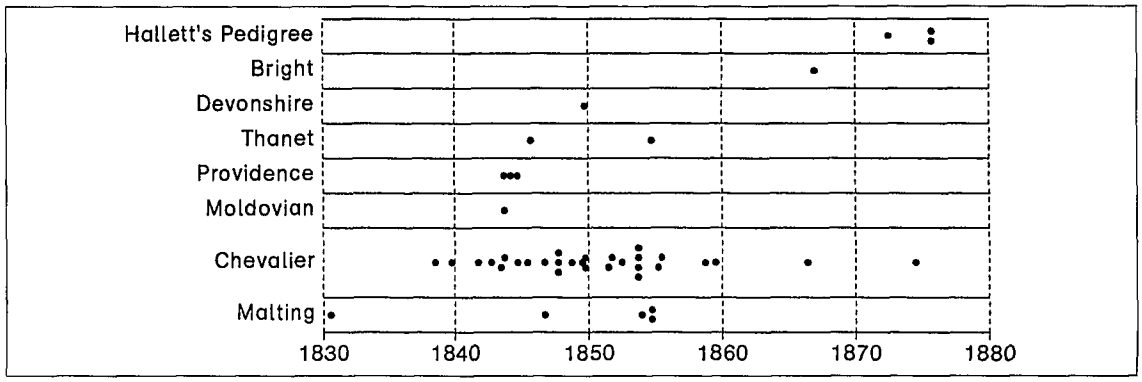
72 J. G. Stewart, 'Lessons from recent crop experiments', *THASS*, 5th ser., 22 (1910), p. 64.

73 *FM* 2 (1835), p. 287.

74 *FM*, 2nd ser., 3 (1841), p. 34.

75 *FM* 1 (1834), pp. 70, 511, 512.

76 *FM* 3 (1835), pp. 220, 314, 385, 386, 502.



Source: *Jackson's Oxford Journal* 1753–1880 and *Reading Mercury* 1800–1880

FIGURE 2. Descriptors of barley in Oxfordshire farm sales notices to 1880

organized by local farmers' groups at Castle Douglas, Kircudbrightshire and Fortrose, Ross and Cromarty.[77] Chevalier was mentioned in Philip Pusey's survey of national agricultural progress in 1840, was reported to be cultivated on all but the inferior lands of Northumberland in 1841, and in 1849 was said to have 'spread over the whole country on the class of soils for which it is suitable'.[78] In 1841, members of the farmers' club at Stoke Ferry, Norfolk, agreed that its introduction had 'occasioned a complete revolution in some districts where no such thing as a malting barley was formerly thought of; it is one of the great improvements of modern times'.[79] The variety was first named in published Mark Lane price quotations in December 1833 where it represented the highest grade of malting barley, selling at 34 to 35 shillings per quarter compared with 30 to 32 shillings for other malting varieties, 27 to 30 shillings for distilling and 25 to 27 shillings for grinding grades.[80]

Auctioneers sometimes attached descriptors, mostly varietal, to standing crops or crops in store listed in farm sales advertising. Figure 2 shows these for barley in Oxfordshire sales notices up to 1880. The virtual disappearance of descriptors for barley after about 1860 suggests that Chevalier may have been so dominant in the county by that date that no useful purpose was served by mentioning it. Hallett's Pedigree was a Chevalier, and 'Bright' is probably a reference to brewing quality, not a variety. This interpretation of figure 2 is not at odds with E. S. Beaven's observation that 'before 1886, 80 to 90 per cent of the barley grown in England' was the progeny of a single plant of Chevalier.[81] Only where environmental conditions favoured other new varieties or, as at Holme Cultram, Cumberland, and Leominster, Herefordshire, local landraces of barley, were farmers inclined to mention that other barleys, at least in these locations, afforded better fodder.[82] Chevalier triumphed precisely because it was a premium barley perfectly attuned to the known and well-articulated demands of the brewing trade, irrespective of any considerations as to its fodder qualities. Yet it is some measure of the extent of the British farmers'

77 *FM* 6 (1837), pp. 310, 317.

78 Pusey, 'Agriculture as a science', p. 11; J. Grey, 'A view of the past and present state of agriculture in Northumberland', *JRASE* 2 (1841), p. 164; 'M. M. M.' [M. M. Milburn], 'On the means of improving the quality and increasing the quantity of the different varieties of barley', *FM*, 2nd ser., 20 (1849), p. 11.

79 *FM*, 2nd ser., 3 (1841), pp. 444–5.

80 *Mark Lane Express*, 9 Dec. 1833, p. 129.

81 Beaven, *Barley*, p. 90.

82 *FM*, 2nd ser., 6 (1842), pp. 12, 358; 11 (1845), pp. 156–161.

fixation with fodder that they campaigned long, hard and eventually successfully for an end to the taxation arrangements which secured the market for Chevalier and the other quality malting barleys of domestic growth, in large part because they believed, without correctly diagnosing the benefits of those arrangements, that they prevented British farmers exploiting to the full the fodder potential of the barley crop.

This is not the place to supply the (as yet) unwritten history of the long crusade for the repeal of the malt tax. Suffice it to say that the repeal campaign, vigorously prosecuted from the beginning of the nineteenth century, became particularly intense during the half century from 1830 to 1880 when beer itself was not dutied.[83] To an extent, the argument for repeal rested on a belief that to tax a raw material rather than the manufactured product must in principle disadvantage the producers of that raw material.[84] There was also an expectation, particularly among those who believed that they could only produce such grades, that the removal of the tax would encourage maltsters and brewers to use inferior domestic barleys.[85] However, the principal complaint against the tax was that it prevented farmers from making full and effective use of their own crops. Labourers could not be paid in farm-brewed beer nor, more importantly, could livestock be fed on malt derived from non-marketable barley grown on the farm.[86] In 1846, the Total Repeal Malt Tax Association argued the fundamental injustice of a situation where French, Belgian, Dutch or Danish barley growers could ship malt-fed cattle duty-free to Britain, while the British farmer 'could only stand by and see his own cattle superseded in his own market'.[87] The possibilities and limitations of malt feeding were explored in a succession of feeding tests, including some undertaken by J. B. Lawes at Rothamsted, and others ordered by the Board of Trade. In 1865, having reviewed all the evidence, Lawes concluded that malt had no advantage over the barley from which it was made as a staple food of healthy animals, although he acknowledged 'a certain amount of malt to be beneficial when given in admixture' either to young or weakly animals, or in 'finishing' or 'making up' for exhibition or sale.[88] However, these opinions were vigorously contested by farming witnesses to the malt tax select committee of 1867 and 1868, who argued that nothing short of repeal would meet their needs. The so-called 'Gladstone's mixture' of linseed and inferior malt, allowed by the Malt for Feeding Cattle Act of 1864, was dismissed as a worthless concession.[89] In their report the select committee concurred, considering it 'proven that excise restrictions, in preventing barley being sprouted for the feeding of horses and cattle, are injurious to the agriculturalist'.[90]

83 For a discussion of the fiscal situation, see S. Dowell, *A history of taxation and taxes in England from the earliest times to the present day* (4 vols, 1965 edn), IV, pp. 85–8; G. B. Wilson, *Alcohol and the nation* (1940), pp. 318–21.

84 *Hansard* (Commons), CCLIII, 24 Jun. 1880, cols 766–7.

85 BPP, 1867, XI, Report from the SC on the Malt Tax, QQ 2256, 2606.

86 BPP, 1836, VIII, QQ 341–5, 557, 560, 702–3, 797.

87 *FM*, 2nd ser., 14 (1846), p. 168.

88 *FM*, 2nd ser., 17 (1848), p. 256; BPP, 1865, L, Abstract report of experiments undertaken by order of the Board of Trade to determine the relative values of malted and unmalted barley as food for stock, p. 793; BPP, 1866, LXVI, Report of such experiments, pp. 397–478.

89 Especially BPP, 1867–8, IX, Report of the SC appointed to inquire into the operation of the malt tax, QQ 31–3, 87, 265–74, 373–5, 505–9, 577, 660–75, 4981–86. See also BPP, 1863, VII, Report from the SC appointed to consider whether the laws relating to the excise duty on malt can be amended; BPP, 1867, XI; BPP, 1864, III, Bill to allow the making of malt duty-free to be used in feeding cattle, pp. 1, 9; BPP, 1865, L, Number of malt houses entered to make malt to be used in feeding animals, p. 785.

90 BPP, 1867–8, IX, p. 238.

When the malt tax was finally repealed in 1880, the consequences were not at all that British farmers had anticipated. Any benefits from the freedom to use home-produced malt as fodder were effectively counteracted by the brewer's freedom to abandon premium British malting barleys for cheaper alternatives. The use in commercial brewing of imported barleys increased greatly, as did the use of maize, rice and other substitutes.[91] New British varieties of malting barley appeared and were adopted, notably Goldthorpe, a sport first identified in a south Yorkshire field in 1889, and the hybrids Standwell (introduced 1900), Plumage-Archer (1905), and Spratt-Archer (1920).[92] None gained a market penetration comparable with that previously achieved by Chevalier. In his authoritative text on malt and malting, published in 1885, H. Stopes estimated that because Chevalier yielded more extract than other varieties but paid no more tax, maltsters had been justified in paying four shillings per quarter more for it than it would have been worth had the tax not existed.[93] As the barley acreage, which had increased from 1867 to 1881, began to decline, farmers who had agitated for repeal had cause to reflect on the warning, made by the brewer and member of parliament for Staffordshire Michael Bass during the 1880 repeal debate, that the British farmer would have 'to compete with the whole world in beer-producing cereals as he (already) had ... to do in the production of food-producing ones'.[94] In 1894, Suffolk farming witnesses to Wilson Fox's enquiry lamented the effects of repeal no less passionately than their farming brethren had pleaded for repeal before the select committee on the malt tax in 1867 and 1868.[95]

IV

The needs of livestock did not have a transformative impact on varietal preference in oats because this was an important consideration in varietal choice from the eighteenth century. Farmers agitated for a taxation regime which would allow them more freedom to use barley as fodder, but met with little success before 1880. The national varietal mix before that date was therefore dominated by the quality malting varieties, especially Chevalier, which were grown wherever environmental conditions were suitable. Wheat offers the clearest evidence of a varietal shift influenced by the needs of livestock farming, a change all the more surprising as it occurred simultaneously with the nineteenth-century spread of wheaten bread consumption to all parts of Britain.[96]

[91] Jonathan Brown, *Steeped in tradition. The malting industry in England since the railway age* (Reading, 1983), pp. 83–5; T. R. Gourvish and R. G. Wilson, *The British brewing industry, 1830–1950* (1994), pp. 183–5. The fiscal incentive to use home-grown barley in the distilling industry was effectively ended in 1855 and imported barley for distilling entered Britain in increasing quantities from the 1860s. See R. B. Weir, 'Distilling and agriculture, 1870–1939', *AgHR* 32 (1984), pp. 49–62.

[92] Brown, *Steeped in tradition*, pp. 90–1; T. J. Riggs *et al.*, 'Comparison of spring barley varieties grown in England and Wales between 1880 and 1980', *J. Agricultural Science* (hereafter *JAgSc*) 97 (1981), pp. 599–610; H. Hunter, *Crop varieties* (1951), pp. 19, 34–6; Beaven, *Barley*, pp. 102–4; Brassley, 'Crop varieties'.

[93] H. Stopes, *Malt and malting* (1885), pp. 610–1.

[94] *Hansard* (Commons), CCLIII, 24 Jun. 1880, col. 760.

[95] BPP, 1895, XVI, RC on Agriculture, pp. 438–9; BPP, 1867, XI; BPP, 1867–8, IX.

[96] E. J. T. Collins, 'Dietary change and cereals consumption in Britain in the nineteenth century', *AgHR* 23 (1975), pp. 97–115.

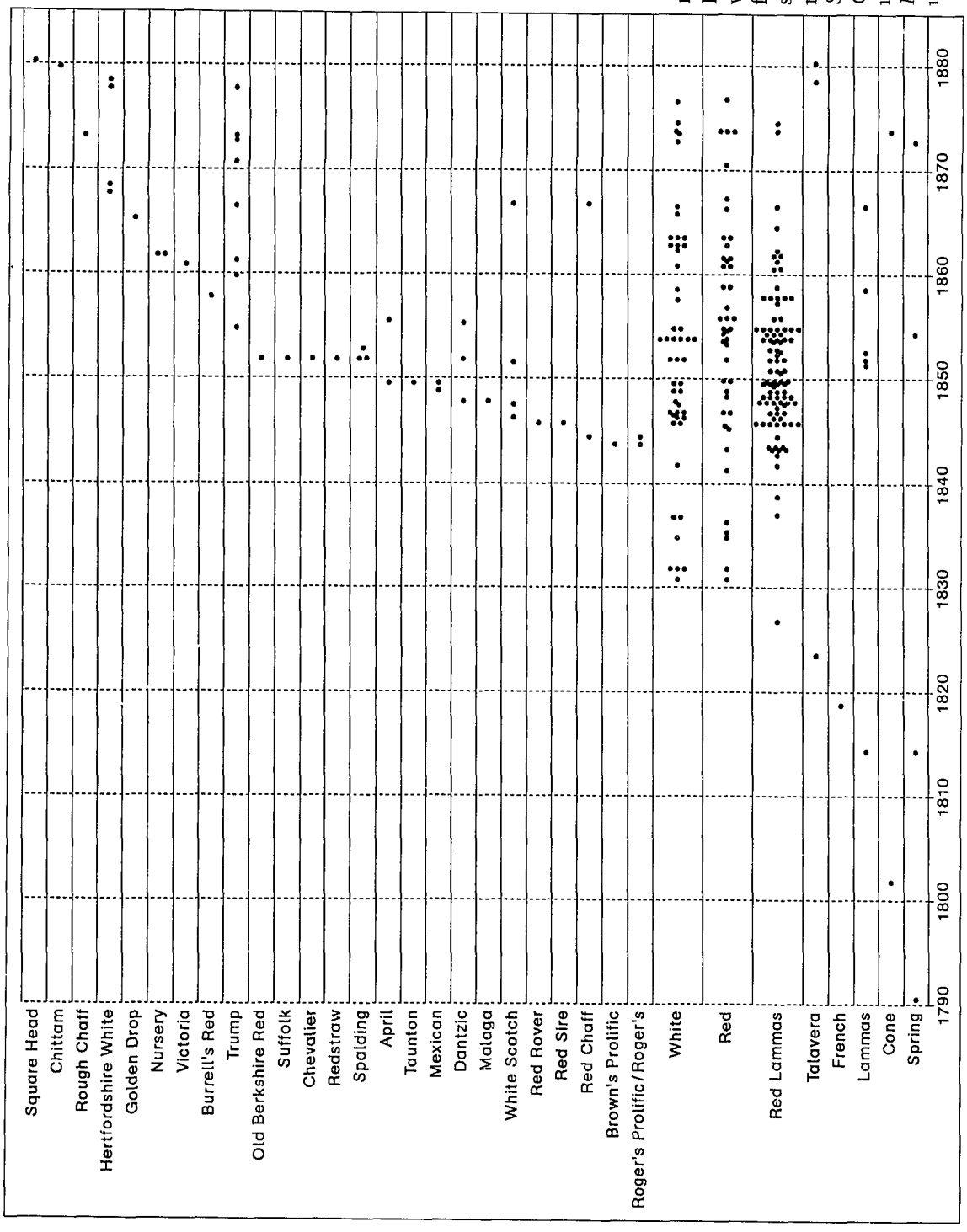


FIGURE 3. Descriptors of wheat in Oxfordshire farm sales notices to 1880
Source: Jackson's Oxford Journal 1753–1880 and *Reading Mercury* 1800–1880

By 1840 so many new wheat varieties were available that an East Lothian correspondent to the *Mark Lane Express* thought 'those in existence at the present time ... almost innumerable'. How does it happen', he rhetorically enquired, 'that not one individual variety possesses qualities capable of securing to it an undoubted pre-eminence over the rest?'[97] The answer, as was apparent from the deliberations of many of the newly-formed farmers' clubs during the years 1839 to 1845, was that no single variety could meet the twin requirements of environment and function when both were so diverse. The clubs' resolutions on wheat were consequently less prescriptive and certain than their resolutions on other matters: 'the results of the same variety of wheat upon different soils seemed so much at variance, that it was impossible to decide on the merits of any one kind for universal adoption', concluded the Hadleigh Farmers' Club in 1840.[98] Nevertheless, societies, clubs and interested individuals endeavoured both to monitor the flow of new varieties, and to assess their contrasting growth requirements and yield characteristics. These activities, which involved national organizations like the Royal Agricultural Society and the Highland, as well as local agricultural societies and farmers' clubs, have left their traces in the published literature. The Royal Agricultural Society's museum of wheat varieties appears to have been well established by 1845, thanks largely to the work of Le Couteur and sometime Cambridge botany professor J. S. Henslow.[99] By the same year, both the *Journal* of the Royal and the Highland *Transactions* had published the results of several inter-varietal wheat trials.[100] Local clubs and societies reported the results of trials relevant to local conditions, some of which they had also organized, and the reports were published in local newspapers or the *Farmer's Magazine*.[101]

Material of this kind assists us, as it doubtless assisted farmers at the time, to a better understanding of the distinctive and contrasting qualities of the new varieties. Before the nineteenth century, the most common wheats in Britain were various landraces of the autumn-sown Red Lammas type. These were wheats of relatively low yield but moderate hardness with sufficient strength to make bread of acceptable quality. The proliferation of varieties, which descriptors used in farm sale advertising suggest, became particularly marked in Oxfordshire during the 1840s and 1850s (figure 3), represented a search for higher productivity and profitability on a range of criteria. Some varieties equalled or even exceeded the strength of established types. They included the spring-sown Talavera, said to have been introduced from Spain during the Peninsular War. Talavera offered a high extraction percentage and flour of unusual strength.[102] In 1864, a market report in the *Farmer's Magazine* spoke with enthusiasm of the

97 *Mark Lane Express*, 24 Feb. 1840, p. 10.

98 *FM*, 2nd ser., 3 (1841), p. 134.

99 *FM*, 2nd ser., 2 (1840), p. 213; 6 (1842), p. 440; 21 (1850), p. 71.

100 J. Morton, 'An account of an experiment on the relative values of several varieties of wheat', *JRASE* 1 (1840), pp. 39–44; W. Miles, 'Report on the wheats selected for trial at Cambridge and on other wheats', *JRASE* 3 (1842), pp. 391–5; C. Hillyard, 'On wheat', *JRASE* 3 (1842), pp. 297–305; G. Kimberley, 'Report on prize wheats', *JRASE* 3 (1842), pp. 395–7; H. Handley, 'Report on prize wheats', *JRASE* 3 (1842), pp. 397–8; J. Waldie, 'Report of an experimental trial of six varieties of prize wheat', THASS, new ser., 9 (1843–5), pp. 124–7.

101 For example, Gloucester Farmers' Club, *FM*, 2nd ser., 3 (1841), pp. 211–2; Stoke Ferry Farmers' Club, *FM*, 2nd ser., 3 (1841), p. 442; Maidstone Farmers' Club, *FM*, 2nd ser., 4 (1841), pp. 293–4, 296–7; Beccles Farmers' Club, *FM*, 2nd ser., 11 (1845), p. 58.

102 'An Old Norfolk Farmer', *Wheat: its history, characteristics, chemical composition and nutritive properties* (1865), p. 171.

quality of the first of the new season's Talavera appearing at Mark Lane: 'strong, good coloured and heavy, some being up to 65 lbs per bushel'.[103] But the quality of the flour was insufficient compensation for the variety's low yield and its constitutional delicacy under British conditions. By 1865, Talavera had been abandoned by the farmers of Norfolk 'on account of the smallness of its yield and its disposition to sprout before harvest'.[104]

Although other varieties with reasonable bread-making qualities, like Rough Chaff, proved more durable, a general trend of declining hardness was detectable at an early date. Wheats which may not have been good in the quality of the grain but were 'better farmers' wheats' were increasingly preferred.[105] These included many of the heavier yielding reds, such as Spalding, Hickling and Brown's Prolific. Spalding, which returned one of the lower bushel weights but the highest volume yields in trials reported by the Beccles Farmers' Club in 1845, appears to have been quite extensively grown.[106] It was frequently reported from East Anglia during the 1840s, and in 1850 was said to be the only red wheat variety grown to any extent in East Lothian.[107] Spalding was also mentioned in the prize reports for Gloucestershire (1850), Northamptonshire (1852), Oxfordshire (1854) and Shropshire (1858), being described in the Oxfordshire report as 'more of a farmer's wheat than a miller's'.[108]

An essential feature of a 'farmer's wheat' was that it supplied straw and less often grain in the quantities and of the quality required for livestock fodder. These varieties were generally characterized by high average yields of grain of relatively low densities. The livestock producers' preference for such wheats was reinforced by agricultural writers and opinion formers who regarded high volumetric yield and the heavy applications of manure necessary to achieve it as self-evidently desirable, an answer to the wheat grower's competitive difficulties, irrespective of the quality of the resulting grain.[109] The characteristics of such varieties, which continued to appear through the second half of the century, may be gauged from data collected during the 1870s and 1880s. As part of his work as a scientific consultant to the baking industry, the chemist William Jago published an analysis of samples of British and foreign wheats from the harvests of 1883 and 1884. Table 1 presents summary descriptive statistics of the results for crude wet gluten percentage, probably the best single measure of strength provided in these

103 *FM*, 3rd ser., 3 (1864), p. 268. Also *Mark Lane Express*, 11 July 1842, p. 9.

104 'An Old Norfolk Farmer', *Wheat*, p. 171. In 1840 a report from East Lothian (*FM*, 2nd ser., 1 (1840), p. 154) noted that Talavera 'does not improve in this, to it, cold climate, and consequently an introduction of new seed is occasionally required'.

105 The first use of the expression 'farmer's wheat' I have been able to trace occurs in a report of the Norfolk and Suffolk Harleston Farmers' Club, *FM*, 2nd ser., 15 (1847), pp. 138–9. It is not entirely clear why a farmer's wheat was so called. As well as its qualities as animal fodder, suitability for grist milling for on-farm human consumption may have been a further consideration.

106 *FM*, 2nd ser., 11 (1845), p. 58.

107 *FM*, 2nd ser., 9 (1844), p. 439; 13 (1846), pp. 145–6; 15 (1847), pp. 138–9; B. Almack, 'On the agriculture of Norfolk', *JRASE* 5 (1845), p. 329; *FM*, 2nd ser., 22 (1850), p. 482.

108 J. Bravendar, 'Farming of Gloucestershire', *JRASE* 11 (1850), pp. 150–1; W. Bearn, 'On the farming of Northamptonshire', *JRASE* 13 (1852), p. 59; C. S. Read, 'On the farming of Oxfordshire', *JRASE* 15 (1854), p. 211; H. Tanner, 'The agriculture of Shropshire', *JRASE* 19 (1858), p. 16.

109 See, for example, Philip Pusey, 'On the source and supply of cubic saltpetre, salitre or nitrate of soda, and its use in small quantities as a restorative to corn crops', *JRASE* 13 (1852), pp. 349–367; Anon., 'An increase of manure the best source of our future supply of corn', *FM*, 3rd ser., 4 (1853), pp. 334–6.

TABLE 1. British and imported wheats: wet crude gluten (per cent)

British		*Imported*	
Low scoring		*Low scoring*	
Rivet	Trace	# 1 Calcutta	8.5
Rivet	Trace	Walla Walla (Oregon)	11.7
Fine Hertfordshire	14.5	# 2 Calcutta	13.0
Red Chaff	14.5	Hard White Karachi	14.7
Square Head	14.5	Persian	16.0
Rough Chaff	14.7	# 2 Club Calcutta	16.3
Red Nursery	14.8	Hard Calcutta	16.5
Square Head	16.6	# 1 Club Calcutta	16.8
Red Chaff	17.2	New Zealand	16.9
High Scoring		*High Scoring*	
Victoria	23.0	Red Königsburg	27.2
Red Chaff	23.2	# 1 Hard Canadian	28.0
Nursery	23.4	Saxonska	28.0
Kent Red	23.5	Kubanka	28.7
White Chaff	23.7	Australian	29.0
Red Lammas	23.9	Ghirka	29.5
Red Lammas	25.2	Persian	30.0
Essex Rough Chaff	26.0	Kubanka	30.3
Rough Chaff	27.6	Hard Fife	32.0
n = 37.0 *Mean = 18.6* *Median = 18.5*		*n = 43.0* *Mean = 22.3* *Median = 23.4*	

Source: W. Jago, *The chemistry of wheat, flour and bread, and technology of bread making* (Brighton, 1886), pp. 238–9, 241–2.

data, and identifies high and low scoring varieties in the two samples. Under certain cultivation conditions, Rough Chaff could produce flours relatively low in gluten, but otherwise they were high. Red Lammas consistently registered relatively high gluten percentages. By contrast, the two Rivet samples showed no more than traces of gluten. The appearance of the two samples of Square Head among the lower gluten scores should also be noted. Table 2 shows annual means and coefficients of variation for the yields of 15 varieties of red wheat tested at Rothamsted between 1871 and 1881.[110] The highest mean yields were recorded for Rivet, although it also had the highest coefficient of variation. It was the third worst yielding of all 15 varieties during the disastrous harvest of 1879. By contrast, Old Red Lammas and Rough Chaff registered some of the lowest mean yields, but their coefficients of variation were also low, and they

[110] The white wheats in the trial have not been included in the table since they were not suited to the heavy soils of Rothamsted and performed indifferently.

recorded some reasonable yields in bad years. Red Lammas had the third highest yield of the sample in 1879, and Rough Chaff the highest in the almost equally disastrous year of 1880. The low yielding varieties offered good bread-making qualities and some prospect of a reasonable yield in poor years. The high yielding varieties offered a high average volumetric yield of grain of indifferent bread-making quality.

TABLE 2. Red Wheat varieties at Rothamsted, 1871–1881

	Mean yield per acre (bushels)	*Coefficient of variation (per cent)*
Rivet	45.8	35.5
White Chaff	44.2	26.5
Club	43.4	29.8
Hallett's Golden Drop	42.3	27.2
Bole's Prolific	41.3	19.2
Red Rostock	40.1	32.9
Red Langham	39.6	22.4
Bristol Red	39.6	24.3
Red Wonder	39.5	24.6
Browick	38.6	24.0
Red Nursery	37.9	18.2
Burwell (Old Red Lammas)	37.8	18.0
Golden Rough Chaff	37.3	24.5
Chubb	36.6	32.1
Hallett's Original Red	36.5	17.3

Sources: A. D. Hall, *The book of the Rothamsted experiments* (1917), p. 66.

Despite their status as 'farmers' wheats', high yielding but low density varieties like Spalding and Rivet would have been much less favoured had their grain been unmarketable. As data collected by the Richmond Commission shows, grain continued to constitute a significant component of gross farm receipts. For example, as late as the 1880s, wheat represented about 14 per cent of total receipts on a mixed farm in south Wiltshire.[111] For farmers growing the high-volume, low-density varieties, reasonable market returns were still necessary. In 1840, a contributor to a discussion on wheat varieties at the Watton Farmers' Club, Norfolk noted that 'there were many varieties that would produce more than others – Hickling for instance, but then it was not saleable'.[112] However, this does not appear to have been the general experience of those wishing to market inferior varieties. Samples of low bushel weight commanded lower prices, but not as low as was commensurate with their poor flour yields. Indeed, J. B. Lawes even thought it unusual for millers to pay more for better wheats.[113] The British marketing system appears to have been tolerant of inferior grades of wheat.

[111] Copus, 'Changing markets', p. 337.
[112] *FM*, 2nd ser., 3 (1841), p. 465.
[113] *FM*, 2nd ser., 17 (1848), p. 107

Throughout the nineteenth century, sales in British markets were agreed on visual inspection of a sample, without formal grading, in contrast to north America's developing system of elevator-based marketing. Achievement of the economies associated with elevators required an agreed system of grading, since the produce of different farmers was pooled at that point, prior to sale. The essential basis of grading was the density of the consignment, measured by bushel weight.[114] It is true that such a system could only function with single varieties of wheat, as produced by the north American spring and winter wheat belts. Because of differences in the shape of the ear and hence in the volume of air a full bushel would contain, the British varieties with the highest specific gravities did not necessarily register the highest bushel weights.[115] The British wheat marketing system had to handle an intrinsically more problematic commodity. Britons not only failed to devise a solution, but seemed incapable of coming to terms with the problem. The sensible recommendations of the select committee of 1834 that sales should be by imperial bushel accompanied by a statement of weight per bushel were never carried into law, and subsequent parliamentary enquiries were distracted by issues other than grading: the standardization of measures, the accuracy of the published corn averages, and the injustice suffered by tithe payers who found their liability assessed in a translation of weight to measure at an arbitrarily-fixed conversion rate.[116] The problem does not appear to have been fully acknowledged until 1928 when a ministry report on grain marketing observed: 'in the trade in home-produced grain the conditions usually associated with systematic grading and standardization do not exist'.[117] In the meantime, a highly fractured and fragmented marketing system frequently failed to match buyer and seller in an appropriate fashion. Millers complained that they could no longer find suitable domestic wheats at the same time as the remaining growers of those wheats protested that no-one was prepared to pay the premiums they had once attracted.[118]

A system which encouraged British farmers to grow the kinds of wheats bakers least wanted to buy could only intensify the demand for import, a demand many in the corn trade were eager to satisfy. As early as 1835, the release of imported wheat in bond and its replacement by British flour or biscuit intended for export was being promoted as a solution to British supply problems consistent with the continued existence of the corn laws.[119] The issue most prominent in the deliberations of the Select Committees on Bonded Corn in 1840 and on the Grinding Act in 1842 was the need to recover overseas markets, including those in British colonies, lost to foreign suppliers of flour and biscuit.[120] The 1842 report recommended 'the enactment of

114 M. Rothstein, 'American wheat and the British market, 1860–1905' (Unpublished Ph.D. thesis, Cornell University, 1960), pp. 88–95; W. Cronon, *Nature's metropolis: Chicago and the Great West* (New York, 1991), pp. 97–147.

115 A. S. Wilson, *A bushel of corn* (Edinburgh, 1883), pp. 21–120; P. H. Frere, 'On M. J. Reisert's agricultural experiments', *JRASE* 24 (1863), pp. 436–54.

116 BPP, 1854, LXV; 1857–8, LIII; 1870, LXI; 1878–9, LXV, Returns of Measures and Weights; BPP, 1888, X, Report of SC on Corn Averages; BPP, 1890–1, XII, Report of SC on Corn Sales, QQ, 16, 17; C. R. Fay, 'The sale of corn in the nineteenth century: measure versus weight', *Economic J.*, 34 (1924), pp. 211–8.

117 Quotation from D. J. Britton, *Cereals in Britain* (1969), p. 170.

118 A. D. Hall, 'The question of quality in wheat', *J. Board of Agriculture* 11 (1904), p. 323; Hall, *Pilgrimage*, pp. 64–5; National Association of British and Irish Millers (hereafter NABIM), *12th annual report*, 1890, p. 69.

119 Report in *The Times* noted in *FM* 3 (1835), p. 398.

120 BPP, 1840, V, pp. 1–98; BPP, 1842, XIV, pp. 1–96.

some measure which would enable this country to participate ... in the fresh flour and biscuit trade ... framed so as not to infringe the law for regulating the duty on the importation of foreign grain'.[121] The problem was that any system which allowed biscuit or biscuit flour manufactured from inferior British wheats for export at some future date to release from bond an equivalent quantity of superior continental wheat, was likely merely to increase the importation of those wheats by an amount equivalent to the quantity of British flour or biscuit which could be found to place in bond. William Skipworth, a Lincolnshire farming witness to the 1842 committee, observed that if the consequence of the committee's proposals was 'to allow a speculator to grind up a quantity of our soft bad wheats here and introduce into our market a good wheat which has come from abroad and is in bond', then that would be objectionable in a bad harvest.[122] In fact, millers were already availing themselves of such freedom as they were allowed to mix hard continental wheats with the indifferent British wheats of wet harvests.[123] The consequence of the Grinding in Bond legislation, extended by repeal itself, was to allow British millers full participation in overseas wheat markets in good years and bad, without payment of the duty necessary to release imports from bond, thereby facilitating their acquisition of superior, more expensive, high-gluten wheats for mixing with inferior domestic varieties to produce flour of good bread-making quality.[124] In June 1846, the monthly corn trade report noted that wheat imported had been immediately released, 'not in the ordinary way by paying duty, but by substituting flour for the wheat required', a device 'much in use of late' by millers 'compelled' to take foreign wheat 'for mixing with the inferior qualities of English'.[125] In 1847, a Mark Lane report spoke of 'Essex and Kent stands so miserably supplied ... that many of the town millers were unable to secure a sufficient quantity for mixing with the foreign'.[126]

Britain's position as the emergent clearing house and marketing centre of the developing international wheat trade, which many witnesses to both the 1840 and 1842 select committees saw as the foundation of the country's future dominance of world trade in flour and biscuit, was both a partial outcome of its early preference for 'farmers' wheats' and a factor which allowed that preference to develop further. The marketability of indifferent bread wheats of domestic growth is explained not just by the failings of the marketing system but by the increasing proportion of premium grade bread flours which were mixes of low-gluten domestic and high-gluten imported wheats, a trend which gave many millers less reason to be demanding of quality in the domestic crop than they would otherwise have been.[127] These developments were to the advantage of the port millers who not only enjoyed the greatest discretion in the choice of domestic and Irish wheats and least-cost access to imports, but also the best opportunities on British soil to benefit by the economies associated with the large-scale purchase of imported

121 BPP, 1842, XIV, p. 3.

122 BPP, 1842, XIV, Q. 1042.

123 FM, 2nd ser., 4 (1841), pp. 303–6.

124 April 1845 corn trade review, *FM*, 2nd ser., 11 (1845), p. 477: 'favourite varieties of fine Danzig and Rostock have been taken in small quantities for mixing with the coarse kind of English'. Even before they gained the right to 'trade' domestic wheats and wheat in bond, merchants and millers were exploiting the bonded warehouse system to minimize duty payments: W. Vamplew, 'The protection of English cereals producers: the corn laws reassessed, *EcHR*, 2nd ser., 33 (1980), pp. 384–90.

125 *FM*, 2nd ser., 13 (1846), p. 577.

126 *FM*, 2nd ser., 16 (1847), p. 197.

127 On flour types at mid-century, see John Towers, 'On the nutritive qualities of the bread now in use', *FM*, 2nd ser., 16 (1847), pp. 65–7; Eliza Acton, *The English bread book* (1857, rep. 1990), pp. 66–7, 81–3.

grain of warranted quality handled mechanically and in bulk.[128] In due course, their dominance was reinforced by their adoption of long-system roller milling, and increasing consumer acceptance of white, characterless, nutritionally-deficient bread manufactured with low bran flours derived increasingly from imported hard wheats. These developments disadvantaged the inland millers, who not only enjoyed none of the same benefits but had a greater need of domestic wheats of reasonable strength. Small water and wind mills went out of business in large number, the survivors eking out a precarious existence grinding provender.[129] The competitive disadvantages were also increasingly felt by the larger inland concerns, even though many had converted first to steam and then to shorter roller systems.[130] To survive as producers of bread flours they needed to be able to mix costly imports with cheaper home-grown wheats available locally. Any reduction in the hardness of those wheats had to be matched by an increase in the proportion of imports in their flour mixes, and by a corresponding fall in the price they were prepared to pay for home-grown wheat.[131] They became deeply concerned about the declining hardness of the domestic crop and eventually attempted to devise a remedy.

In September 1890, millers who had gathered in London for the council meeting of the National Association of British and Irish Millers (NABIM) reflected with sadness on the British grower's preference for new wheats like San Salvator ('a long in straw, large yield, coarse kind of Rivet which when milled gives a poor, blue flour') and the disappearance of the likes of Talavera ('a finer wheat could scarcely be desired for a miller').[132] Under pressure from the inland millers among its members, NABIM made belated attempts to rectify matters. Gentle pressure on the railway companies for reductions in carriage rates on foreign wheats having produced no change, it was proposed that regional groupings of mills would be created, each with a central clearing house to allow the exchange of hard and soft flours between members, the intention being that all could then sell mixed flours of similar strength in their own market areas. The proposal foundered on the reservations of the port combines. Unwilling to concede any of the advantages of his formidable economies of scale, Joseph Rank advocated and obtained general assent for a policy of Darwinian survival of the fittest, albeit the industry then entered a period of price fixing by regional cartels, which gave a life-line to higher-cost concerns while increasing the already superior profit margins of the port millers.[133]

128 Rothstein, 'American wheat', pp. 158–172.

129 R. Perren, 'Structural change and market growth in the food industry: flour milling in Britain, Europe and America, 1850–1914', *EcHR*, 2nd ser., 43 (1990), pp. 420–37; H. Macrosty. 'The grain-milling industry: a study in organisation', *Economic J.*, 3 (1903), pp. 324–5; B. A. Holderness, 'Agriculture and industrialization in the Victorian economy', in G. E. Mingay (ed.), *The Victorian Countryside* (2 vols, 1981), I, pp. 188–90.

130 On technical change to 1850, see J. Tann, 'Corn milling', in *Agrarian History*, VII, pp. 397–415. The term 'inland miller' is a necessary shorthand. The 'inland millers' included some in coastal locations where imported wheats were not received regularly or in bulk. These millers had no prospect of the scale economies available at the major ports.

131 Biffen and Engledow, *Wheat-breeding investigations*, p. 30; R. H. Biffen, 'Mendels's law of inheritance and wheat breeding', *JAgSci* 1 (1905), p. 5.

132 NABIM, *12th annual report, 1890*, pp. 68–9

133 T. W. Hibbard, 'Gradual reduction by roller milling applied to soft wheats', a paper delivered to the Dublin convention, 10 June 1886, reported in NABIM, *8th annual report, 1886*, p. 42; letter from Watson, Todd and Company, Birmingham, *NABIM 9th annual report, 1887*, p. 117; *Liverpool Corn Trade News*, 2 Feb. 1889, p. 3; Report on Buxton special convention, 14–15 Feb. 1901, NABIM *21st and 22nd annual reports, 1899–1901*, pp. 122–144; NABIM, *23rd annual report, 1902*,

The inland millers next brought forward less controversial proposals to encourage British farmers to greater care in the reservation of seed corn and in their initial choice of wheat varieties. Agricultural societies were to be assisted in organizing seed wheat exhibitions and competitions. W. R. Mallett of Exwick Roller Mills, Exeter, was the leading proponent of this policy and personally prevailed upon the Bath and West to take up the challenge.[134] He did not appear to appreciate that the competitive trials of seed wheat lately organized by the Royal Agricultural Society had proved either controversial or inconclusive.[135] Nor that Patrick Shirreff had devoted rather more than a third of the published account of his life's work to a sustained complaint about the agricultural societies' role in cereal breeding in general and their treatment of him in particular.[136] In 1907, Humphries and Biffen revealed that agricultural societies responded to NABIM's encouragement in this matter by persistently awarding prizes to wheats low in strength: 'the large berry, which is soft and obviously full of starch is still the judge's ideal'.[137] As they showed, high yielding wheats of the Rivet, Stand-Up and Square Head types, which had become increasingly popular since the 1870s, produced flour low in baking quality when compared with older varieties like Red Lammas. Experiments at Rothamsted between 1902 and 1904 demonstrated that the indifferent baking properties of Square-Head's Master deteriorated even further when yield was boosted by fertilizer.[138]

With the joint financial support of the Board of Agriculture and NABIM's Home Grown Wheat Committee, founded in 1901, Biffen, Humphries, Hall and their associates embarked on a programme of research which first demonstrated that the superior strength of some of the harder imported wheats, notably Red Fife, was heritable and not merely a function of climate.[139] They then set about breeding hybrids which combined the strength of the imports and the high yields of the popular domestic types. This resulted in the releases of Little Joss in 1911, Yeoman in 1916 and Yeoman II in 1924.[140] The hybrids proved popular in some quarters. As early as 1926 it was reported that 17 per cent of the seed samples forwarded by farmers to the government seed testing station for germination tests were Yeoman and about 8 per cent Little Joss.[141] But the Wheat Act of 1932 undermined home-grown bread wheat while ostensibly promoting it. The milling quota proposals of the abortive 1928 bill were watered down in the 1932 legislation, which authorized deficiency payments on all wheat of 'millable quality'. Some members of parliament were perceptive enough to suspect that this meant a subsidy on everything: 'taxed £6 million in order to provide an increased amount of chicken food', as one put it.[142] So it duly

p. 41; Perren, 'Structural change'; Macrosty, 'Grainmilling', pp. 330–334, 536–543.

134 NABIM, *21st and 22nd annual reports, 1899–1901*, pp. 63–5; NABIM, *23rd annual report, 1902*, pp. 52–3.

135 W. Carruthers, 'Report on the competition for seed-wheat, 1880', *JRASE*, 2nd ser., 17 (1881), pp. 75–86; *idem*, 'Report on the competition for seed-wheat, 1883', *JRASE*, 2nd ser., 20 (1884), pp. 300–9.

136 Shirreff, *Cereals*, pp. 64–97.

137 A. E. Humphries and R. H. Biffen, 'The improvement of English wheat', *JAgSci*, 2 (1907), pp. 2–3.

138 *Ibid.*, pp. 4–6; Hall, 'Quality in wheat', p. 335.

139 *NABIM, 25th annual report, 1904*, pp. 59–67; *NABIM, 26th annual report, 1905*, p. 22; Biffen and Engledow, *Wheat-breeding investigations*, pp. 91–3.

140 Clark, 'Improvement in wheat', p. 235; Biffen and Engledow, *Wheat-breeding investigations*, pp. 99–113; Percival, *Wheat*, p. 116; J. Long, *Making the most of the land* (nd., *c.* 1913), p. 73.

141 Biffen and Engledow, *Wheat-breeding investigations*, pp. 61–2.

142 *Hansard* (Commons), 262, 9 Mar. 1932, col. 1825.

proved. Since the subsidy, levied as a tax on flour, was effectively available on all marketed wheat, the markets were saturated with high-yielding, low-density wheats only suitable for fodder.[143] It took another world war, a more elaborate system of price support, and the invention of the Chorleywood bread process before British wheat was re-established as the main ingredient of British bread.[144]

The geography of wheat importation to Britain evolved in a stepwise fashion. Increasing demand and reducing transport costs brought in ever more distant zones of supply: the Baltic, the Black Sea, the Pacific slope, the Great Plains, India, Persia, the Plate, Chile, Australia, the prairies, to name only the most important. A maturing local, or at least less distant demand for food saw reduced exports to Britain from some supply areas. Increasing wheat flows from the Black Sea and north Africa between 1840 and 1860 precisely mirrored declining supplies from northern Europe, especially the western Baltic, as increasing food demand on the continent brought changes in farming systems and reductions in wheat available for export.[145] By the last decade of the nineteenth century, it was widely recognized that similar forces were at work in the United States, which, it was feared, would eventually lose its status as a net exporter of wheat.[146] The advent of new and the growth of old centres of metropolitan consumption served to accelerate the settlement of the remaining unoccupied parts of the globe suitable for wheat cultivation. As Table 1 shows, not all wheat varieties imported into Britain in the 1880s were hard. India and the Pacific northwest produced wheats rather softer than the British average. But the disappearance of some supply areas and the advent of others with more extreme climates had the net effect of increasing the overall hardness of the mix of wheats entering international trade. Such important late-settled areas as the northern Great Plains and the Canadian Prairies could only grow hard spring wheat.

The declining hardness of the domestic crop and the increasing hardness of wheat imports were complementary to a degree which does not always allow ready differentiation of cause and effect. Had the increasing softness of domestic wheat only occurred after 1870, then it could be explained without serious challenge to the orthodoxy that the British farmer post-repeal was a passive victim of events. The high yielding, low density varieties of the Stand Up, Square Head and Rivet types gained in popularity because, it could be argued, an autonomous increase in both the volume and the hardness of imports allowed a reduction in the hardness of the home grown crop at that time. Farmers who did not abandon wheat altogether favoured the high yielding, soft varieties because they no longer had a serious interest in supplying the market for bread flours. The further growth of a cake and biscuit industry able to take advantage of soft domestic wheats was one consequence.[147] Repeal created an open market in Britain. Countries with surpluses available for export competed to supply it, and after 1880 supplied it in such

143 'Bill to encourage the production of wheat by compulsory milling of certain proportions of home-grown wheat by millers', BPP, 1928, II, p. 429; J. A. Mollett, 'The Wheat Act of 1932: forerunner of modern farm price support programmes', *AgHR* 8 (1960), pp. 30–1.

144 A. Williams, 'The history of the Chorleywood bread process', in A. Williams (ed.), *Breadmaking. The modern revolution* (1975), pp. 25–39.

145 S. Fairlie, 'The nineteenth-century corn law reconsidered', *EcHR*, 2nd ser., 18 (1965), pp. 562–75; *FM*, Sept. 1853, p. 274.

146 J. W. Rush to 7th annual convention, NABIM, 30 July 1896, NABIM, *12th annual report, 1890*, p. 38.

147 T. A. B. Corley, *Quaker enterprise in biscuits. Huntley and Palmer of Reading, 1822–1972* (1972), pp. 78–9.

volume and with wheat of such quality as to place the survival of the domestic producer in peril. Events during the earlier high farming era play no part in the explanation.

However, evidence from the 1830s onwards, suggests that the orthodox view stands in need of revision. The adoption of arable-based livestock fattening, well under way before corn law repeal, created a demand for varieties of wheat which would both service the needs of livestock production and respond to the manure produced by it. Even before 1849, when repeal was fully implemented, 'farmers' wheats' were favoured to an extent which necessitated importation of relatively costly hard wheats. The trend was given further impetus by the preference of the powerful port millers for imported wheats, and by the informal and chaotic grading practices of British grain markets, which failed to deliver appropriate rewards to growers of the low-yielding wheats most suitable for bread making. While later events considered in isolation are not challenging to the view that the softening of the domestic crop was an effect of grain imports, it appears from earlier events actually to have been a cause. The late-century reduction in the hardness of British wheats was a late episode in a long-running saga.

V

Varietal innovation is a neglected theme in existing accounts of eighteenth- and nineteenth-century agricultural change. This paper has argued that the period after 1760 saw an increasing tempo of innovation in cereal varieties. Plant breeders gained a good empirical understanding of the possibilities of introduction and selection. Opportunity for significant financial reward was limited, but less tangible returns were possible and costs were low. Consequently, large numbers of new varieties became available to farmers during the nineteenth century. Seed and the principles of varietal selection were easily transported. The experience of varietal innovation was therefore shared by Britain's continental neighbours, though none opened its markets to importation over as extended a period as did Britain.[148] None therefore witnessed quite the same conflict between the forces of innovation and the forces of competition.

Varietal preferences in barley and oats were not significantly influenced by the rise of livestock farming, although many barley growers were unhappy that the effect of the malt tax was to restrict their use of the crop as feed. Further, while British oats and barley producers both had the advantage of growing some varieties which commanded a premium over imports, wheat growers did not. This served to worsen the effects of the wheat price decline of about one half between 1846 and the end of the century. Agricultural writers gave farmers every encouragement to adopt new high-yielding varieties, and they appear to have responded. The wheats so produced were acceptable as provender and bedding. Cheap soft flours stimulated the growth of the cake and biscuit industries. It is probable that the net return on a high yielding low gluten variety with a low unit price was better than the return on an equivalent acreage of any other domestic wheat. But this was in part a reflection of market failure. Samples of home-grown bread wheats entering British markets became too few to attract the premiums their quality

[148] For a discussion of Vilmorin's lists of French varieties see Evershed, 'Varieties of wheat', and on Dutch wheats, A. C. Zeven, *Landraces and improved cultivars of bread wheat and other wheat types grown in the Netherlands up to 1944* (Wageningen, 1990). On tariffs see BPP, 1913, LXVIII, Return showing average prices of wheat ..., p. 110.

warranted. Domestic markets had no formal system of quality grading, and strong prejudices against introducing one. Millers used ever larger quantities of imported hard wheats, a trend which reinforced the competitive advantages of the larger port concerns. The competitive position of the inland millers weakened further as British farmers abandoned the market for bread wheats. Comparison of London import prices for United States wheat and Gazette prices of English wheat shows that the American crop was more costly by 4.9 per cent in 1872–6, but that this difference had widened to 14.4 per cent by 1907–11.[149]

Analysts of British nineteenth-century agriculture, both at the time and subsequently, have persistently treated 'wheat' as a single undifferentiated commodity. The competitive problems of the British grower are therefore reduced to the single issue of comparative production and transport costs. This paper has suggested that varietal innovation by British wheat growers, mainly in response to the demands of livestock fattening, altered the available mix of British wheats in such a way as to stimulate the demand for hard wheat imports. To this extent, the pursuit of improvement through high farming was more a cause of than a constructive response to intensified international competition.

[149] Means of annual means given in A. J. H. Latham and L. Neal, 'The international market in rice and wheat, 1868–1914', *EcHR*, 2nd ser., 36 (1983), p. 276.

Trouble with farms at the Census Office: an evaluation of farm statistics from the censuses of 1851–1881 in England and Wales*

Dennis R. Mills

Abstract

From two viewpoints this article evaluates the tables in the 1851–81 Census Reports based on farmers' responses regarding farm size and employment. It is intended both as a guide to the tables, and to the strengths and limitations of the data contained in them. It also discusses the apparent strategies of the Census Office in relation to the wider concerns of census-taking and the collection of agricultural statistics. The information discussed is the most comprehensive of its kind for the period, but needs to be treated with considerable caution. Much of the difficulty lies in the intention of the Census Office to arrive empirically at a definition of 'farmer' by collecting data, rather than by taking an arbitrary definition and applying it to the census process.

The institution of the regular peace-time collection of agricultural statistics was debated for a period of 35 years, starting about 1830 and culminating with the establishment of the current system in 1866. The debate centred on crop returns, especially wheat, in the context of rising imports of this cereal necessitated by population increase. Meanwhile the general census authorities in 1801 had begun to collect information on all occupations, including farmers, and various types of farm employees. While the debate about crop returns was in full sway, the 1851 census began the collection of data on farm sizes and supplemented the occupational question directed at all individuals by asking employers, including farmers, to state the numbers of persons in their employment. A full set of tables based on these data appeared in the 1851 census report. This activity continued in the censuses of 1861, 1871 and 1881, but the reports of 1861 and 1871 made only partial use of the material collected, and none of it was used in 1881. This strange behaviour by the Census Office suggests that they were not fully confident of the results they obtained, and is one of the reasons for attempting an evaluation of the data from the standpoint

* My wife, Mrs Joan Mills, began the excavation of data from the census reports. Dr E. Higgs and Prof. M. E. Turner made helpful remarks on the first draft of the 1851 sections of the paper, and Profs E. J. T. Collins and G. E. Mingay were also very encouraging at this stage. Mrs A. S. Brook made valuable comments on the first full draft and suggested further reading. Prof. M. Drake, among other forms of assistance, checked the tortuous references to Parliamentary Papers and provided some extra material. Profs W. A. Armstrong and M. Overton responded to enquiries about their own work. I have depended considerably upon the resources of the libraries of The Open University, Nottingham University, Bishop Grosseteste College, the Museum of Lincolnshire Life, Lincolnshire Archives, and the Lincolnshire Libraries Service. My thanks go to all these helpers, but any shortcomings are, of course, my own responsibility.

of present-day agricultural historians. Although increases in farm size have been one of the major features of agricultural change, relatively little attention has been paid to it by historians in recent decades. Changes in the amounts of labour employed on farms have possibly aroused no greater interest, despite labour being one of the farmer's chief inputs.[1] To what extent can any progress be made towards understanding these questions by using the data collected by the Census Office?

At the four censuses of 1851–1881 householders who were occupiers of (agricultural) land, not all of whom described themselves as farmers, were requested to record on their schedules the number of acres of land they occupied (with common grazing rights stated separately). They were also asked to record the number of *labourers* they were employing, regardless of whether or not they lived in the farmhouse. Boys and women were to be recorded separately, but the request for the numbers of women employed was not repeated in the same way at the 1861–81 censuses and this aspect of the subject is therefore omitted from the present discussion. Enumerators transferred the information from household schedules to the census enumerators' books (CEBs) for onward transmission to the General Register Office, which set up a temporary Census Office for the purpose. The latter then built up a series of tables at national, divisional and county level which were published in the printed census volumes. Since 1952, when the 1851 CEBs were opened for public use, it has also been possible to use the raw figures recorded by farmers.

In addition to the farmers' responses concerning their farms as units, there were of course responses relating to the occupations of *individuals* in the workforce, farmers, agricultural labourers, farm servants, farmers' sons, shepherds and so on.[2] These responses are less central

[1] For a general history of agricultural statistics see Ministry of Agriculture, Fisheries and Food (MAFF), *A Century of Agricultural Statistics, Great Britain, 1866–1966* (1968); the introduction, written by A. H. J. Baines, describes the build-up towards the introduction of the compulsory and comprehensive collection of data starting in 1866. Relevant literature on farm size mostly in the period up to 1850 includes W. A. Armstrong, 'Labour I: rural population growth, systems of employment, and incomes', in G. E. Mingay (ed.), *The Agrarian History of England and Wales VI: 1750–1850* (1989), p. 670; J. V. Beckett, 'The debate over farm sizes in eighteenth- and nineteenth-century England', *Agricultural History*, 68 (1983), pp. 308–25; D. B. Grigg, 'Small and large farms in England and Wales; their size and distribution', *Geography*, 48 (1963), pp. 268–79; *id.*, *The Agricultural Revolution in South Lincolnshire* (1966), pp. 169–70, id., 'Farm size in England and Wales, from early Victorian times to the present', *AgHR* 35 (1987), pp. 179–89; and M. Overton, *Agricultural revolution in England: the transformation of the agrarian economy, 1500–1850* (1996), pp. 171–78.

[2] See E. Higgs, *A clearer sense of the census: the Victorian censuses and historical research* (1996) for a description of the enumeration process, the preparation of census reports, the relevant archival arrangements, and especially on the agricultural workforce (pp. 105–7). D. Mills and K. Schürer (eds), *Local communities in the Victorian census enumerators' books* (1996) discuss the enumeration process in Chapters 1 and 2; there are illustrations of the Census Office in this book (front cover and p. 20). For an article reviewing the methodology of using the manuscript returns at the local level see D. and J. Mills, 'Farms, farmers, and farm workers in the nineteenth-century census enumerators' books: a Lincolnshire case study', *Local Historian* 27 (1997), pp. 130–43. An older, but still important reference is P. M. Tillott, 'Sources of inaccuracy in the 1851 and 1861 censuses', in E. A. Wrigley (ed.), *Nineteenth-century society. Essays in the use of quantitative methods for the study of social data* (1972), especially pp. 118–21. Another still useful older general introduction to the censuses is R. Lawton (ed.), *The Census and social structure. An interpretative guide to nineteenth century Censuses for England and Wales* (1978).

TABLE 1. Labour supply on three farms at Thornborough, near Buckingham, 1851

Farmer and farm address	*Acres*	*Labourers employed*	*No. and ages of co-resident sons and daughters employed*	*Man equivalents*
Arlant Allcock, High Street	196	3 men and 2 boys	2 sons, 25, 15 One dau, 19	Seven
John Mold, Shellspit Farm	160	7 men and 4 boys	One son, 24	Eleven
Samuel Frost, Manor House	170	3 men and 2 boys	3 sons, 23, 20, 16	Eight

Note: Man equivalents calculated by including the farmer as one man, and boys and girls under twenty as half a man.

Source: Census Enumerator's Book for Thornborough, 1851, PRO, HO107/15.

to the present article, but critical analysis of the occupation tables produced from them shows that their use also needs to be considerably qualified.[3]

Sections one and two of this paper look at farm employment, firstly as it was recorded in the CEBs, then as it has been studied on this basis by modern historians. Sections three and four repeat this process in relation to farm acreages. Thus informed at the local and manuscript level, the reader is taken on in section five to a consideration of the relevant tables in the Census Reports of 1851, 1861 and 1871. Section six puts the farm size data alongside those collected by other means, whilst the last section sets the discussion in the wider contexts of census-taking and agricultural statistics more generally. Finally, there is an appendix offering a more detailed guide to farm statistics in the census reports.

I

Table 1 demonstrates the wide variations in labour supply per unit area frequently encountered at the local level in the CEBs by comparing three farms at Thornborough (Bucks.) in 1851. 'Man equivalents' have been calculated by adding the farmers themselves, their sons and one daughter to the number of labourers recorded, taking boys and girls under 20 as half a man. This procedure is based on the observation that farmers seldom described their co-resident sons and daughters as 'labourers', nor probably thought of them as such, partly as a matter of status, partly because they would not have been in receipt of conventional labourers' wages. How married farmers' sons living in their own households described themselves is a matter of conjecture, since the census was not constructed in a way that relates households to each other. At Thornborough we find that John Mold of Shellspit Farm was apparently employing eleven man-equivalents on a 160 acre farm almost in sight of Arlant Allcock's 196 acre farm where he managed with only

[3] For the first part of the century see E. A. Wrigley, 'Men on the land and men in the countryside: employment in agriculture in early nineteenth-century England', in L. Bonfield, R. M. Smith and K. Wrightson (eds), *The World We Have Gained: Histories of Population and Social Structure* (1986), pp. 295–336. For the later period see E. Higgs, 'Occupational censuses and the agricultural workforce in Victorian England and Wales', *Economic History Review* 48 (1995), pp. 700–16. His study is part of a wider interest in the use of occupations in the censuses; see also E. Higgs, 'The tabulation of occupations in the nineteenth-century census, with special reference to domestic servants', *Local Population Studies* (hereafter *LPS*) 28 (1982), pp. 58–66, reprinted in Mills and Schürer (eds), *Local communities*, pp. 27–35.

seven, whilst Samuel Frost of the Manor House employed eight. Presented as acres per man-equivalent, Allcock had one man per 28 acres, Mold one man per 14.5 acres and Frost one man per 22.5 acres.

Table 2 illustrates the layout of the CEBs and transfers the focus to an area – North Cumberland – in which farm service was still in widespread use. 'Indoor farm servants' were paid differently from the non-resident labourers, through a lump cash payment at the end of a year's service, plus full board during that time. They were described as 'servants' in the CEB column for *relationship to head of household*, which was distinct from the *occupation* column. In the latter they were described variously as '(indoor) farm servant', 'carter', 'waggoner', 'shepherd', 'garthman', and so on. Although the terms 'farm or agricultural labourer' should not have been used of farm servants in the occupation column, this was sometimes the case. Thus in Table 2 one such in the Todd household is described in the occupation column as 'farm labourer' and another in the Richardson household as 'ag[ricultural] lab[ourer]'.[4] Robert Todd is also an example of a farmer who returned no employees on his own line in his schedule, despite having a co-resident worker in his household. Perhaps Todd thought of John Byers as a *servant*, as distinct from a *labourer*, but then we have to ask why Byers was described in the occupation column as a 'farm labourer'? Thus, as is shown below, there was confusion as to whether 'labourers' was an all-inclusive term, despite the Census Office's instructions to use it that way.

To continue the analysis from the point of view of the ratio between labour and land, Joseph Thirlwall appears to have had less labour than one might expect. If he and the farm servants are added to the two labourers declared on the top line, the total of five men and one woman yields a ratio of 47 acres per man-equivalent, compared with 26 acres on Todd's farm and only 18 acres on the Routledge farm. Only very occasionally are the historian's doubts put to rest as to how living-in farm servants had been counted in the farm total: Bingham H. Thomlinson at Little Coates near Grimsby in 1851 declared that he employed six indoor and 13 outdoor labourers, the six indoor labourers actually appearing on lower lines in his entry. It is generally accepted that casual workers were excluded, since the Census Office's instructions to farmers was to state the number of labourers employed at the date of the census – during the last few days of March or the first few of April – a season when casual work would be minimal on most farms.

There is also what can be termed the 'bailiff problem'. Where a bailiff, or sometimes a foreman, took farm servants into his household, he usually mistakenly described them as if they were his own servants, rather than those of his master, who may or may not have been resident on the farm. Thus at Grasby Bottoms Farm, near Brigg, Lincolnshire, in 1861 William Dann described himself as a farming bailiff, with three 'servants' whom he listed as 'carters' in the occupation column. In census terms he should have used the word 'lodger' or 'boarder' in the relationship column, but this did not represent the real situation as a bailiff saw it, since the three servants would not have been paying him for board and lodgings. Instead, he was presumably paid by his employer for this extra service.

[4] Joseph Thirlwall and James Routledge exemplify the employment of female farm servants, a relatively rare practice outside northern England. For recent statements on farm service see Overton, *Agricultural Revolution*, pp. 179–82; Armstrong, 'Labour I', pp. 672–77; Alan [*sic*] Armstrong, *Farmworkers: a Social and Economic History, 1770–1980* (1988), pp. 94–96; and S. Caunce, 'Farm servants and the development of capitalism in English agriculture', *AgHR*, 45 (1997), pp. 49–60.

TABLE 2. Four farm households in the Wetheral registration sub-district, Cumberland, 1851

Sch. No.	*Address information*	*I*	*U*	*Name and surname*	*Relation to head of family*	*Cond'n*	*Age M*	*Age F*	*Rank, profession or occupation*	*Where born*
	(Coathill ED)									
11	(not given)	1		Robert Todd	Head	Wid	77		Farmer of 90 acres	Cumberland, Stanwix
				George do.	Son	Wid	32		Farmer's son	do., Seberham (sic)
				Rebecca do.	Daughter	Un		30	Farmer's daughter	do., do
				Ann do.	Granddaughter			10	Scholar	do., St Marys
				John do.	Grandson		2			do., Croglin
				John Byers	Servant		19		Farm labourer	do., Stapleton
	(Wetheral ED 7-11a)									
1	Coathouse	1		Joseph Thirlwall	Head	Mar	56		Farmer of 260 acres employing 2 labs	Cumberland, Walton
				Ann do.	Wife	Mar		52		do., Brampton
				Mary Edmundson	Wife's sister	Un		62	Annuitant	do., do.
				Elizabeth Gilchrist	Servant	Un		24	Ag Servant	Scotland
				William Johnston	Servant	Un	54		do.	do.
				John Dickson	Servant	Un	20		do.	Cumberland, Kirkington (sic)
	(Wetheral ED 7-11b)									
76	Low Wood	1		James Routledge	(Joint) Head	Un	55		Joint farmers of 220 acres employing 8 labs	Cumberland, Hayton
				George do.	(Joint) Head	Un	40			do., do
				Mary do.	Sister	Un		45	Housekeeper	do., do.
				Mary Wannop	Neice	Un		18	Farm servant	do., Cumwhitton
				Joseph Charlton	(no entry)	Mar	40		Farm servant	do., Walton
				John Brow	(no entry)	Un	27		Farm servant	Scotland, Gretna
	(Wetheral ED 7-11d)									
57	(not given)	1		John Richardson	Head	Mar	40		Farmer	Cumberland, Whitehaven
				Jane do.	Wife	Mar		42		do., Wetheral

Sch. No.	*Address information*	*I*	*U*	*Name and surname*	*Relation to head of family*	*Cond'n*	*Age M*	*F*	*Rank, profession or occupation*	*Where born*
				John Phillips	Servant	Un	26		Ag Lab	do., Rockcliffe
				Wm Rutherford	Servant	Un	30		Winter Shepherd	Scotland
				Ann Hewitson	Servant	Un		26		Cumberland, Cumwhitton
				Margret Henderson	Servant	Un		36		Scotland

Note: The full label of column 1 is 'No. of Schedule'; column 2 = Road, Street, &c., and No. or Name of House; columns 3 and 4 = Houses inhabited or uninhabited/building. Cond'n = marital condition. Age M and Age F = ages of males and females. ED = Enumeration District.

Source: Transcript and Index for the 1851 Census for Wetheral, etc., Cumbria Family History Society, 1989, based on PRO, HO/2429.

II

Passing on to some of the studies of farm employment based on the CEBs, Sheppard compared the numbers of men 'employed' (as stated by the farmers) with the numbers of agricultural labourers recorded in the East Riding (in census entries relating to individuals) and found close agreement between the two figures: approximately 10,200 for the first category and 10,900 for the second. She therefore concluded that farmers, with reasonable consistency, *excluded* their indoor farm servants from the employee totals, regarding this question as a reference to outdoor labourers only. In his study of South Carmarthenshire, S. Thomas did not report having tested this conclusion, because the 'Returns state quite specifically "farmer of x acres employing n labourers."' It seems that he relied on the farmers being all of the same mind that 'labourer' meant 'outdoor labourer'.

The Sheppard approach was, however, challenged in another Welsh context by C. Thomas in a study of nine enumeration districts (EDs) in south Cardiganshire. Here he found that of 185 'farmsteads' listed in the 1851 CEBs, only 45 provided details of the labour force. He argued that the remaining 140 farms could not all be assumed to have employed no labourers, but detected confusion as to the use of terms and a lack of compliance with the census questions. Tillott and Stevenson, studying an area of 12 parishes around Scunthorpe, discovered that the farmers reported a total of 810 employees and had 312 farm servants in their households. Even if it is safe to add these two figures together, the total is only 1122 persons, compared with 1365 agricultural workers recorded as individuals. The authors felt that the discrepancy was too large to be explained by farm labourers working outside the boundaries of the survey area, and suggested that another partial explanation lay in casual work and chronic under-employment.[5]

[5] J. A. Sheppard, 'East Yorkshire's agricultural labour force in the mid-nineteenth century', *AgHR* 9 (1961), pp. 45–6; S. Thomas, 'The agricultural labour force in some south-west Carmarthenshire parishes in the mid-nineteenth century', *Welsh History Rev.* 3 (1966), p. 67; C. Thomas, 'Rural society in nineteenth century Wales: south Cardiganshire in 1851', *Ceredigion*, 6 (1971), pp. 397–8; P. M. Tillott and G. S. Stevenson, *North-west Lindsey in 1851* (University of Sheffield, Department of Extra-Mural Studies, 1970), pp. 2, 6–9. W. T. R. Pryce, 'Manuscript census records for Denbighshire in the nineteenth century', *Trans. Denbighshire Hist Soc.*, 22

Taking acreages at face value for the time being, it is possible to report on a number of studies of the relationship between area and labour. In very crude terms, these point to farmers in arable areas employing men at the rate of about 25 acres per man on farms of under 100 acres and 35 or more above that size, with fewer men in pastoral areas. In 1871 the Census Office estimated 35 acres per worker across the country, but, despite including farmers in their calculations, they omitted farmers' relatives working on farms. Tillott and Stevenson calculated a figure of about 24 acres per worker on the basis of adding all 312 farm servants to the 810 labourers declared by farmers, plus one-and-a-half men per farm to allow for family labour. In the East Riding, Sheppard reported averages varying from 13 acres to 34 acres per worker depending on soil fertility (high fertility = high labour demand) and farm size (large farms were more efficient). S. Thomas found in south-west Carmarthenshire that the area per worker was about 33 acres on farms of 50–100 acres, about 40 acres on farms of 100–200 acres, and about 45 acres on farms of 200–300 acres, with a figure of about 60 acres on farms of 500 acres or more. For a pastoral parish in Devon, Haydon calculated averages of 21 and 28 acres per worker in 1841 and 1851 respectively, but figures for single parishes in particular can only be regarded as approximations, even when based on individual, rather than farm entries in the CEBs, since indications as to place-of-work were given only for workers living in farmhouses. Other farm workers may have worked outside their parishes of residence, and many did so in those areas where closed villages were commonplace as in eastern and southern England, but the transfer of labour between parishes is even reported from Carmarthenshire.[6]

III

Moving on to the reliability of the acreages recorded, whilst problems are not as complex, they remain serious, since on top of having to assume that farmers had accurate figures and were willing to divulge them truthfully, there is also the much more important problem that some farmers recorded no acreage figure. What proportion of the whole these farmers represent is a matter for discussion.

From the way in which the information appears in the CEBs, there would appear to be two different situations in which a farmer failed to report an acreage. The first arose when the farmer actually occupied land in his own right as an owner or tenant, but simply failed to report the acreage. This can be inferred where the farmer is head of a household at a farm address and/or where his household included farmers' sons or co-residing farm servants. See for an example, John Richardson in table 2.

(1973), p. 189, also reports confusion about the reporting of employees. In some other studies census data on employment and acreages has been accepted almost at face value, for example, A. Chinnery, 'Rutland farms in 1871', *Rutland Record*, 2 (1981), pp. 78–81.

6 BPP, 1873, LXXI, Part II, *Census of England and Wales 1871*, Vol. IV, *General Report*, p. xlviii; Tillott and Stevenson, *North-west Lindsey*, p. 7; Sheppard, 'East Yorkshire', pp. 46–7 and 52–4; S. Thomas, 'SW Carmarthenshire', pp. 67–9; E. Haydon, *Secular and Divine. A History of Widworthy Parish in East Devon* (Marwood Publications, Ford Farm, Wilmington, 1997), p. 75; D. R. Mills, *Lord and Peasant in Nineteenth-Century Britain* (1980), pp. 118–120; and B. A. Holderness, '"Open" and "close" parishes in England in the eighteenth and nineteenth Centuries', *AgHR*, 20 (1972), pp. 126–39.

Although the Census Office's instructions were that 'the term farmer was to be applied only to the occupier of land', problems also arise where this instruction appears to have been ignored. A farmer may have been out of work or retired, for example, Watson Harmston, living at 4, Edwin Street, Nottingham in 1881, who described himself as 'farmer out of place'.[7] Some farmers may have been reluctant to describe themselves as 'out of place' and although the Census Office used the term 'retired', the concept of 'retirement' may have been imperfectly understood. Alternatively a farmer may have described himself so because he was a partner in a farm reported by another person, perhaps his widowed mother, a brother, or his father. From what is seen in the CEBs it is often difficult to disentangle one situation from another, although there are sometimes hints, such as the great age of a farmer, or his appearance as a single man in the household of his farmer brother, or even (but very rarely) an explicit admission that two brothers were 'joint farmers', as in the Routledge household included in table 2.

There is also the 'bailiff problem' again. A bailiff should not have reported the acreage of the farm of which he had charge since he was not the 'occupier'. However, this sometimes happened, as at Manor Farm, Canwick, Lincolnshire in 1871, when bailiff George Sleight reported 165 acres. Whether the true occupier desisted or did likewise will usually remain unknown, through lack of a means to identify him. Poor coordination between farmer and bailiff could lead to a farm acreage being reported twice over, or not at all. Where a farmer occupied two or more 'farms' (in the sense of distinct physical units) he would presumably have added their acreages together and reported them as one 'holding'. This should have been the correct procedure from the present standpoint, helping to keep the numbers of *farmers* and the numbers of *farms* in step with each other.

IV

Published studies sometimes raise the problem of defining the use of the term 'farmer', especially at the lower acreage levels. Sheppard drew a line under occupiers of five acres (with the exception of 'gardeners' and 'market gardeners') and considered any 'farmer' reporting a smaller acreage as in reality an agricultural labourer. S. Thomas, partly on the basis of comparison with a tithe apportionment, challenged this view and drew the line at 10 acres.[8] In some areas the term 'cottager' was used of minor occupiers of land, whilst the better known terms of 'smallholder', 'gardener' and 'market gardener,' all have to be considered, since they were all 'occupiers of land'. In addition, there were many dual occupationists who combined farming with any one of a very large range of additional occupations, sometimes more important than their farming, sometimes less so, but usually in an ambiguous relationship so far as census evidence is concerned.

There is a considerable variation in the proportion of farmers found not to have recorded their acreages. For example, the biggest survey available is Sheppard's, which shows that about 10 per cent of farmers in the East Riding did not give their acreages in 1851, although locally it could be a much higher proportion. Tillott and Stevenson's study area near Scunthorpe had 250 farms for which acreage figures were given in the 1851 census, yet this accounted for only

[7] Higgs, *A Clearer Sense*, p. 104. I owe the information on Harmston to the kindness of Mrs Jean Towers. He was recorded in the 1861 and 1871 censuses as a farmer at Canwick, Lincs., 40 miles away.

[8] Sheppard, 'East Yorkshire', p. 44 and S. Thomas, 'SW Carmarthenshire', pp. 63–4.

about 70 per cent of the area surveyed. Eleven other full-time farmers failed to give their acreages. In addition they excluded a large number of dual occupationists from the total of full-time farmers, including all men who gave 'farmer' as all or part of their occupational description. In all 375 men were excluded, of whom 281 were heads of households. At Tickhill in south Yorkshire in 1851, 17 of the 60 farmers did not record their acreages. C. Thomas' Cardiganshire area of nine EDs contained 185 men and women describing themselves as farmers in 1851, but only 171 gave their acreages. The latter figure is to be compared with no less than 357 agricultural *holdings* recorded in the near-contemporary tithe apportionments, many of which were obviously not occupied by full-time farmers. Pryce reported that acreage information is sometimes missing from the 1851 CEBs for Denbighshire, especially in EDs located on the coalfield or near towns, where 11–26 per cent of farmers (household heads) failed to state the size of holding.[9]

V

After each census the Census Office published a number of volumes, usually loosely referred to as 'Census Reports'. In practice there were several kinds of texts, including (general) reports proper, population tables, summary tables and abstracts (see appendix). As Higgs has demonstrated, the clerical process of tabulating the raw data was fraught with practical difficulties of a kind readily appreciated by any modern scholar experienced in the use of questionnaires. Noting that the Census Office clerks were only temporary and poorly trained, he followed up their work with reference to domestic servants in Rochdale, Blackburn and Oldham. Higgs discovered not only discrepancies between the printed tables and the CEBs from which they were derived, but also inconsistencies in practice between clerks processing the returns for different towns. Apparently clerks attempted to rectify mis-specifications, perhaps referring back in some instances to the household schedules, but they left little behind to show how this was done. In the 'servant' context, one possibility was by cross-reference to entries in the 'relationship to head of household' column.[10] Much the same kind of criticisms are probably true in relation to the processing of farm data.

Failure to create a working definition of farmer is at the root of many of the difficulties, especially in regard to farm acreages, for if there was no definition of 'farmer', it followed that there could be no definition of 'farm'. In the 1851 report the Census Office claimed that the acreage and employment figures they collected would give a 'definite idea of the term "farmer"' and lay 'the foundation of a further inquiry'. They referred to lists of farmers resident in each parish drawn up with the intention of carrying out a revision, which they thought could only

9 Sheppard, 'East Yorkshire', p. 45; Tillott and Stevenson, *NW Lindsey*, pp. 2, 4, 7 and 8; P. M. Tillott, 'The Censuses of Tickhill in 1851 and 1861', part 1 (Tickhill Census Project, unpublished ts, *c.* 1970), p. 13; C. Thomas, 'S Cardiganshire', Tables 5 and 7; Pryce, 'Denbighshire', p. 189. Other examples are given in Mills, 'Farms, farmers, etc', Table 3.

10 Higgs, 'The agricultural workforce', pp. 703, 713; and 'The tabulation of occupations'. Dr Higgs also informs me that no occupational coding dictionary for census clerks in 1851 has survived, and that, although such existed for later censuses too, they are unlikely to have been much help in situations described in this article. See also Tillott, 'Sources of inaccuracy', pp. 86–90, and, for an extension of Higgs' observations, see M. Anderson, 'Mis-specification of servant occupations in the 1851 Census: a problem revisited', *LPS* 60 (1998), pp. 58–64.

be done on the spot. In the absence of this revision, apologies were made for publishing the figures of acreages and employees as they stood. The Census Office also accepted the uncertainty as to whether indoor farm servants had been included in the totals of labourers and noted that farmers themselves and their sons at home should be added to reflect the full size of the workforce. Superannuated farmers and those who had given up their farms were said to have been included with working farmers, as with other occupations, but they neglected to say exactly how they identified these men, or how many there were.[11]

Perhaps the most important shortcoming of the reports is that there is no way of establishing with certainty the total number of farmers actually occupying land and not reporting their acreages in 1851. Was it 2047 (0.9 per cent) as stated at the foot of Table 35, which seems implausible, or the gap of 24,113 (9.7 per cent) between Tables 32 and XXV? In addition, there are the 22,982 'lost' dual occupationists of Table XXXVII to bear in mind (see appendix and table 3). If the real number of non-reporters was distributed evenly between the size groups, the tables will not have suffered significantly, but there is no means of verifying this. On the contrary, suspicions are easily aroused that errors occurred principally at either ends of the scale. Smaller farmers included many who were also engaged in other activities that might have led them to neglect the recording of acreages and employees. At the other end of the scale, confusion may easily have occurred in the cases where farmers resided at one farmstead (or none), but occupied two (possibly more) farms, one or more in the charge of bailiffs.

TABLE 3. Occupiers of land engaged in other pursuits beside farming, England and Wales, 1851: the 18 most common pursuits

Pursuit	*Number*	*Pursuit*	*Number*
Victualler and/or beerhouse	1898	Blacksmith	645
Miller	1885	Woollen-cloth manufacturer	631
Innkeeper	1536	Shoemaker	546
Gardener, nurseryman	1463	Carman, carrier	543
Butcher	1352	Maltster	537
Land proprietor	1230	Mason, pavior	445
Farm bailiff	895	Coal miner	315
Carpenter, joiner	759	Cotton manufacturer	315
Grocer	690	House proprietor	313

Source: BPP, 1852–3, LXXXVIII, part 1, p. cclxxxv. Abstracted from Table XXXVII, which excludes many dual occupationists (but an unknown number) who were transferred as farmers to the Occupation Tables because they reported the size of their holdings and the number of labourers employed. See appendix for further detail.

Despite all the difficulties that farm statistics obviously presented to the Census Office, similar basic questions continued to be asked at the next three censuses. However, in 1861 there was a sharp reduction in the number of tables prepared from the CEBs, the Census Office making use of representative counties instead of printing tables for the whole of England and Wales

[11] BPP, 1852–53, LXXXVIII, part I, *Census of Great Britain 1851, Population Tables II, vol. I*, p. lxxviii.

(see appendix). The report for 1871 repeated a pattern similar to that of 1861, but in 1881 nothing whatever appears to have been done to make use of farm data.

In the 1861 report the Census Office repeated the disclaimer that their collection of farm acreages and numbers of labourers had been defective, but would lay the foundation of a further inquiry. Again they pointed out the need at least to add farmers and farmers' sons to the numbers of employees in order to arrive at more reliable employment data for farms. They offered a partial explanation of the gap between the aggregate numbers of farm employees reported by farmers and the figures appearing in the Occupation Tables as due to many agricultural labourers being out of work; problems over the number of farms were due to many farmers being superannuated or having given up their farms.[12]

The table footnotes and text of the 1871 report are instructive. In particular the Census Office drew attention to the maverick influence of the term 'labourer' used without specification of the branches of the economy to which they belonged. Their numbers had shot up from 325,000 in 1851 and 307,000 in 1861 to 509,000 in 1871. The Census Office complained that 'not withstanding the explicit instructions on the subject to the householders and enumerators, it is not improbable that many agricultural labourers returned themselves simply as labourers'. The writer's experience of the CEBs points to the enumerators as the more guilty parties, since whole enumeration districts in rural areas can be found without a single 'ag lab' – instead the enumerator has used the abbreviation 'lab'. The rise in the number of labourers between 1861 and 1871 is, however, another matter.[13]

Farmers in the representative counties who reported no labourers totalled 23,540 in 1851 and 25,618 in 1871, or 33.9 and 42.2 per cent respectively: at least these figures are broadly consistent with the national proportion of 40.7 per cent in 1851 (see appendix). The Census Office remarked that there were 714 farms in the representative counties in 1851 and 892 in 1871 for which no acreage had been returned. These figures are equivalent to only 1.0 and 1.5 per cent respectively and although they are similar to the percentage of 0.9 reported in 1851 for the whole country, they appear to be far too low an estimate.[14] There is, of course, no way of ascertaining how many farmers were genuine non-employers, but my impression from the CEBs is that a considerable proportion of farmers who recorded an acreage also recorded the number of labourers they employed. Thus the gap between the 1.0 to 1.5 per cent not returning acreages and the 40 per cent not returning labourers is so large as to suggest that the clerks went astray somewhere in their interpretation of the data and its tabulation.

Indeed, a footnote appended to Table 109 of the 1871 report draws attention to the fact that in addition to the 60,762 farmers reporting acreages in the representative counties, there were a further '10,521 farmers who made no returns respecting either the acreage of their farms or the numbers of the men employed'. This 10,521 is no less than 14.8 per cent of the total of 71,283 farmers reported in the table, but is unreliable because there is no means of disaggregating the two kinds of non-reporting (acreages and employees). According to earlier reasoning the total of 10,521 must have included some retired farmers and farmer-partners, but even allowing for

[12] BPP, 1863, LIII, part I, *Census of England and Wales 1861*, III, *General Report with Appendix of Tables*, p. 29.

[13] BPP, 1873, LXXI, part II, pp. xliv–xlv; Higgs, in 'Tabulation of occupations', has attempted to iron out this kind of problem.

[14] BPP, 1873, LXXI, part II, pp. xliv–vi.

[15] BPP, 1873, LXXI, part II, p. xliv, appendix A, p. 123 for Table 109.

this factor, the percentage is much bigger than the larger of the two figures extracted from the 1851 report: the official figure of 0.9 per cent and the inferred figure of 9.7 per cent.[15] The historian is, therefore, still in a quandary as to the under-reporting of acreages, but there is a possibility that Sheppard's figure of about 10 per cent for the East Riding is representative of the whole country (see above, p. 65).

VI

The reader may be forgiven for thinking that the farm data in the census reports are quite without value. It is true that only a handful of historians have made significant use of them. Probably less confidence can be placed on the figures of farm employment than on acreages, especially where there were marked seasonal fluctuations that could not be reflected in the census, or in areas of widespread hiring of farm servants, who may have been treated in different ways by different farmers in reporting the number of their employees. In the absence of any consensus about how to allow for variations in reporting, it is very important for local historians to use both the farm employment data and the record of individuals' occupations. Since there was often movement of labour between EDs, the figures for individual EDs should be regarded with particular suspicion, and an attempt be made to increase the geographical scope of the research in order to widen and strengthen the statistical base. At the national level it is essential to have recourse to the work of Higgs and Wrigley.[16]

The evaluation of the acreage figures given in the censuses must take into account the fact that they are the most comprehensive for the period. They are also less biased than figures in estate records, which tend to exaggerate the numbers of large farms. Where they exist, the tithe apportionments are much to be preferred, although they are very time-consuming if figures for more than single parishes are sought. Overton has recently dismissed the acreages given in the censuses, stating that 'the data are unreliable because the question was a voluntary one and many small farmers did not bother to give an answer'.[17] Such a remark, it will now be seen, oversimplifies the actual situation, although one might not quarrel with the conclusion.

Table 4 represents an attempt to circumvent some of the problems by taking the Census Office's farm acreage figures for 1851 and comparing them with 1871, as it is fairly safe to assume similar defects in the reporting system at both dates. The data for the whole of England and Wales in 1851 show that the 17 English counties act as a reasonably representative selection for that date: in only one size group (5–20 acres) are the figures more than two percentage points apart. The number of farms reported in these counties went down by 12.8 per cent between 1851 and 1871. The two largest size groups (300 acres plus) gained over the others, in absolute as well as percentage terms. The next lowest group (200–300 acres) and the two smallest groups (below 20 acres) lost in absolute terms, but gained percentage-wise. The three middle groups (20–200 acres) lost in both both absolute and percentage terms.

The extreme right-hand column of table 4 acts as a reminder that, although there was still a very large number of small farms in England in 1871, they did not account for a large proportion of agricultural production: their importance was more in social than in economic terms. For

[16] Higgs, 'Agricultural workforce' and Wrigley, 'Men on the land'.

[17] Overton, *Agricultural Revolution*, p. 174.

TABLE 4. Farm sizes in England and Wales (1851) and 17 'representative' English counties (1851 and 1871)

Size (acs)	*Eng & Wales 1851*		*17 Eng Counties 1851*		*17 Eng Counties 1871*		
	N	%	*N*	%	*N*	%	*% of area*
Under 5	7,656	3.4	2,047	3.0	1,984	3.3	0.1
5–20	42,829	19.2	10,894	15.9	10,091	16.9	1.3
20-50	47,315	21.2	12,747	18.6	10,604	17.7	4.0
50-100	44,558	20.0	13,451	19.6	10,483	17.5	8.3
100-200	45,752	20.5	14,795	21.6	12,047	20.1	19.2
200-300	18,401	8.2	6,930	10.1	6,251	10.4	16.8
300-500	11,646	5.2	5,012	7.3	5,216	8.7	21.8
500 & over	5,114	2.3	2,755	4.0	3,194	5.3	28.6
Totals	223,271	100.0	68,635	100.1	59,870	99.9	100.1

Source: BPP, 1852–3, LXXXVIII, part I, Appendix II, Table XXXIV (for 1851) and BPP, 1873, LXXI, part II, pp. xliv–xlv (for the 17 counties). See appendix for further detail.

example, 20.2 per cent of farms in the under 20 acre groups contained only 1.4 per cent of the land, whilst the largest size group (500 acres and over) comprised only 5.3 per cent of the number of farms, but contained 28.6 per cent of the total acreage represented in the table. So, if the under 20 acre holdings are regarded as not being true farms (but, say, mainly the holdings of labourers, cottagers, smallholders, dual occupationists, semi-retired farmers and market gardeners), then it is clear that the smaller *true* farms of 20–200 acres were being absorbed into larger holdings as economies of scale took effect during the period of High Farming. By comparison, Grigg showed that there was a decline of the larger farm (over 300 acres) during the period *c.* 1875–1930, followed by a revival which was slow enough to prevent the area occupied by larger holdings from reaching the 1851 level again before the 1960s.[18]

The Census Office's figures for 1871 can also be compared with those derived from the *Agricultural Returns*. The first way of doing this is to start with the 1871 Report's figure of 249,907 farmers and graziers, or occupiers of land not returned under any other profession. The Census Office compared this with the 309,708 *holdings* of five acres and upwards recorded in 1872 through the *Agricultural Returns*, 'two or more of which were sometimes held by one person, and some were held by persons who were certainly not farmers'. They then pointed out a further 171,714 holdings of less than five acres, but concluded that 'the farmers, in the proper sense of the word, probably do not exceed 250,000', thus coming back to their own initial figure![19]

The second way of making a comparison is through the breakdown of farm sizes in the *Agricultural Returns* of 1870 and the census tables of 1871. The unadjusted data appear in the top part of table 5 and show an enormous discrepancy in percentage terms in the two smallest size

[18] Beckett, 'Debate', pp. 310 and 325, has some similar comparisons between proportions of numbers and of areas for 1851; Grigg, 'Farm size in England and Wales', p. 186. Overton, *Agricultural Revolution*, p. 173, points out that, in general, landlords would be interested in engrossing farms because higher acreages meant proportionately higher profits, thus potentially higher rents per unit area.

[19] BPP, 1873, LXXI, part II, p. xlvi.

table 5. Distribution of farm sizes (percentages) in England (1870) and in 17 'representative' counties (1871)

Size (acres)	*Under 5*	*5-20*	*20-50*	*50-100*	*100 & over*	*N*
Year			*Unadjusted*			
1870	26.0	28.0	16.0	12.0	18.0	393,569
1871	3.3	16.9	17.7	17.5	44.5	59,870
Year			*Adjusted*			
1870			34.8	26.1	39.1	181,042
1871			22.2	21.9	55.9	47,795

Note: The adjusted figures have been produced by eliminating all farms of under 20 acres from the percentage calculations (see text for further discussion).

Sources: 1870, BPP, 1870, LXVIII, pp 363 ff, *Agricultural Returns of Great Britain 1870*, Appendix to Report, p. 20; 1871, BPP, 1873, LXXI, part II, pp. xliv-xlv. See appendix for further detail.

groups (below 20 acres), thus mirroring the data discussed in the previous paragraph and supporting Overton's contention that the largest failure of occupiers of land to report their acreages on their census schedules occurred in these groups. This comparison also points up the difference between the recording of *farms* in the main body of the census tables on the one hand, and *agricultural holdings* in the *Returns* on the other. By discarding the figures for the two smallest groups, it is possible to adjust the percentage figures for the three groups above 20 acres. The discrepancies between the two sets of data are redistributed, rather than reduced, making it clear that the two methods of reporting were considerably at odds, quite apart from the very wide discrepancies between the two in the lowest sizes.

VII

In evaluating the data discussed in this article, the agricultural historian needs to take into account the overall aims of the Census Office, insofar as it is possible to establish them. When it planned the first censuses to make use of household schedules (from 1841 onwards), in asking the question on 'rank, profession, and occupation', it was not primarily concerned with social status or stratification. Instead it was much more concerned to establish to what extent occupational conditions could be used to explain mortality levels in different sections of the population. Nevertheless, in the 1851–81 censuses all employers were questioned as to the number of persons in their employment. In their 1851 and 1861 reports, the Census Office referred to this matter as though they were chafing at the restrictions of the Census Act, which did not permit them to ask all the questions that would have made possible the 'enumeration of visible property and annual produce' embraced by the Census in some other countries. This helps to explain why the 1851 report said that 'The return of the workpeople by masters and farmers ... is purely tentative, a mere auxiliary to our inquiry'. Despite this caveat, the failure of employers to respond appropriately was a disappointment to the Census Office.[20]

[20] Higgs, *A Clearer Sense*, pp. 18, 109; Higgs, 'Agricultural workforce', p. 702; BPP, 1852–53, LXXXVIII, part I, pp. lxxvii and lxxix; BPP, 1863, LIII, part I, p. 29; and M. Drake, 'The census, 1801–1901', in Wrigley (ed.), *Nineteenth-century society*, p. 45.

The scale of farm enterprises could also be gauged by asking for acreages, and in respect of both the acreage statistics and those of farm employment, the Census Office are likely to have been influenced by the regularity with which Select Committees and Royal Commissions enquired into the state of agriculture, the problem of the rural poor, and the availability of smallholdings for those who wished to get their foot on the bottom rung of the 'farming ladder'. The 1871 Census Report specifically makes the point that there was a plentiful supply of rented holdings of all sizes in England and Wales, and refers to a recent paper in the *Journal of the Statistical Society* which discussed the relatively small numbers of owner-occupier farmers here, as compared with France.[21]

In addition, the debate about crop and stock returns being conducted contemporaneously must have had some influence on the thinking of the Registrar-General's Office. Thus, for example, arguments in favour of collecting agricultural statistics were set out by Caird in 1852 and at great length by Wren Hoskyns in 1855. In the following year the *Journal of the Royal Agricultural Society of England* began to publish annual digests of statistics useful to farmers, and from 1870 this digest incorporated brief summaries of the crop returns, starting with those for 1867. In 1860 for a second time, the Statistical Society proposed an agricultural census. More specifically, the debaters considered a number of different practical means by which statistics could be collected. Was it to be by the Poor Law Guardians and their officers, by churchwardens or incumbents, by farmers' clubs, or by the Quarter Sessions and the constabulary? In 1847 Milner Gibson, Vice-President of the Board of Trade, tried to persuade parliament to legislate for a scheme depending on superintendent registrars (i.e., the census administrators), who were to employ 'agricultural enumerators'. The 1861 report referred to the probability that England, as well as Ireland, would 'enjoy the advantages of a system of Agricultural Statistics', and this was quoted as the reason for not processing all the information in their own returns.[22]

When the collection of agricultural statistics started in 1866, the Census Office was discarded as a possible vehicle. Instead, excise officers working from parish rate books identified all those who should be supplied with returns. Even so, or perhaps because of the involvement of the Inland Revenue, a satisfactory response rate was not achieved for about ten years.[23] Perhaps the Census Office were right not to wind down their scheme too precipitously, since they might after all have been called upon to administer the collection of agricultural statistics.

The behaviour of the Census Office remains, however, enigmatic, despite the significant number of pointers towards an explanation, since the questions on acreage and employment in all four of the censuses of 1851–1881 were plainly not being answered in a reliable way. Moreover, the amount of tabulation dropped off markedly after 1851, and in 1881, although the questions carried on as before, absolutely no use was made of the data collected. The agricultural

[21] BPP, 1873, LXXI, part II, p. xlviii.

[22] J. Caird, *English Agriculture in 1850–51* (1852; repr. 1968), pp. 520–24; C. Wren Hoskyns, 'On agricultural statistics', *J. Royal Agricultural Society of England* 16 (1855), pp. 554–606 (agricultural enumerators discussed on p. 558); Lawton, *Census and social structure*, p. 18; MAFF, *Century of Agricultural Statistics*, pp. 2–7; BPP, 1863, LIII, part I, p. 29.

[23] The collection of farm size data was much improved from 1885 onwards, at irregular intervals; Grigg, 'Farm size in England and Wales', p. 181. The number of holdings of five acres or more in England and Wales was given as 338,715 in 1885; BPP, 1886, LXX, p. 1 – ; *Agricultural Returns of Great Britain*, 1886 (for 1885), p. 98.

historian is left with a tantalising prospect of 'what might have been' if the matter had been pursued more energetically. However, it is also quite possible that had the matter been thoroughly reviewed after the 1851 census, then the farm employment and acreage questions might have been eliminated from all future censuses. Finally, one of the most interesting sets of farm data found in the Census Reports – the data on dual occupations, illustrated in table 3 – was collected almost fortuitously.

Appendix. A guide to farm statistics in the census reports, 1851–71

Of the three reports, that issued following the 1851 census contains much more information than the two later reports. Not only are the tables more detailed, but there is also a complete set for all the English counties. Details of the tables containing 1851 data at the national and divisional levels are given together in table A of this appendix, making it possible to confine the text to particular points of interest.[1] In the main report, table 32 shows the numbers of *labourers* (my emphasis, a term excluding women and children) employed by farmers in England and Wales. The total number of farmers included is *225,318*, of whom 91,698 (or 40.7 per cent) made no return as to the number of labourers employed. It is impossible to find out how many of these did not employ anyone at all or did not employ outdoor labourers, and how many simply failed to answer the question. The total number of labourers included in the table is *665,651*, and it is tempting, but unfortunately not very fruitful, to compare this with the figure of 1,625,600 for the total agricultural workforce in 1851 according to Charles Booth's reworking of the Census Office's tables, and 2,151,800 according to Higgs' reworking.[2] However, the wide gap between these figures supports Sheppard's view that most farmers declared only outdoor labourers.

Tables 33–35 are concerned with *farms*, principally with farm sizes and the proportion of the country occupied by cultivated farmland. A footnote to tables 33 and 35 states that acreages for 223,271 farms in England and Wales were returned, whilst *2047* farmers, who were presumably thought to be occupiers, failed to report their acreages. These figures sum to *225,318*, the total also included in table 32. Table 35 displays the acreage data against employment data, but the criticisms levelled against both sets of data suggest that these are compounded when related to each other.

Turning to the first appendix, tables 19–22 contain data on the numbers and proportions of

[1] The relevant sections of the 1851 Census Report can be found in BPP, 1852–53, LXXXVIII, part I, *Census of Great Britain 1851, Population Tables II, vol. I*, pp. lxxviii–lxxxi, xci, clxxiv–clxxv, ccxxiii, ccxxvi and cclxxxiii–cclxxxv. The relevant tables are Tables 32–35 in the report section (pp. lxxviii–lxxxi), Tables 19–21 in its first appendix (pp. clxxiv–clxxv) and Summary Tables XXV, XXXIII–XXXVII in the second appendix (pp. cclxxxiii–cclxxxv) all relating to the national level. Further on in the same volume and in volume II there are follow-up tables giving similar data for each division of the country and each geographical county. There are almost indispensable lists of printed census reports in M. Drake, 'The census, 1801–1901', in Wrigley (ed.), *Nineteenth-century society*, pp. 31–46; and in Lawton (ed.), *The Census and social structure* (1978), pp. 296–301. Mills and Schürer (eds), *Local communities*, pp. 80–5 have also followed this practice.

[2] Higgs, 'Agricultural workforce', p. 709. Table 1 of Higgs' paper contains both Charles Booth's 'orthodox' figures for the numbers of people engaged in agriculture in 1851, 1861 and 1871, and Higgs' secondary reworking of them.

APPENDIX, TABLE A. Summary of relevant tables in BPP, 1852-53, LXXXVIII, part 1

Table	Title	Description of contents
Report:		
Table 32, p. lxxix	Farmers employing in- and out-door labourers in England and Wales	The data are set out on a scale graduated in steps of single labourers from nil to 10 labourers, steps of five labourers from 10 to 60 labourers, then one group for 60 labourers and above (21 categories).
Table 33, p. lxxx	Number and proportion of farm holdings of different sizes in Gt Britain (England and Wales shown separately)	Eight size categories: under 100 acres, 100–600 acs in 100ac steps, 600–999, 1,000acs and above.
Table 34, p. lxxx	Acres of land returned as occupied in GB (England and Wales shown separately)	Total number of farms, total acreage of farmland, total acreage of uncultivated land, total acreage of territory.
Table 35, p. lxxx	Number of acres returned by farmers in England and Wales, and the number of farms of various sizes	Twenty-four size categories, plus a category where the farmer had not stated an acreage.
Appendix I:		
Table 19, p. clxxiv	Number and size of farm holdings in GB (England and Wales shown separately)	Eight size categories, as in Table 33.
Table 20, p. clxxiv	Number and size of farm holdings, 11 divisions of England and Wales	Fourteen size categories, under 100, steps of 100 to 1000, then 1,000–1,199, 1,200–1,499, 1,500–1,999, and 2,000 acres and over.
Table 21, p. clxxv	Proportional number of farm holdings of various sizes in GB (Eng. and Wales shown separately) 11 divisions of England and Wales	This table turns the raw data of Table 19 into proportions expressed as *xxx* per 1000.
Table 22, p. clxxv	Proportional number of farm holdings of various sizes, 11 divisions of England & Wales	This table turns the raw data of Table 20 into proportions expressed as *xxx* per 1000.
Appendix II; Summary Tables:		
Table XXV, pp. ccxxii to xxvi	Occupations in England and Wales, by sex and age	Class IX, the agricultural class can be found among all the other occupational classes, viz., farmers, graziers, relatives of both, bailiffs, ag labs (outdoor), shepherds, farm servants (indoor), others connected with agriculture.
Table XXXIII, p. cclxxxiii	Farmers with nos. of labourers employed and acres occupied in GB	Fourteen size categories (plus no acreage category) shown against 16 employment categories.
Table XXXIV, p. cclxxxiii	As for Table XXXIII, but England and Wales only	Twenty-four size categories, plus a category where the farmer had not stated an acreage, shown against nos. of labourers employed in 20 categories (nos. of labourers as for Table 32, less the farmers who gave no return of labourers employed).
Table XXXVII, p. cclxxxv	Occupiers of land engaged in other pursuits beside farming	A table of dual occupationists, one occupation being farming. Table excludes all those who stated acreages and nos of labourers, as they appear in tables above.

farms within various acreage categories. Thus, for instance, out of every 1000 holdings in England and Wales 637.60 holdings on average were under 100 acres in size and 3.45 holdings were 1000 acres and above (table 21).

As to *farmers*, the most detailed national tables are the summary tables in the second appendix, beginning for the present purpose with table XXV, which gives all occupations in England and Wales by age groups and gender. From these it can be seen that *249,431* persons, male and female, were recorded as farmers or graziers, a figure some *24,113* greater than the total of table 32 of the main report. Presumably because they were retired or out of place, these 24,113 farmers did not report acreages and are in addition to the 2047 stated in table 35 not to have done so. There is, thus, a major discrepancy between table XXV and the earlier tables in this regard. There may be a further discrepancy in that not one female grazier is reported in table XXV. Was this category included in the 22,916 female farmers or did it get 'lost'?

Tables XXXIII–IV are similar to tables 32–33, but, despite giving more detail, are no more enlightening on the question of farmers not reporting acreages. However, a note to Table XXXIII shows that the Census Office realised it was impossible to get the same total of labourers from using its farm employment figures (table 32) as from counting individual entries (in the Occupation Table – table XXV). The discrepancy was put down to three factors (a) an unspecified number of farmers not returning the numbers of labourers they employed; (b) the inclusion of retired farmers in table XXV; and (c) different ways of dealing with dual occupationists as between table XXV and table XXXIII.

Into this febrile situation table XXXVII throws up a further *22,982* occupiers of land, who, as well as farming, were engaged in other pursuits. However, it does not include all dual occupationists combining farming with another occupation. Thus the rubric states that men recording themselves in the format 'miller and farmer' (or 'farmer and miller') 'employing x labourers and occupying y acres' had been transferred to tables XXXIII–IV. This transfer *excluded* all those failing to report both employees and acreages. Moreover, these latter dual occupationists were not transferred to the farming section of table XXV, being included instead in sections relating to their 'other' occupations. Thus, there is some blurring at the edges of the Census Office's implicit definition of a farm, because the clerks had to exercise some judgement on which dual occupationists were to be classified as farmers. As the householders had been requested to put the more important occupation first, this was generally taken in for use in the classification,[3] but an 'occupation' of high social standing like landed proprietor would tend to be regarded as more important, regardless of position. The rubric also acknowledges that some inflation in the numbers of farm employees occurred where it was impossible to separate farm employees from employees in the second occupation.

The divisional and county tables for 1851 offer no help in answering the questions raised in this article. Moreover, although the numbers of farmers not reporting labourers is identified – for instance, 5095 out of the 11,017 farmers in the Lincolnshire table, – those not reporting their acreages are forgotten, making it impossible to analyse this problem at the divisional or county level. In addition, these tables also demonstrate the ambiguities surrounding employees. It might be expected that such figures would relate to acreages, especially in a county with few extreme

[3] BPP, 1852–53, LXXXVIII, part II, vol. I, p. lxxxii.

APPENDIX, TABLE B. Summary of relevant tables in BPP, 1863, LIII, Part I

Table	Title	Description of Contents
Report:		
Table VII, p. 35	Number of persons engaged in agriculture in England and Wales, enumerated at each of the censuses 1851 and 1861	Gives numbers for each of 25 agricultural occupations, including land proprietors, by gender.
Table VIII, p. 35	Number of farmers and graziers, farm bailiffs, farm servants (in-door), agricultural labourers, and shepherds (out-door) enumerated at the censuses of of 1851 and 1861 in England and Wales	Gives totals only (nb, Tables VII and VIII are extracts from an Occupation Table similar to Table XXV of the 1851 Report (see Table A above).
Appendix to report:		
Table 87, p. 139	Farmers with the number of labourers, and of acres occupied in the following registration counties: Bucks, Cambs, Ches, Cumb, Lincs, Norfolk, Shrops, Sussex, Wilts, Yorks NR	Twenty-four sizes of farm from under five acres to over 2,000, plus category 'acreage not stated'; 20 categories of farmers by number of labourers, from one man to 60 and over, plus category 'no men employed or number not stated'.
Table 88, p. 139	As 87, but for 1851	As 87.
Tables 89-98, pp. 140-43	As 87, but for the 10 counties separately	As 87.
Table 99, p. 143	Occupiers of land engaged in other pursuits besides farming	For the same counties as in Table 87.
Table 100, p. 144	Number of farm holdings by size, 1851 and 1861, for same counties.	In eight sizes from under 100 acs to 1,000 acs and over, raw data and proportions expressed as *xxx* per 1,000.
Table 101, p. 144	Number of farm holdings 1851 and 1861, under 100 acres, same counties.	Six sizes: under 10, 10-20, 20-30, 30-40, 40-50, total under 50, 50-100 and total under 100 acres.

variations in farming practice such as Lincolnshire. Nevertheless, for example, of the 654 farmers in the Lincolnshire table reporting acreages of 75–99 acres, 157 had no employees or did not state their number, 211 reported one man, 178 reported two, 78 reported three, 22 reported four, and the remaining eight reported between five and 10 employees. Similarly, the 293 farmers occupying 400–499 acres are spread out across the table in the 14 columns representing the employment of one man up to more than 30 men, with a further three farmers reporting no employees. Finally, as before, this table is confined to men, the women, boys and girls having been discarded by the Census Office.[4]

The tables published after the 1861 and 1871 censuses are described in tables B and C of this appendix, which show a striking fall-off compared with 1851. In particular, the divisional tables disappeared entirely, whilst the number of county tables was reduced in 1861 to only ten, rising again to seventeen 'representative counties' in 1871 (all English). Only Cumberland, Lincolnshire and Sussex appear in both lists and no argument was put forward for the selections made. A table showing dual occupationists in the ten selected counties appears in the 1861 report, but

[4] BPP, 1852–53, LXXXVIII, part II, vol. II, p. 597.

APPENDIX, TABLE C. Summary of relevant tables in BPP, 1873, LXXI, Part II

Table	Title	Description of Contents
Report:		
Unnumbered table, pp. xliv-xlv	Farmers and their holdings in 17 representative counties of England (counties as for Table 109, below)	The table is in two sections, one with 24 sizes of farm (as Table 109), the other with 14 sizes from under 100 to 2,000 acres and over. Numbers of each size and the total acreage in farms of each size are given for both 1871 and 1851.
Unnumbered table, p. xlv	Number of men returned as agricultural labourers, labourers (unspecified), shepherd (outdoor) and farm-servant (indoor)	Figures given for 1851, 1861, 1871, the two labourer categories sub-totalled, and the shepherds and farm-servants sub-totalled.
Unnumbered table, pp. xlvi-vii	Farmers employing In and Out door Labourers in 17 representative counties of England (counties as for Table 109, below)	The table is in two sections, one with 20 categories of farmers by number of labourers, from one man to 60 and over, plus category 'no return', the other with 13 categories, from under 5 to 60 and over. Numbers of farmers in each category and the total number of labourers employed by each category are given for both 1871 and 1851.
Appendix A to report:		
Table 109, p. 123	Farmers with the number of labourers, and of acres occupied in the following registration counties: Surrey and Kent (ex-Metropolitan), Sussex, Hants, Berks, Essex, Suffolk, Norfolk, Leics, Rutland, Lincs, Notts, Derbys, Durham, Northld, Cumbld, and Westld	Twenty-four sizes of farm from under five acres to 2,000 and over, plus category 'acreage not stated'; 20 categories of farmers by number of labourers, from one man to 60 and over, plus category 'no men employed or number not stated', for 1871.
Table 110, p. 123	As 109, but for 1851	As 109, but for 1851.
Tables 111-127, pp. 124-29	As 109, but for the 17 counties separately for 1871	As 109, for 1871.

not that for 1871. Perhaps the most unfortunate change is that farm acreages and employment figures appear, not for England and Wales as a whole, but in totals only for the ten and seventeen representative counties in 1861 and 1871 respectively. To compensate for this saving of labour, the Census Office gave comparisons for the representative counties between 1851 and 1861 and between 1851 and 1871, which are of some value to historians wishing to establish trends across the period of High Farming.[5]

[5] For 1861 the relevant report is BPP, 1863, LIII, Part I, *Census of England and Wales 1861, Vol. III, General Report with Appendix of Tables*, pp. 29, 35–6 and appendix, pp. 139–144. For 1871 the relevant report is BPP, 1873, LXXI, Part II, *Census of England and Wales 1871, Vol. IV, General Report*, pp. xliv–xlviii and appendix A, pp. 123–29.

Proletarian labourers? East Riding farm servants *c.* 1850–75*

Gary Moses

Abstract

In a recent 'polemic' examining the nature of the nineteenth century rural work-force, Alun Howkins emphasised the continued pervasiveness of peasant agriculture and farm service. This, he suggested, questions the legitimacy of rural historians' continued attachment to the notion of the agricultural proletarian as the main form of farm labour in nineteenth century Britain. In doing so Howkins placed all farm servants outside the category of the rural proletarian. This article considers the validity of this position and suggests that at least some nineteenth century farm servants should be regarded as proletarian labourers.

A debate has developed in recent years regarding the interpretation of the social structure and social relations of rural society in the nineteenth century. Within the dominant paradigm, enclosure, technological change and the transition to large scale capitalist agriculture from the mid-eighteenth century have been taken as the normal pattern of economic development. This agricultural modernization is in turn regarded as promoting a process of social modernization which resulted in a tripartite social structure of landlords, tenant farmers, and labourers. In general it has been accepted that this process of capitalist modernization involved the formal proletarianization of the labouring population in the sense that they came to lack ownership and control over the means of production. The main point of disagreement has centred upon whether this formal level of class formation was then translated into class-orientated socio-political consciousness. For some, the absence of a sustained and formally organized labour movement is interpreted as evidence that formal proletarianization failed to generate a class-orientated socio-political consciousness until at least the rural trade unionism of the 1870s.[1] In contrast, a revisionist interpretation of nineteenth-century rural society has sought to emphasise that the formal proletarianization of the rural labourer did result in class consciousness. Within this paradigm, the periodic riots, sporadic trade unionism, incendiarism and animal maiming that occurred in the decades after the Napoleonic wars are cited as evidence of an emerging

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[1] A. Armstrong, *Farm workers. A social and economic history* (1988) is generally regarded as a representative example of this position.

proletarian consciousness developing in opposition to that of the capitalist landlords and tenant farmers.[2]

More recently a third, 'post revisionist' interpretation has emerged which emphasises the geographical and theoretical limitations of the two existing paradigms. This view, which has been most clearly outlined by Alun Howkins, focuses upon the regional imbalance of most agricultural and rural history. Howkins suggests that an over concentration upon the large arable farms of southern and eastern England has resulted in a distorted 'tripartite' model of the rural social structure which exaggerates the importance of large-scale capitalist agriculture and proletarianization in shaping social relations precisely because it excludes those parts of nineteenth-century Britain in which neither predominated. In these excluded areas, it is suggested, a far more complex pattern of social relations existed which involved social groups such as peasants and farm servants, whose consciousness cannot be explained by reference to the orthodox model which assumes that the landless proletarian is the norm.[3]

Howkins' attempt 'to provoke thought and argument' offers a rural perspective on the more general re-interpretation of British social history of recent years. This has critically re-evaluated the orthodox linear interpretation of industrial development which still forms the material context for much rural social history: an interpretation which assumes that modern large scale production inevitably superseded older forms. The utility of concepts such as proletarianization and class formation as the 'master tools' of social history has also been questioned.[4] Howkins' exploratory re-interpretation of the nineteenth-century social structure continues this recent reappraisal as he not only emphasises the survival of forms of production involving peasants and farm servants, but also the possibility that these were integral to a more diverse and overlapping mix of social relations than is allowed for by class orientated paradigms. The remainder of this article seeks to respond in a positive but critical fashion to some of the provocations offered by Howkins and focuses on a particular aspect of the debate he has attempted to stimulate: the implications of his ideas for the analysis and interpretation of nineteenth-century farm service.

Most historians have regarded farm servants as extraneous to the rural proletariat even when they depended upon wage labour for their existence. Ann Kussmaul, for example, has suggested that although farm servants were hired wage labourers engaged on annual contracts, their transitional status, their location within a familial regime, and the legal and customary expectations of the master-servant relationship set them apart from other wage labourers.[5] This binary opposition between farm servants and proletarian labourers is also apparent in most interpretations of the process of proletarianization and class formation in southern England from the late eighteenth century. In general, these studies associate the emergence of a proletariat with

[2] See for example, R. Wells, 'The development of the English rural proletariat and social protest, 1700–1850', *J. Peasant Studies*, 6 (1979) and the same author's 'Tolpuddle in the context of English agrarian labour history, 1780–1850', in J. Rule (ed.), *British Trade Unionism 1750–1850: the formative years* (1988).

[3] A. Howkins, 'Peasants, Servants and Labourers: the marginal workforce in British agriculture, *c.* 1870–1914', *AgHR*, 42 (1994). See also A. Howkins, 'Labour history and the rural poor, 1850–1980', *Rural History*, 1 (1990).

[4] P. Joyce, 'Work', in F. M. L. Thompson (ed.), *The Cambridge social history of Britain, 1750–1950* (3 vols, 1990), II, pp. 151–2.

[5] A. Kussmaul, *Servants in husbandry in early modern England* (1981), pp. 8–9.

a corresponding decline of farm service. The classic example is Hobsbawm and Rudé's influential study, *Captain Swing*. This locates rural protest within the context of economic and social changes which included the transition to large-scale capitalist agriculture and a corresponding decline of farm service. Hobsbawn and Rudé regarded both as precipitating a deterioration in social relations which was integral to the 'relentless proletarianization of the farm labourer' and which, in turn, provided the stimulus for rural protest movements.[6] A similar approach is apparent in the work of other historians who have also connected the emergence of agrarian capitalism and the decline of farm service with the formation of a rural proletariat.[7] In general, two central themes inform these studies. Firstly, that farm service was a traditional, pre-modern labour system which declined with the emergence of modern capitalist agriculture; in Kussmaul's words it was 'one the large reptiles of economic history, extraordinarily successful in its time, and driven rapidly to extinction when times changed'.[8] Secondly, that the decline of farm service was an integral aspect of the destruction of the customary social relationships that had previously fettered class formation in rural society. Taken together, these themes suggest that farm service is incompatible both with the forces and relations of production regarded as typical of modern agrarian capitalism, and that proletarianization and class formation can only occur outside of farm service. This further implies that any remaining farm servants that continued to survive into the nineteenth century should be regarded as being located within a network of pre-capitalist forces and relations of production.[9]

However, there have been a few dissident voices who have offered alternative interpretations of farm service. For example, there has been increased questioning of the idea that there is an essential incompatibility between farm service and modern forms of capitalist agriculture. This alternative view was pioneered by Brian Short who argued, contrary to Hobsbawm and Rudé, that farm service remained important in some areas of Sussex into the second half of the nineteenth century. He noted that this survival co-existed with large scale capitalist farming:

> ... even on the most highly-developed and intensely-capitalized farms of the South Downs producing large amounts of cereals and geared to a national or even international market by the mid-nineteenth century, there was living-in farm servants. Capitalist farming does not preclude the living-in farm servant.[10]

The experience of the East Riding of Yorkshire also demonstrates how capitalist farming and

6 E. J. Hobsbawm and G. Rudé, *Captain Swing* (1973 edn), p. 24.

7 B. Reay, 'The last rising of the agricultural labourers. The battle of Bossenden Wood, 1838', *History Workshop J.*, 26 (1988); Wells, 'Tolpuddle' and K. D. M. Snell, *Annals of the Labouring Poor. Social change and agrarian England, 1660–1900* (1987) all associate the emergence of large scale cereal farming with a decline of living-in farm service, which, alongside other factors, promotes proletarianization, protest, and class consciousness amongst the rural poor.

8 Kussmaul, *Servants in husbandry*, p. 134.

9 Joyce, 'Work', p. 152, suggests that southern and eastern agriculture had established capitalist relations of production by the early nineteenth century because it had abandoned living-in farm service. This, he suggests, had the effect of promoting a separate and differentiated lifestyle on the part of farmers and labourers, a situation which is contrasted with that pertaining in the north and west which retained living-in arrangements. Here, capitalist-proletarian relations had not developed and the farmhouse remained the focus of a shared culture for capital and labour.

10 B. Short, 'The decline of living in servants and the transition to capitalist farming', *Sussex Arch. Collections*, 122 (1984), p. 162.

living-in farm service can co-exist. The East Riding experienced considerable agricultural modernization from the late-eighteenth century. The changes were similar to those in the south and east of England: enclosure, increased farm size, new methods of cultivation and advances in mechanization. Yet, as the detailed study of East Riding farm servants by Stephen Caunce demonstrates, the transition to large-scale capitalist agriculture in the East Riding did not involve the abandonment of farm service. In fact those tenant farmers who presided over the development of the most advanced forces of production in the county remained most committed to the retention of living-in farm service and even increased their reliance upon it throughout the nineteenth century.[11] The fact that farm service continued to survive in areas of large-scale capitalist agriculture suggests that there is no automatic correlation between the development of modern forces of production and the decline of farm service.

The notion that farm servants should be regarded as non-proletarians has also been challenged. In a response to Short's article, Mick Reed has suggested that 'hired workers whether or not they lived in the farmhouse were proletarian; ... It is their divorce from the land or other means of production that that makes them proletarians not their removal from the farmhouse'.[12] Two recent contributions to this *Review* by Richard Anthony and Stephen Caunce also appear to follow this formal definition of farm servants as proletarians.[13]

These questions of the nineteenth-century farm servant's pervasiveness and social position are central to Alun Howkins' post-revisionist position. He emphasises the continued vitality of farm service and urges a revision of the view 'argued by Ann Kussmaul and others that farm service was in decline in England from the 1830s and had become insignificant by the 1870s ...'.[14] Whilst accepting 'Kussmaul's dichotomy between service and day labour', Howkins adopts a broader definition of farm service based on hiring by the year or half-year which encompasses many varieties. Helpfully, he offers a model that identifies three kinds of farm service in nineteenth-century England. He begins with '"classic" farm service in which one or two sons or daughters of social equals lived with a different family and "learnt a trade", hoping themselves eventually to take a farm'. This, he suggests is 'the form that most concerns Kussmaul and is certainly in decline throughout the nineteenth century'. More significant in the nineteenth century was 'the practice of hiring young men and, to a lesser extent, women into the farmhouse or another house or bothy on the farm but whose status was that of hired labour with little or no hope of ever becoming farmers themselves': the East Riding of Yorkshire is cited as the prime example of this mode of farm service in England, followed by Lincolnshire and parts of Nottinghamshire. In some areas of Scotland and England this departure from the classic form of farm service co-existed with Howkins' third variety of service – family hiring – which involved 'the head of the household ... being hired for a year with his or her family to live and work on a particular farm'. Under this revised model Howkins suggests that farm service is far more common in the nineteenth century than has been thought. 'In

[11] S. Caunce, *Amongst farm horses. The horselads of East Yorkshire* (1991).

[12] M. Reed, 'Indoor farm service in nineteenth century Sussex: some criticisms of a critique', *Sussex Arch. Collections*, 123 (1985), p. 226.

[13] R. Anthony, 'Farm servant vs agricultural labourer, 1870–1914: a commentary on Howkins', *AgHR* 43 (1995); S. Caunce, 'Farm servants and the development of capitalism in English agriculture', *AgHR* 45 (1997).

[14] For what follows, Howkins, 'Peasants, Servants and Labourers', pp. 57–61.

England, the counties of Cumberland, Westmorland, north Lancashire, Northumberland, Durham, and Yorkshire were dominated by farm service even in 1905. It was also present in some form in all but thirteen English counties'.[15]

This attempt to revise the orthodox model of the nineteenth century labour force is not merely an exercise in quantification. Howkins' discussion of the survival of farm service is but one element in his wider project of offering a new interpretation of nineteenth-century rural Britain. Basically, the pervasiveness of nineteenth-century farm service is used as a stick with which to beat the standard model of proletarianization and class formation which still informs much rural history. For example, the continued existence of the three varieties of farm servant are used 'to question the notion that the main form of farm labour in nineteenth-century Britain was "agricultural proletarian"'.[16] Taking farm servants, peasants and other 'marginal' workers, whose wage relationship fell short of the 'pure cash nexus' into account, Howkins goes on to suggest that:

> ... the 'classic proletarian' farm labourer is probably in a minority, albeit a slight one, of all those who worked the land of Britain in the nineteenth-century. Moreover he is probably regionally restricted to the eastern, and some southern counties and some midland counties. It is here that 'proletarian' social relationships might be expected to develop in the form of trade unions and political organizations and of course, they do, although still only among part of the labour force ... In contrast, a substantial area of England and especially Scotland, Wales and Ireland was worked by farm servants. Most contemporaries and many more recent writers noted that hiring by the year frequently led to close and apparently harmonious relationships between employer and employed.[17]

The fact that Howkins continues to regard the transition to capitalist agriculture as significant in generating proletarian social relationships in the south and east of England whilst excluding even those farm servants employed as waged labourers on large capitalist farms in the north is important. It suggests that he regards all forms of farm service, even those variants that co-existed with capitalist forces of production, as fundamentally unproletarian.[18] This appears to mark a break with at least some of his earlier writing on this subject in which he suggested that some farm servants might be regarded as proletarians.[19] The source of this departure may be statistical in the sense that this most recent revisionism is burdened with the task of broadening the

15 This is perhaps not incompatible with Kussmaul's general conclusion that farm service declined as a national institution as England became divided between a low service agricultural south and a high service industrial north and west. See Kussmaul, *Servants in husbandry*, p. 130 and ch. 7. It is perhaps unfortunate that this chapter, which concedes the persistence of farm service in the north of England, is entitled 'Extinction'.

16 Howkins suggests that hiring was the main difference, but other factors, such as payment in kind (including board and lodging) also modified the position of farm servants and blunted the pure cash nexus of the wage relationship.

17 'Peasants, Servants and Labourers', p. 61.

18 Howkins readily acknowledges that farm service as a labour system is capable of generating antagonistic social relations, but his analysis suggests that such conflicts should be regarded as taking non-proletarian forms.

19 A. Howkins and L. Merricks, 'The Ploughboy and the Plough Play', *Folk Music J.*, 6 (1991); A. Howkins, *Reshaping Rural England: A Social History 1850–1925* (1991); and Howkins, 'Labour History', have encouraged this author's view that farm servants engaged on large capitalist farms may be regarded as proletarian labourers.

definition of the farm servant in a manner that facilitates claiming the highest possible membership for the non-proletarian group. This enables him to deploy *all* farm servants alongside the re-discovered peasantry in support of a thesis that claims that 'By a narrow majority, those who worked the land of Britain, the object of our search, were not proletarianized and landless day labourers but peasants or servants'.[20] However, his inclusion of all farm servants in the non-proletarian group also suggests that he regards their social situation and consciousness as qualitatively different from other wage labourers. It is the contention of this article that this importation of all farm servants into the world of the non-proletarian may be taking revisionism too far. One area in which this reasoning (which places all farm servants outside of the rural proletariat) might be challenged is in those situations where agricultural modernization promoted the emergence of a type of farm service which marked a significant departure from the 'classic' form of farm service studied by Kussmaul: i.e. the practice of hiring labourers who had little expectation of anything other than paid wage labour. The East Riding of Yorkshire is the prime example of this variant of nineteenth-century farm service. Should the East Riding farm servants of the mid-nineteenth century be regarded as non-proletarians?

Initially I wish to focus on proletarianization as a process which involves the expropriation of labour as a commodity. In this respect, following Marx, the East Riding farm servants are required to meet a number of conditions. That, as the sellers of labour power, they are free to dispose of this labour power as their own commodity. That they have no other commodity other than their labour to sell. That they meet the owner of capital in the market on the basis of equality before the law, and that they sell their labour power only for a definite period.[21] The structure of agriculture and the nature of farm service in the East Riding appear to satisfy this formal level of class formation. By the mid-nineteenth century agriculture here was a predominantly capitalist industry in which tenant farmers employed waged labour and sold what they produced on the market. In some parts of the East Riding, the greater proportion of this labour took the form of living-in farm servants engaged on annual contracts created through a process of verbal bargaining at an annual round of hiring fairs.[22] These hirings had once been part of a system of statutory wage regulation; however, the statutes were repealed in 1813 and their enforcement had, in any case, declined from the mid-eighteenth century. From that time onwards, there was (in Kussmaul's words), 'a flowering of free and open markets in agricultural labour, centred around the hiring fair'.[23] Thus, whilst Howkins emphasises the significance of farm service in modifying the wage relationship in the sense of blunting the dependence of the worker

[20] Howkins, 'Peasants, Servants and Labourers', p. 60.

[21] K. Marx (ed. F. Engels), *Capital: A Critical Analysis of Capitalist Production* (4 vols, 1974 edn), I, pp. 164–5.

[22] J. Sheppard, 'The East Yorkshire agricultural labour force in the mid-nineteenth century', *AgHR*, 9 (1961). By the mid-nineteenth century there were 25 substantial hirings in the East Riding lasting from early November to early December. Custom determined that servants were free to attend several hirings. For details of East Riding hiring fairs see S. Caunce 'East Riding hiring fairs', *Oral History*, 3 (1975); *Amongst farm horses*, chs 5 and 6; G. Moses, 'Rustic and rude: hiring fairs and their critics in East Yorkshire *c.* 1850–75', *Rural History*, 7 (1996); S. Parrott, 'The decline of hiring fairs in the East Riding of Yorkshire: Driffield, *c.* 1874–1939', *J. Regional and Local Studies*, 16 (1996).

[23] Kussmaul, *Servants in husbandry*, p. 63, notes that farm servants regarded board and lodging as an integral part of their wages to be negotiated in the market place.

on the market, the evolution of the hiring fair in the East Riding limited this considerably. The transformation of the hiring fair into a labour mart within which farm servants sold their labour as a commodity meant that farm servants shared a common dependence upon waged labour. In this formal sense the East Riding farm servants conform to Charles Tilly's definition of proletarians as 'people who work for wages, using means of production over whose disposition they have little or no control'.[24] In their recent contributions to the *Review*, both Anthony and Caunce appear to accept this formal categorisation in their own questioning of Howkins' attempts to exclude all farm servants from the category of the rural proletariat.[25]

Howkins' decision to exclude the East Riding farm servant from the ranks of the rural proletariat would seem to suggest that he regards a formal definition of proletarianization based upon non-ownership of the means of production as too shallow, and that he regards the everyday experience of farm service as transcending this formal dependence upon market relations and encouraging a level of consciousness and action which is non-proletarian. It is worth examining, therefore, farmer and farm servant relations on the farm away from the hiring fair. It is here that Howkins' view that farm service constituted a non-proletarian experience is perhaps most apposite. For example, although farm servants created their contracts in a free and unfettered fashion, and increasingly regarded them in cash terms, perhaps the nature of the master-servant relationship thereafter distinguished the farm servant's experience from that of the classic proletarian. Howkins cites contemporary testimony of the 'clannish' feelings between employer and employed on northern farms employing farm servants as evidence of the fact that living-in on the farm could limit the emergence of a proletarian conciousness in the form of, for example, trade unions.[26] Support for such an interpretation may be derived from Dunbabin's work on agricultural trade unionism in the 1870s in which he noticed the relative failure of organized agricultural trade unionism in the north of England. He related this to the continued pervasiveness of farm service there:

> a high proportion of the farm workers were unmarried, and boarded in the farmhouses. And this certainly militated against the development of formal trades unions. For a strike must have been difficult to organise when one was actually living in a farmer's house; and close social relationships were universally believed to make for an identification of the farmer's and labourers' interests.[27]

The case of the East Riding of Yorkshire, an area in which the ratio of indoor to outdoor servants was 1:1.4, apparently endorses this analysis. Three other factors which Dunbabin suggests correlate with trade union activity elsewhere – arable farming, large farms and Primitive Methodism – were also present. Yet he describes trade unionism as 'very weak' in the East Riding.[28] As trade

[24] C. Tilly, 'Demographic origins of the European proletariat', in D. Levine (ed.), *Proletarianization and Family Life* (New York, 1984), p. 1.

[25] Anthony, 'Commentary', p. 63; Caunce, 'Farm servants and capitalism', p. 59.

[26] Howkins, 'Peasants, Servants and Labourers', p. 61.

[27] J. P. D. Dunbabin, 'The incidence and organization of agricultural trades unionism in the 1870s', *AgHR*, 16 (1968), p. 122.

[28] *Ibid.*, p. 124. This may be something of an exaggeration as there is evidence of considerable trade union activity in the East Riding during the early 1870s. However, this seems to have generally excluded farm servants. For details see M. G. Adams, 'Agricultural Change in the East Riding of Yorkshire 1850–1880' (unpublished Ph.D. thesis, University of Hull, 1977), pp. 350–1; and *Hull and Eastern Counties Herald*, 25 Jan. 1872;

unionism is emphasized by Howkins as an indication of the level of socio-political consciousness amongst rural labourers, it is tempting to regard the farm servants' absence from the East Riding trade unionism of the 1870s as confirmation of the proposition that farm service inhibits the development of a proletarian consciousness.

However, the manner in which the farm service system had evolved in the East Riding during the nineteenth century minimized the extent to which payment in kind in the form of living-in could modify the relationship of master and servant as implied by Howkins' and Dunbabin's analysis. Contemporary comment on the increased wealth and social pretensions of East Riding tenant farmers suggests that the social and cultural forces that encouraged the decline of service in the south and east – a desire for privacy, and a growing distaste for the idea of accommodating servants in one's home – existed here, and these alone would have promoted the decline of farm service if other constraints had not dictated otherwise.[29] However, the combination of economic and demographic factors that permitted the abandonment of service in the south of England after the Napoleonic wars did not prevail in the East Riding. Here, the resurgence of capitalist arable agriculture occurred within the context of a dispersed settlement pattern and the proximity of alternative industrial employment. This ensured that living-in and annual contracts remained the most effective means for farmers to satisfy a large proportion of their labour requirements.[30] The salience of economic criteria in this decision to retain rather than abandon farm service ensured that the East Riding system was subject to a number of innovations that facilitated the development of capitalist social relations *within* farm service. For example, although the East Riding developed a relatively unusual symbiosis between farm service and arable agriculture, it otherwise conformed to a pattern of agricultural development that E. L. Jones identified as emerging elsewhere in England from 1850.[31] Jones suggested that from this time the agricultural labour market began to tighten, particularly in areas of arable high-farming systems on recently reclaimed land away from established settlement patterns and in close proximity to alternative industrial employment. He argued that farmers responded to this tightening labour market through a combination of mechanization and workforce reorganization that enabled a regular core of farm staff to handle a large

22 and 29 Feb. 1872; 7, 14 and 21 Mar. 1872; 4, 11, 18, Apr. 1872.

[29] There is evidence that in the years following the Napoleonic wars, a situation of labour surplus induced some East Riding farmers to abandon the farm servant system. BPP, 1836, *Second Report from the Select Committee appointed to enquire into the State of Agriculture*, evidence of Mr C. Howard, Q. 5434. By the mid-nineteenth century the wealth and increasingly gentrified lifestyle of the larger East Riding tenant farmer was a common theme in the local press, see, for example, 'The Yorkshire Wolds', by 'the roving commissioner of the Newcastle Daily Chronicle', *York Herald*, 8 Oct. 1864, who described them as living 'in the style of country squires rather than tenant farmers'; see also the *Hull Advertiser*, 12 Apr. 1850, and J. Caird, *English agriculture in 1850–51* (1852), pp. 310–1. Caird regarded Wolds tenant farmers as probably the wealthiest in the country.

[30] O. Wilkinson, 'The agricultural revolution in the East Riding of Yorkshire', *East Yorkshire Local History Ser.*, 5 (1956); J. Sheppard, 'Labour force'; A. Harris, *The rural landscape of the East Riding of Yorkshire, 1700–1850* (1961); M. B. Gleave, 'Dispersed and nucleated Settlement on the Yorkshire Wolds, 1770–1850', *Trans. Institute of British Geographers*, 30 (1962); Adams, 'Agricultural change'; Caunce, *Amongst farm horses*, introduction and ch. 16, and the same author's 'Twentieth-Century farm servants. The horselads of the East Riding of Yorkshire', *AgHR* 39 (1992).

[31] E. L. Jones, 'The agricultural labour market in England', *EcHR* 17 (1964).

proportion of the all-year-round work. Much of the East Riding, particularly the Wolds and Holderness, conformed to this model. There was, for example, a correlation between high acreage, new cropping techniques, increased mechanization and the expansion of resident farm servant labour in the region. There is also evidence of a tightening labour market from the early 1850s.[32] Consequently, although preserving a degree of continuity with the past, both the employment relationship and the labour process became less intimate during the mid-Victorian period. Employers retained control over hiring and the general organization of production but, increasingly, had little direct contact with the greater proportion of their workers. Large arable farms developed a labour regime in which the care, feeding and working of the horses was organized around a mass horseman system which utilised the divided labour of young proletarians disciplined and supervised by the more experienced foreman (or hind) and wagoner.[33]

The transition to large-scale capitalist agriculture in the East Riding also encouraged a reshaping of female farm service. As the nineteenth century progressed, the sexual division of labour within farm service became more clearly delineated as male and female servants came to occupy separate but overlapping domestic and non-domestic spheres in terms of hiring arrangements and work. Some women became the more specifically domestic servants demanded by the gentile privacy now characteristic of larger farmhouses whilst others were employed to service the extensive board and lodging requirements of the male farm servants, combining domestic and farmyard duties with cooking and cleaning. Many undertook a mixture of all these, coupled with periodic bouts of field labouring and threshing. These trends also involved the development of more formal and impersonal relationships between employers and their female servants.[34] The pivotal relationship between farm service and the development of high-farming in the East Riding ensured, therefore, that the working relationship between master and servant lost most, if not all, of its 'clannish' familial associations.

The intensification of capitalist agriculture in the East Riding not only increased the size of farms and the average number of farm servants employed but also encouraged changes in their accommodation. Many new farm houses were built whilst others were modified and enlarged. The prevailing trend in both new and enlarged farms was for the farm servant accommodation to be located in a separate and distinct part of the farmhouse away from that occupied by farmers and their families. This often involved almost total segregation, with all farm servants housed in separate dormitories located in adjoining outbuildings, with only limited and discrete access to the main body of the farmhouse. In some cases both innovations were combined, with the female servants occupying a wing of the farmhouse with its own access to the washhouse and kitchen, whilst the men occupied a separate dormitory outbuilding or 'mens end' attached to the farmhouse but with its own external doorway and yard.

A further significant change was the development of the 'hind house' system. Here the role and functions of a single foreman who lived with and oversaw the younger servants were transferred to a hind: a married man who, with his wife, female servants or daughters housed and fed the servants in a separate 'hind house' away from the main farmhouse. Each of these

[32] Caunce, *Amongst farm horses*, especially the introduction and ch. 16. Adams, 'Agricultural Change', pp. 346–7 for the tightening labour market.

[33] Caunce, *Amongst farm horses*, chs 4, 7 and 8.

[34] I. Pinchbeck, *Women Workers in the Industrial Revolution* (1969 edn), chs 2 and 4.

changes had precedents prior to the mid-Victorian period, but where they had once been exceptional, by the 1880s they were combined to form a near-universal pattern of social segregation between capital and labour on the larger tenant farms of the East Riding.[35] Thus the continued reliance on farm service demanded by the economic needs of high farming in East Yorkshire did not necessarily ensure the continuation of pre-capitalist social relations; rather, farm service was adapted in ways which suggest that the relationship between servant and master lost its close paternal intimacy and became, in the words of the leading historian of East Riding farm service, 'almost entirely economic'.[36] This interpretation is given further endorsement by contemporary Anglican opinion which was increasingly critical of East Riding farmers for their abdication of responsibility for anything other than the working aspects of their farm servants' lives.[37]

Since the evidence considered so far suggests that yearly hiring and living did not necessarily create the ideal conditions for close and consensual social relations, it is worth considering whether any other aspect of the system is able to bear the burden of explaining the apparent absence of socio-political consciousness amongst the East Riding's farm servants. One aspect of the East Riding system worth further consideration is the manner in which its mode of labour organization delegated day-to-day management functions to supervisory workers who presided over an authoritarian but relatively autonomous labour hierarchy. Labour systems which allowed such autonomy may be interpreted as limiting the emergence of a proletarian socio-political consciousness because they fell short of establishing the real subordination of labour.[38] This, it could be suggested, created space for a compromise between labour and capital centred upon the work group's self-discipline and the workers' positive identification with the objects of their labour. The discipline of the East Riding farm servant system is almost legendary. Caunce has recently likened the system to a form of 'proto-Taylorism'. His study of twentieth-century farm servants also testifies to the degree of intrinsic job satisfaction afforded to farm servants who worked with horses.[39] As he demonstrates, the male farm servants employed within this system undoubtedly derived a sense of pride in their capacity for hard work, their skill at

[35] For contemporary details of farm servants' accommodation in the East Riding, see BPP, 1868, *First report from the commissioners on the employment of children, young persons and women in agriculture*; W. H. M. Jenkins, 'Show farm "Eastburn", Driffield', *J. Royal Agricultural Society*, 5, pt 5 (1869); BPP, 1896, *Reports of the royal commission on the depressed condition of the agricultural interests*, assistant commissioner Coleman's report on agriculture in Yorkshire; M. C. F. Morris, *Yorkshire Folk Talk* (1911), described the hind system as largely prevailing in the East Riding by the late-Victorian period, especially on the Wolds. For a recent analysis of these changes which emphasises the social distancing between farmers and servants during the nineteenth century, see C. Hayfield, 'Farm servants' accommodation on the Yorkshire Wolds', *Folk Life*, 33 (1994).

[36] Caunce, *Amongst farm horses*, p. 86.

[37] Examples include R. I. Wilberforce (Archdeacon of the East Riding), *A letter to the gentry, yeomen, and farmers of the archdeaconry of the East Riding* (Bridlington, 1842); Rev. J. Eddowes, *The agricultural labourer as he really is: or, village morals in 1854* (Driffield, 1854); M. E. Simpson (ed. Rev. F. Digby Legard), *Ploughing and sowing: or, annals of an evening school in a Yorkshire village, and the work that grew out of it* (1861); Rev. F. Digby Legard, 'The education of farm servants', in Legard (ed.), *More about farm lads* (1865), pp. 2–3; W. Thomson (Archbishop of York), *Work and prospects – a charge* (York, 1865).

[38] G. S. Jones, 'Class struggle and the Industrial Revolution', *New Left Rev.*, 90 (1975), p. 49; Joyce, 'Work', p. 151: Howkins, 'Labour history', p. 118.

[39] Caunce, 'Farm servants and capitalism', p. 55; *Amongst farm horses*, ch. 10 and *passim*.

the plough and from the condition of the horses placed under their supervision. A graphic illustration of this latter aspect is also provided by Herbert L. Day who worked as a farm servant between 1916 and 1930. In his book *Horses on the Farm*, he refers to the 'imaginary ownership'of animals and tools that occurred amongst farm servants. 'Hired horsemen lived in a world of make-believe. They imagined that they owned the horses they drove, the tools they used and the plough or wagon they were allocated'.[40]

This positive identification forms part of the basis of Caunce's explanation of the absence of overt socio-political consciousness amongst East Riding farm servants. He suggests that the East Riding system constituted a form of 'social control' based around a combination of the authority of the supervisory workers and the servants' own desire to do their jobs well. When both functioned effectively, they fostered a sense of internal order and harmony within the labour hierarchy. He does not, however, suggest that this alone was a sufficient explanation for the consent and equilibrium that developed. Instead, he emphasises the importance of locating the workings of the labour system within the broader context of the mobility, internal promotion and material benefits afforded by the positive market situation of the East Riding farm servant as mediated through the annual contracts bargained at the hiring fairs.[41] Dunbabin suggested that hiring fairs nullified the need for formal trade unions because they fulfilled comparable functions but generated less conflict, and Caunce pursues a similar argument when he compares the hiring fair 'to an informal and temporary union' which involved 'genuine and sometimes fierce bargaining with the farmers' and 'helped reinforce the servants' sense of common experience and common identity as a group by requiring them to stand up to the farmers'.[42] He suggests, though, that the extent and depth of this conflict was contained by the ritualized nature of annual hirings and the equalized bargaining power that existed between farmers and servants.[43] Thus, although Caunce regards farm servants as formal proletarians with a potential conflict of interest with their employer, the workers' identification with their labour and the benefits they obtained through the system of contracts and bargaining at hiring fairs resulted in general worker satisfaction with farm service as an institution. It is not that farm servants were antipathetic to trade unions in principle (after all, many of those East Riding labourers that participated in the trade unionism of 1870s were ex-farm servants), but the workings of the system meant that conflicts were channelled into other forms which limited the extent of ill-feeling.[44] This helps explain the absence of formal trade unionism amongst East Riding farm servants who, according to Caunce, were 'non-unionized and relatively acquiescent in things as they were'.[45] Consequently, although Caunce's interpretation differs from Howkins', it may lend some comfort for his decision to exclude the East Riding farm servants from the ranks of the rural proletariat as it offers an explanation for the absence of trade union militancy amongst East Riding farm servants, the level of socio-political conciousness that Howkins regards as integral to the fully-fledged proletarian.[46]

40 H. L. Day, *Horses on the farm* (Beverley, 1981), p. 18.

41 Caunce, *Amongst farm horses*, ch. 7.

42 Dunbabin, 'Agricultural trades unionism', pp. 120–2; Caunce, *Amongst farm horses*, p. 67; 'Farm servants and capitalism', p. 59.

43 Caunce, *Amongst farm horses*, pp. 67–9.

44 *Ibid.*, p. 69.

45 *Ibid.*, p. 4.

46 Howkins' argument that farm servants' conflicts with capital should not necessarily be interpreted as evidence of proletarian consciousness possibly gains support from Caunce's conclusion that 'The

It is important to emphasise at this point that Howkins does not seek to argue that farm servants were incapable of engaging in social conflict with their employers. He readily acknowledges that farm servants, including those in the East Riding, were capable of maintaining conflicts as sustained and possibly even more astringent than those involving labourers in the English south. What appears to distinguish these conflicts from those of the proletariat is the absence of institutional expression in the form of militant organizations. An alternative interpretation might build upon Caunce's argument and follow Reed in regarding all farm servants as proletarians whose conflicts with capital should be regarded as a form of socio-political consciousness analogous to that exercised by other workers through formal organizations such as trade unions.[47] This approach, which integrates farm servants into the tripartite model and grants them a proletarian socio-political consciousness, obviously questions Howkins' decision to set them apart. It is therefore worth considering whether Reed's position is appropriate for the East Riding during the mid-Victorian period.

There is evidence that at this time the working and hiring practices of the East Riding farm service system were increasingly generating conflicts between labour and capital. One example of such a conflict was over the control of horses. Within the male work force there was intense rivalry centring on the relative condition of the horses under each farm servant's supervision. In their desire to outstrip their peers, farm servants often used linseed cake or drugs to fatten and improve the appearance of horses.[48] There were cases in the mid-Victorian period of farmers summonsing farm servants for appropriating oil cake and administering drugs without consent.[49] There were also prosecutions of farm servants for refusing to obey orders, assaulting their employers, refusing to work in the evenings and resisting the introduction of new technology.[50] Caunce acknowledges (and offers evidence) that farm service could generate conflicts that challenged the authority and discipline inherent within the system and suggests that it was on the larger capital intensive farms, with the largest concentration of farm servants, that the problems of control were most pronounced. He also suggests, however, that incidents of this type were exceptional deviations that serve to underline the harmony that normally prevailed.[51] This is a reminder that some degree of friction can be beneficial in the maintenance of a general equilibrium. There is also the danger, however, that an overly functionalist approach, with its emphasis upon the positive contribution of all social action to the maintenance of social order, can overstress the extent of integration and consent. The existence of conflict is a reminder that farm service was not necessarily a total institution that completely contained the tensions inherent in the capitalist labour process. Furthermore, the possible correlation between farm size and conflict suggests that the larger arable farms should perhaps be interpreted as a variant of the large, bureaucratic type of enterprise that has been regarded as facilitating the formation of a class-orientated socio-political consciousness amongst rural labourers.[52] This is not least

outlook of farm lads undoubtedly moved a few steps towards that of the industrial working-class as their status as permanent wage earners became clear and unarguable in the nineteenth century, but before 1914 it was only a few steps', *Amongst farm horses*, p. 200.

47 Reed, 'Criticisms', p. 233.

48 See Caunce, *Amongst farm horses*, ch. 9, for a discussion of horse feeding.

49 See for example, *Driffield Times*, 8 May 1875.

50 *Hull and Eastern Counties Herald*, 9 May 1872, *Hull Times*, 5 June 1875, *Hull and Eastern Counties Herald*, 11 July 1872.

51 Caunce, *Amongst farm horses*, ch. 7.

52 D. Lockwood, 'Sources of variation in working class images of society', *Sociological Rev.*, 14 (1966).

because in their work-orientation and everyday life, the farm servants employed on the larger isolated farms shared many characteristics with the 'occupational community' regarded by some as conducive to the formation of a radical social imagery amongst agricultural workers.[53]

There is further evidence that farm servants were exhibiting a disposition to act in class ways in the mid-Victorian period. This relates to two areas: bargaining at hiring fairs, and the operation of annual contracts. Caunce has emphasized the essential fairness of the East Riding system for both masters and servants, comparing the East Riding fairs to the classical economists' ideal of the perfect market. He acknowledges that conflict could and did occur, but the comparatively high wages obtained by the farm servants and the formulaic and routinized nature of the hirings limited its extent.[54] Yet the master-servant relationship remained exploitative and it is worth considering whether this manifested itself at the hirings in ways which might be regarded as indicative of a proletarian socio-political consciousness. At this point the notion of 'structural conflict' may be of some utility. This concept was developed by Alun Howkins as a means of analysing non-institutional forms of conflict between farmers and labourers which occurred at certain times of the agricultural year, particularly at moments of labour shortage which placed farm workers in a stronger bargaining position.[55] In many respects the November location of hiring fairs favoured farmers as it coincided with a slack period of the year when, as one farmer noted in a letter to the *York Herald* in 1876, 'Masters usually have much less business of importance, and servants are of much less value to masters than they could be, by any means, at any other time of the year'.[56] As the 1876 hiring season illustrated, this structural advantage for farmers was accentuated when fine weather had enabled farmers to progress their farm work significantly. In that year, although servants were holding out for higher wages, farmers were able to resist because they were well advanced in their work and therefore felt little pressure to re-engage at the levels demanded.[57] Of course there were times when the short term seasonal situation favoured servants. If employers were behind with their work, they were obviously under greater pressure to hire. There is evidence that farm servants tried to take advantage of these factors. It was complained, for example, that as the hiring season approached, farm servants became unruly and inattentive to their work, attended an unreasonable number of hiring fairs and thereby placed farmers at a disadvantage in the hiring season.[58]

However, the most important factor determining the outcome of the bargaining process was not the short term seasonal situation but longer term shifts in the labour market. As the *York Herald's* report emphasized, the principal cause of the 'downward tendency of wages' in 1876 was 'the depressed condition of agriculture and the overstocked market for servants'.[59] Indeed that year appears to mark the onset of the effects of agricultural depression upon the farm servant labour market which, thereafter, enabled farmers to drive down wages.[60] For much of the mid-Victorian period however, labour had been in a stronger position as farmers found

53 C. Bell and H. Newby, 'The sources of variation in agricultural workers images of society', *Sociological Rev.*, 21 (1973).

54 Caunce, *Amongst farm horses*, p. 67 and ch. 6, *passim*.

55 A. Howkins, 'Structural conflict and the farm-worker', *J. Peasant Studies*, 4 (1977).

56 *York Herald*, 13 July 1876.

57 *Ibid.*

58 *Yorkshire Gazette*, 18 Nov. 1854.

59 *Ibid.*

60 By 1880, despite determined resistance, farmers were able to dictate terms, *Beverley Guardian*, 20 Nov. 1880; and 'make a resolute stand against the high wages which have so long obtained', *York Herald*, 15 Nov. 1880.

that their reliance upon farm servants could create situations in which demand exceeded supply. This problem became most acute during the early 1870s, but during the previous twenty years farmers had been complaining of the changing balance of power in the local labour market.[61] E. L. Jones suggested that in areas where this tightening labour market situation emerged after 1850, it enabled and encouraged a greater sense of assertiveness and independence amongst the labouring population. He argued for a correlation between the workers' strength in the labour market and the emergence of independent working class organization in the form of religious organizations and friendly societies, a process that culminated in the trade unionism of the 1870s.[62]

I would suggest that there is evidence of a similar pattern of development in the East Riding. Despite the fact that farm servants did not participate in the formal trade union activity that developed in the East Riding during the 1870s, the tightening labour market created the conditions for farm servants to engage in analogous structural conflicts which involved them in the successful use of the hiring fair as a vehicle for informal but effective collective bargaining. This view is supported by the newspaper reports of East Riding hiring fairs during the mid-Victorian period which supply evidence of the farm servants' assertive use of the hiring fair, an assertiveness that often enabled both female and male servants to overcome the seasonal disadvantage of autumn hiring and secure higher wages. One illustrative example is that of the Beverley hirings on 6 November 1874 at which *The Beverley Recorder* reported 'an immense assembly of farm servants and domestics' and added that 'It had been expected that owing to the open weather and the consequent forwardness of field operations wages would be lower, but to the surprise of farmers the men stuck out for an advance, and as the Beverley hirings generally rule this district the fact was significant'.[63] Servants pursued other tactics designed to maximise the potential offered by the fact that hirings were a frequent occurrence over an extended period. One practice was for servants to reach agreements with several farmers over a period of time but to fulfil only the most lucrative contract. Farmers complained that this increasingly common occurrence meant that they had become 'tools in the hands of the servants' because they 'had to attend five or six different hirings before they could get servants'.[64] Servants also refused to be hired if employers tried to impose unacceptable conditions such as regular attendance at church.[65] Not surprisingly servants of both sexes also resisted attempts to abolish or reform hiring fairs, to alter hiring practices, and to restrict the number of hirings they attended, regarding such moves as 'hostile to their interests'.[66]

Nor was this burgeoning assertiveness confined to bargaining at hiring fairs. One of the attractions of farm service for farmers was that it reduced their vulnerability to structural conflicts because servants' fixed contracts and wages prevented them from capitalising upon short term seasonal fluctuations in wages at peak times of the agricultural year. However, there is also evidence that at this time the East Riding farm servant system was increasingly unable to fulfil this function of guaranteeing all year round labour requirements. During the 1850s there were complaints by farmers regarding the number of farm servants breaking their contracts at peak

[61] W. Barugh, *Master and man. A reply to the pamphlet of the Rev. John Eddowes, entitled* 'The agricultural labourer as he really is' (Driffield, 1854).

[62] E. L. Jones, 'Agricultural labour market', pp. 332–7.

[63] *Beverley Recorder*, 7 Nov. 1874.

[64] *York Herald*, 7 May 1875.

[65] BPP, 1868, p. 100.

[66] *Yorkshire Gazette*, 25 Nov. 1854.

times of demand for labour. William Barugh defended himself and his 'brother farmers' against the accusation made by local clergy that farmer neglect was the root cause of the perceived demoralization of the farm servant population. He rejected this in favour of an explanation that dwelt upon the farm servants' changed position in the labour market. It was this, he suggested, that explained 'the numerous cases of litigation betwixt masters and servants which have come before the magistrates in recent years'. He argued that farm servants were hiring in autumn and then leaving to take employment at higher wages in the spring for the rest of the year.[67] This problem of enforcing contracts became more acute after the Master and Servant Act of 1867 stipulated that all contracts of a year or more had to be in writing. As most farm servants' contracts were verbal and ended on 23 November, any contract agreed before this was potentially invalid and farm servants exploited this loophole when summonsed to appear before the magistrates for breaking their contracts. By the 1870s, the policy of enforcing contracts, retaining farm servants, and maintaining discipline over them had become a major source of debate in Chambers of Agriculture and at public meetings called specifically to discuss these issues. The East Riding Chambers of Agriculture pressed for the alteration of the dates of hiring fairs so that none occurred before the 23 November. They also organized boycotts of earlier hirings, campaigned for an alteration of the law of master and servant, and tried to prevent servants attending so many hiring fairs.[68]

Mick Reed has suggested that we should not assume that the absence of formal trade unionism is evidence of an absence of socio-political consciousness amongst English farm servants.[69] I would tentatively follow his lead and suggest that the mid-Victorian period was a time when East Riding farm servants combined the custom of the annual round of hirings with the idea that labour is a commodity to be sold in the market as dearly as possible. The conflicts over contracts and other aspects of the labour process suggest that this was part of a broader process involving the formation of an informal socio-political consciousness within the farm servant population. It seems plausible to suggest that there was an interaction between three factors: the farm servants' experience of the modernized system of farm service, the changing condition of the labour market and the carnivalesque environment of the hiring fair. This resulted in the hiring fair becoming an increasingly effective vehicle for the expression of a form of collective opposition by farm servants against employers. This action took forms not always recognized as evidence of a socio-political consciousness, but the tactics and actions of East Riding farm servants are comparable with those of other proletarian workers in the mid-Victorian period in that they were seeking to mitigate and qualify their formal dependence upon the labour market. These actions are, perhaps best categorized as evidence of corporate class consciousness.[70]

67 Barugh, *Master and man*, p. 19.

68 For a fuller discussion of this campaign see Moses, 'Rustic and rude'.

69 Reed, 'Criticisms', pp. 226–35. Both I. Carter, 'Class and Culture among Farm Servants in the North-East, 1840–1914', in A. Maclaren (ed.) *Social Class in Scotland* (Edinburgh, 1976); and Anthony, 'Commentary' suggest that Scottish farm servants were also capable of developing a proletarian socio-political consciousness.

70 As in a class 'which pursues its own ends within a social totality whose global determination lies outside it'. P. Anderson, 'Origins of the present crisis', in P. Anderson *et al.*, *Towards Socialism* (1965), p. 34.

Alun Howkins' attempt to forge a new interpretation is valuable in that it highlights the potential weaknesses of the existing rural labour/social history paradigms: namely, their tendency to underplay the uneven nature of the nineteenth-century rural economy and the diversity and heterogeneity of social relations that this enabled. His assertion of the importance of forms of identity and consciousness other than class rightly emphasises that nineteenth-century rural society was a more complex matrix of structures, identities and relations than is often allowed for by a strict adherence to the conventional tripartite model. However, Howkins' continued attachment to the notion of proletarianization and class formation in some regions of developed agrarian capitalism suggests that he retains a commitment to some form of economic and social determination. The logic of this position suggests that if southern, eastern and some midland labourers are to be considered as proletarians, then so should farm servants engaged on large arable farms in the north of England. It is true that farm servants constituted a group that was distinct and separate from other labourers in terms of their work tasks, contracts and residence on the farm. However, all of these labourers shared a common dependence upon wage labour throughout their working lives, and the divisions between male and female farm servants and between all farm servants and day labourers was less graphic than the gulf which had emerged between the substantial capitalist masters and all labourers. In terms of socio-political conciousness the farm servants may have diverged from the formal requirement of forming trade unions, but their more informal activities should perhaps be interpreted as a different, but equally valid, response to the process of proletarianization. Therefore it appears reasonable to regard the distinction between labourers and servants as one that reflects different stages in the farm labourer's life and to regard all farm labourers as variants of a rural proletariat. In support of this point, it is worth emphasising that East Riding farm servants also participated alongside other labourers in the development and organization of the two institutions which E. L. Jones suggested were indicative of the development of independent working class feeling in mid-Victorian rural society: Primitive Methodism and friendly societies. David Neave has argued that East Riding friendly societies were largely independent working-class organizations which were able to withstand upper and middle class attempts to control them. He also states that 'hired farm servants were among the most active in joining the affiliated orders'. He emphasises that the East Riding was second only to Cornwall as a bastion of rural Methodism and notes the strength of the 'more radical' Primitive Methodism.[71] Neave suggests that the experience of farm service, Primitive Methodism and friendly societies helped to foster a sense of independence, assertiveness and mutual solidarity amongst the farm servant population. As he says,

> The distinctive elements of East Riding rural society in the nineteenth century were the overwhelming support for Methodism and the continuation and development of the tradition that the young men would spend the first ten years of their life as hired farm servants. Neither of these two elements contributed to producing a dependent, submissive, cap touching proletariat. In Methodism particularly Primitive Methodism, the labourers and rural artisans demonstrated their independence from the control of clergy and landowner and in the hirings

[71] D. Neave, *Mutual aid in the Victorian countryside. Friendly societies in the rural East Riding, 1830–1914* (1991), p. 11.

> and mutualism of living-in were learnt the benefits of collective action. This independence and collective action were combined in the village branches of the affiliated order friendly societies to produce what was the only strong rural working class organization in the Victorian countryside.[72]

I would broadly endorse this analysis and follow Neave in describing the nineteenth-century East Riding farm servants as 'a mobile and independent rural working class'.[73]

[72] *Ibid.*, pp. 12–13.
[73] Neave, 'Mutual aid', p. 11.

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Book Reviews

CARENZA LEWIS, PATRICK MITCHELL-FOX AND CHRISTOPHER DYER, *Village, Hamlet and Field: changing medieval settlements in central England*, Manchester UP, 1997. x + 255 pp. 2 tabs; 44 figs. £45.

This is an important book which will become essential reading for all those studying the English medieval landscape. It deals with those most intractable of issues, the origins of nucleated villages, and of the 'regular' open field systems with which these were intimately associated. The book is the outcome of a Leverhulme-funded research project which involved, primarily, the systematic mapping of a wide variety of information relating to settlement forms, soil types, past population densities and much else in four east Midland counties, Bedfordshire, Buckinghamshire, Leicestershire and Northamptonshire.

The book begins with an excellent introduction, which explains the nature of the problem and succinctly reviews earlier research by historians, archaeologists and geographers. It goes on to describe the landscape and topography of the four counties, before presenting, in chapter three, the available evidence for the development of settlement in the region in the period up to the Norman conquest. Chapter four examines how settlement developed between 1066 and 1500, while chapter five – a model of clarity – examines some of the determinants of medieval settlement forms: population density, wealth, and the intensity of land use; the development of agriculture; changing structures of social and tenurial organization; and the impact of towns and trade. Chapter six examines in some detail the influence of these various factors, especially the role of lordship and the developing power of the state: the section on lordship is particularly subtle and stimulating. The chapter concludes with a forcible rejection of monocausal explanations of variations in settlement patterns: 'Every single agency that could lie behind village nucleation – lords, communities, population growth, the state, urbanization, soils – has been found inadequate *on their own* to account for the observed differences'. The final chapter presents a model which places nucleation, and the genesis of regular openfields, within the context of broader currents of economic, social and cultural change. Population growth and pressure on resources, coupled with an expansion of the market economy encouraged settlement nucleation and the laying out of extensive regular open field systems. Conversely, these developments failed to materialize where 'the arable contribution to the economy was less dominant' and where 'the pressure on the land never reached the point at which a transformation of the landscape seemed either necessary or desirable'. Both lords and communities may have been actively involved in landscape change, and replanning was one aspect of wider developments in the definition of property rights and in the growth of organizational structures in the period between the ninth and the thirteenth centuries.

The book is highly readable and full of stimulating ideas. But the principal arguments rest on a number of assumptions, widely shared by landscape historians, which perhaps deserve a more intensive scrutiny. Firstly, this writer for one still has doubts about the use of nineteenth-century maps to reconstruct detailed variations in medieval settlement forms. It is not, for example, entirely clear that a distinction apparent on a map of 1826 between a 'nucleated cluster' and a 'large nucleated cluster' need closely reflect the situation in, say, 1300. This, like the distinction between an 'interrupted row' and a 'small farmstead cluster', could also reflect changes in the late medieval and early postmedieval periods. Given the evidence quoted from villages like Sulby, where complex earthworks demonstrate that 'several phases of settlement have taken place' (pp. 125–7) before the fourteenth century, it seems odd that such a high level of stability is assumed over the subsequent long centuries.

Secondly, the discussion of settlement makes much of the evidence for 'planning', but the simple assumption that apparent regularity of form necessarily reflects reorganization at a single point in time sits oddly with the sophisticated, multicausal explanations offered for wider changes in the character of settlement. One wonders whether a simple village plan of rectangular tofts strung out along a street need always have originated in this way. Some, surely, could have come into existence through the gradual expansion of a settlement, adding toft to toft along a pre-existing roadway according to some simple customary principles. And as so often in discussions of settlement morphology, we are never told

how regular is regular. Certainly, in many cases regularity is in the eye of the beholder and these writers see it where this one would not. On page 59 we are informed that 'despite the superficially random and sprawling appearance of the settlements [in the Chiltern Hills], closer examination reveals a degree of regularity: the arrangement of interrupted row or common-edge settlements and single farmsteads seems almost standardized, with individual tofts set at regular intervals' (how regular is regular?). By page 219 this view, without further argument, has hardened into 'dispersed settlements ... exhibit some signs of deliberate organization'. They may, but given the momentous changes of the later middle ages it must be doubted whether this would be apparent in the spacing of farmsteads shown on nineteenth-century maps. In other regions of England, certainly, nineteenth century common-edge farms were often the survivors of once more continuous spreads of occupation.

Far more important, however, are two related problems. The main arguments of the book are firmly grounded in the widely shared belief that, because nucleated villages and regular open-field systems normally occurred together, they must have come into existence at the same time. Logically, at least, there is no reason why this should have been so. Villages may have come first, later expansion of cultivation producing complex, intermixed holdings which subsequently needed to be remodelled in 'regular' form. Connected to this is the issue of chronology. It is assumed throughout that nucleation was a long-drawn-out process occurring in the late Saxon and early post-Conquest periods. Outlying settlements were abandoned 'some time after 850, and were replaced by villages' (p. 235). 'By the late eleventh century some nucleated villages were already formed ... In the succeeding two centuries we assume that nucleation was continuing' (p. 238). The entire discussion of causes – development of a national state, proliferation of local lordship, rise of a market economy – is dependent upon such a chronology. Yet, as we learn on page 18, in the county in which the majority of archaeological fieldwork has taken place – Northamptonshire – many outlying farmsteads were abandoned *before* 850. In fact, a good argument can be put forward – and recently has been by Brown and Foard – that nucleation of settlement and the layout of regular open fields were distinct events, in Northamptonshire at least, the latter occurring more than a century after the former. The various influences and pressures on rural communities, discussed with such clarity and skill by Lewis *et al*, may well have led to the regularization of field systems. Whether they can explain settlement nucleation, however, will remain unclear until further fieldwork and excavation provide us with a clearer picture of the chronology of this process, and of how this may have varied from region to region.

None of the above comments should be taken as criticism of this excellent and intelligent book, but rather as evidence of how stimulated this writer was by its subtle and sophisticated arguments.

TOM WILLIAMSON

AVRIL AND RAYMOND POWELL, eds, *A medieval farming glossary of Latin and English words taken mainly from Essex records, compiled by John L. Fisher*, Essex Record Office Publication 138, 1997. vi + 49 pp. £6.50.

This slim glossary, already well-known in its earlier edition to those who have worked with medieval manorial documents, and, no doubt, especially familiar to those who have worked with Essex material, has been republished by the Essex Record Office. The glossary provides a valuable supplement to more extensive medieval Latin and middle English wordlists and dictionaries; it also purports to deal in agricultural terms, although, even in this revised edition, the specificity of the title *Farming Glossary* is challenged. This does not matter at all, and simply reflects the nature of the work which, as the editors make clear in a brief sketch of the career of Canon Fisher, was the incidental product of many years toiling through Essex records.

As already noted, this is a revised edition; some Latin entries have been omitted whilst others have been added. Ideally, the user of the glossary would want to know a little more: the date of the first appearance of the word in Essex muniments would be valuable, although hardly so vital as to justify the additional effort on the part of the editors, as would some indication of the source. In this latter case, the earlier edition contained, sporadically, some such information but this has not been included here for reasons which the editors make clear in their introductory note. A bibliography has been included, detailing the national and local sources employed in the compilation of the glossary, as well as listing the manorial records in the Essex Record Office from which the bulk of the entries were drawn.

PHILLIPP SCHOFIELD

CHRISTOPHER JESSEL, *The Law of the Manor*, Barry Rose Law Publishers, 1998. xxxiii + 501 pp. £195 hbk; £88 pbk.

Most scholars of English agricultural history at some stage or another have come across terms to do with agricultural customs or tenures – related to the manor or things manorial – which they think they understand, but which they need to check just to be sure. They search high and low for that trusty compendium of English land

law which they always use on these occasions (say once a year), and which is now probably in its twenty-fifth edition. It is a much loved, and well-thumbed text but I doubt whether it has ever been read from cover to cover. Technically it cannot be faulted, but that is because technically it is written for the lawyers and not the agricultural historians. The frustration of trying to find that volume after a year of gathering dust is matched by the frustration of understanding its technical and archaic language when we do find it. What we really need is a reference book which is readable, has all of the technicalities but shorn of their archaic apparatus, and while written mainly for a legal audience does at the same time recognize that occasionally other users need to address manorial customs, tenurial descent, and common right practices, amongst a wide variety of other important land and tenure-based issues. Christopher Jessel's *The Law of the Manor* may just be the book we have been looking for. That is not to say it is without its faults, not least the fact that some of the historiography is remarkably dated or thin. For example, under enclosure (or as the index of the book has it, technically correctly, inclosure), agricultural historians might find it hard to believe that some reference to W E Tate and his *Domesday* is missing. More gravely there is the omission of his *Parish Chest*. And historians of entail will not find their favourite literature footnoted or listed, and yet to have illustrated the system historiographically would have been so valuable to historians and lawyers alike. Nevertheless, setting these and other omissions aside, this book deserves to be widely used by fellow agricultural historians.

At over 500 pages it may seem reasonable to split it into as many as 28 chapters, yes 28! But the typeface is much larger than we normally use and the page margins are very generous. Therefore the chapters are quite short, but in the end, because it is more like a source of reference and explanation than a cover-to-cover story, the format works quite well. The chapters are arranged in five parts. Part I is about the roots of the manor and the manorial system through its origins and operation, and part II explores the different lands and tenurial variations within manors. Part III is the longest and includes a disaggregation of the rights associated with manors, including mineral, common and pasture, and hunting, shooting and fishing rights. It also describes manorial revenues such as rents and fines, and others such as tolls, and finally it explains manorial obligations like homage and fealty. Part IV places the manor within the various settings in which it operated, including village, town, church, estate and royal demesne. Part V is a conclusion containing five chapters. It places everything else in a modern practical context. The volume is topped and tailed by the usual legal textbook devices of a table of statutes and other laws, a table of cases, an appendix of precedents and a glossary.

The real test of the usefulness of any volume like this is the degree to which the tables, the glossary and the index complement and serve one another in the reader's efforts to find a definition, check its historical context, and look for further details or sources. Most of the time this works, but occasionally it fails. Try looking for parliamentary enclosure for example. It does not appear under 'p' nor cross-referred under 'e' or 'i'. The general act of 1845 appears in the table of statutes, but not the other general acts of 1801 or 1836. Similarly, try looking for enfranchisement of copyholds. There is nothing under 'e', nor a cross-reference under 'c', and while the copyhold acts of the 1840s and 1890s, and the law of property acts of the 1920s are listed, the reader would already have to know of their connection with the enfranchisement process to look them up in the first place. The glossary informs the reader that 'enfranchise' is the verb to free, originally of slaves, then in succession bondsmen, copyholds and long leases. Therefore, eventually the more enquiring reader would get to grips with the copyhold legislation, but really this is rather too laborious a process. Therefore for the agricultural historian, and indeed any other user, the supporting apparatus of list and index which accompanies this book is not as good as we expect, and we would like a fuller index and a cross reference service provided in any subsequent editions. The author's defence that he is a lawyer not a historian, without 'the skills to recover the past' (p. xiii), is no defence at all. But to end on the down beat would not truly reflect the general enthusiasm I have for this book. The complicated tale of the manor is told really quite simply, which lawyers and historians alike will appreciate. In spite of its horrendous price, this will be a well-thumbed book for many years to come.

MICHAEL TURNER

DAVID HEY, ed., *The Oxford companion to Local and Family History*, OUP, 1998. x + 571 pp. £12.99 pbk.

It is not easy to review a book whose contributors read like a virtual 'Who's Who' of English local history studies. It is even more intimidating for the reviewer who owes so much, in a personal sense, to so many of them. For better or worse, about half of the seventeen contributors to *The Oxford companion to Local and Family History* have some part or other to play in my education as a local historian. Perhaps significantly, there is only one out-and-out family historian on the list, albeit an eminent one: Anthony Camp, until recently the director of the Society of Genealogists. This is an issue to which I will return later.

The content of the book is arranged alphabetically, from 'Abbey' to 'Arthur Young'. There is also an appendix of national and local record offices at the back. Including this is either a brave or a foolish act, since such things go so rapidly out of date. Leicestershire Record Office, for example, moved from the listed address some years ago and no attempt has been made to update the information for the new paperback edition.

Indeed, one omission in this section exemplifies the basic difficulty with such a publication. Anthony Camp's item on civil registration outlines the system very clearly (although, again, the date of the book's original publication shows: he refers to 'St. Catherine's House' when all such records have now moved to the Family Records Centre at Myddleton Place). However, the reader will search in vain for the address of either record office in the list of 'national record offices' at the back: surely an academic historian's error?

The 'family history' of the title has really been grafted onto a volume designed for local history researchers, with an inevitable bias in favour of the particular interests of the specialist contributors: 'agricultural history' gets the best part of five full pages; the historiography of local and regional history in England gets around four pages. The signed contributions of Charles Phythian-Adams on popular culture, Harold Fox on landscape history and Margaret Gelling on place names average about seven sides each. In contrast, the census gets only a couple of sides and wills get only one. I would not send the novice family historian to look in this book: there are much better guides to the basic sources available.

However, a newcomer to local history studies or a family historian seeking a good starting point for further research will find The *Oxford Companion to Local and Family History* invaluable. Not least, it makes much more important and scholarly work accessible to the non-specialist and this surely has to be a good thing. One is tempted to remark that it does not hurt academic historians, either, to have to reduce their specialist areas of study to just a few hundred words written for the general reader. Here, all the contributors have performed sterling feats of brevity and clarity. Every alphabetic entry, however brief, also carries excellent bibliographical details for further study and this feature alone will make the book useful to amateurs and professionals alike.

As a way of introducing students to the very best scholarship in an increasingly popular area of study, the paperback edition of David Hey's volume should certainly have a place on the bookshelf of every local history researcher.

SIMON PAWLEY

T. P. HUDSON, ed., *The Victoria history of the counties of England. A history of the county of Sussex*, V(i), *Arundel Rape (south-western part) including Arundel*, OUP for the Institute of Historical Research, 1997. xxii + 279 pp. 14 maps; 57 illus. £70.

This volume is the eleventh to be published of the Victoria history of the county of Sussex, and it deals with the south-western part of the rape of Arundel. For the historic county of Sussex, this leaves volumes V (2–4) covering the rest of the rape of Arundel, and volume VIII covering the rape of Pevensey still to be published. In practice, volume V(i) covers the hundred of Avisford, located west of the river Arun and lying mostly on the fertile coastal plain of West Sussex, together with the borough of Arundel. The latter was the only substantial town in the hundred and owed its origins to its creation as a late Anglo-Saxon burh, in succession to nearby Burpham. In fact Arundel was even more important immediately following the Norman conquest since it was the head of a feudal honour which also included what was later in the thirteenth century to become the separate rape of Chichester.

Historically much of the area covered by this volume consisted of highly regarded arable land on the dip-slope of the South Downs and on the overlying Eocene deposits of the flat coastal plain. And where the Downs were cut through by the south-flowing river Arun there was rich brookland, as also alongside the numerous tiny streams (rifes) connecting either to the coast or to the originally wide Arun estuary. Rough pastures were primarily confined to the downland tops. It was an area of open fields and strong manorial control on the lower slopes, especially in the south. In the north there was more woodland, together with large amounts of medieval parkland. Arundel Great Park had all the medieval accoutrements of pale, deer and deerleaps, gates and oak timber, together with swine pannage and cattle agistments before it was transformed into a large farm in the eighteenth century.

Having introduced the reader briefly to the rape of Arundel, the south-western part then forms the subject matter. The arrangement of the volume is much the same as for older volumes, except that topographical and environmental history, together with economic and social history play a far greater role than in earlier volumes, with a more reduced wordage allocated to the familial descents so beloved of an earlier generation of VCH editors. And to help the reader through the entry for each parish there are now very clear sub-headings to indicate matter such as 'landscape history', 'settlement', 'roads' etc. And although such sub-headings are relatively standard throughout, there are other more particular ones which remind us of the more recent history of the

area, such as 'Felpham as a seaside resort', and which informs us that this small coastal village, referred to by William Blake as 'the sweetest spot on earth', became a resort in its own right for a genteel clientele from the middle of the eighteenth century.

For the agricultural historian there is much of interest in this volume. Over one-third of the text is devoted to the history of the town of Arundel, but the rest deals thoroughly with the rural parishes lying to the south and along the coastal stretch of Avisford hundred. In each case we have an account of their topography and settlement patterns, medieval field systems and their early-modern enclosures, which were executed in this area by agreement and through exchanges of strips. The three open fields of Arundel itself, for example, were enclosed by 1636. There are also accounts of other features of related interest, such as the wealden outliers of the Stoke estate which were first mentioned in 975, or the rabbit warren at South Stoke which operated from the 1490s to 1787. An intriguing mid-nineteenth century development came with the arrival from Holkham (Norfolk) of John Sparks at Yapton. In 1856 he established an agricultural engineering firm which hired out threshing machines and ploughing machines in this overtly arable district.

In the twentieth century the area has also witnessed the growth and decline of an extensive market gardening industry. The favourable local climate and the advent of railway linkages are advanced to account for the growth of the industry, together with the expertise developed within several local families such as the Marshalls from the 1880s. However, the industry has been troubled since the 1970s, and although the contraction in activities (and diversification) is noted at Barnham and Yapton, no explanations are advanced. Instead, a steadily advancing phenomenon in the area covered by this volume, and one well described, is that of urban expansion along the coast. The village of Felpham was enveloped by Bognor Regis after the Great War, and the safe sandy beach at Middleton ensured that town's piecemeal growth from the 1920s. Brickmaking was an obvious counterpart to such growth on the Eocene deposits of the coastal plain (and was an industry into which Sparks's later diversified) and this came to join other rural industries and fishing and maritime trades.

Here then is a volume rich in rural detail. The editorial work has been immaculate and the customary high standards of the VCH are maintained. It is also pleasing to note that among the wide range of cited sources, including the under-used documents in the Arundel Castle archives, there are many which have been written by local historians.

BRIAN SHORT

R. K. I. QUESTED, *The Isle of Thanet farming community. An agrarian history of easternmost Kent: outlines from early times to 1993*, Wye College Press, 1996. xiv + 364 pp. Illus. £12.

The Isle of Thanet is that part of northeast Kent which lies beyond the old Wantsum channel and north of the river Great Stour, an area of about 45 square miles in extent. To this small but distinctive subregion the author – who is better known for her earlier distinguished publications on the history of Sino-Russian relations – has been able to bring extensive personal knowledge and local reminiscences, for her father, Eric Quested (1895–1991) farmed at Woodchurch near Birchington in Thanet between 1919 and 1970. The ten chapters deal logically with discrete periods of Thanet's agricultural history but, as is acknowledged in the *Introduction*, the treatment of the period up until the end of the eighteenth century is largely dependent on secondary source material and contemporary accounts of the locality which, while drawing upon some scattered literature, does not offer the reader anything new in matters of interpretation and at times the writing depends rather heavily upon a descriptive approach. The last three chapters, 'From the Agricultural Crisis to the Armistice 1893–1918', 'From the Armistice to Victory in 1945' and 'From Victory to Glut to Where? 1945–1993' make up a substantial proportion of the total text and are informed by the wealth of oral and family history sources which constitute the main justification for publication.

Looking over Thanet today, with views typically dominated by large fields in what is often a monotonous, bleak landscape, and with the cooling towers of the Pegwell Bay power station on the horizon, it is somewhat difficult to reconcile the picture presented of Thanet in the late eighteenth and early nineteenth century as 'a beautiful unspoilt island' and as 'still almost a natural paradise' (p. 85) with contemporary reality. In a section on 'environmental losses and gains since 1800' the author recognizes that under intensive modern farming methods the appearance of Thanet farmland is now less attractive than formerly, although a case is made that the number and range of variety of trees has increased in the area since the mid nineteenth century. One of the distinctive agricultural specialities of Thanet which has developed over the last hundred years or so is – along with potatoes – the growing of cauliflowers/broccoli which do not rank amongst the most aesthetically pleasing of field crops. Whilst 'collyflowers' had been grown in Thanet since at least 1750 (p. 80), the modern expansion of acreage is traced to the initiative of Barzillai ('Bar') Sackett (1844–1918) who was Eric Quested's grandfather, and Augustus Brookman (1849–1942) who brought in new strains of seed from Brittany in the late 1860s. It was Sackett,

recalled as a 'true entrepreneur' who constantly patrolled his land in a trap, who pioneered the vegetable as a large scale field crop in Thanet rather than as, traditionally, a market garden subject. This is illustrative of the way in which the origins of so many UK local agricultural specializations need to be understood in terms of the endeavour and initiative of individuals. Twentieth-century developments in cauliflower production which are noted include more intensive production methods, road transport, improved packaging and cold store development. In contrast to the Cornish growers, co-operative marketing was met by Thanet producers with resistance until quite recently.

The largest market for this book will come from within what remains of the Thanet farming community who will particularly value the extensive references to their leading agricultural families. The general reader, who would have been assisted by a clear up-to-date map, may find the density of detail lies a little too thick on the ground at times. Whilst this book does not purport to be an analytical study in agricultural history, it is important for the subject that the reminiscences that the study contains are preserved, and in that sense the text is valuable. In a short appendix the author suggests that there is scope for further research in carrying on some of the themes pioneered by Dennis Baker and, in particular, attempting some evaluation of Thanet's role in agricultural innovation in the national context.

NICHOLAS GODDARD

MALCOLM THICK, *The Neat House Gardens: early market gardening around London*, Prospect Books, 1998. 175 pp. Illus. £12.50.

As Malcolm Thick explains, 'Market gardening is the Cinderella of garden history, or perhaps to call it the Ugly Sister would be more descriptive' (p. 11). Thus, it was his aim to redress the balance and write a general history of market gardening around London. He may well do so in the future – and he devotes three chapters to the more general history in this volume – but he was deflected by the desire to share his findings related to a single 'cabbage patch', as Shakespeare dubbed Denmark. The Neat House gardens began their life as an area devoted to the production of vegetables for the Westminster and London markets at the beginning of the seventeenth century. The extent of the gardens, located on the site of modern-day Pimlico, was never large, rising from an estimated 17 acres in 1614, to 39 in 1622 and at least 107 in 1675, but they were highly productive and the gardeners enjoyed reputations as the best in the country. High levels of production were achieved through advanced techniques: thorough tillage using spades and other hand implements guaranteed good soil quality; hot-beds were constructed using huge amounts of night soil and street sweepings from the capital; glass bells also helped to extend the growing season; and cultivation in rows ensured that not a square foot of earth was wasted. The gardens produced a wide range of vegetables for middle and upper income tables but they became particularly renowned for the cultivation of asparagus and melons. Some produce was sold direct to customers or their servants who called at the gardens, although much was taken down the Thames into the City and Westminster.

Perhaps the most important question to ask about the significance of the gardens is whether or not the expertise fostered there had a significant effect elsewhere. It appears that the answer is firmly affirmative as far as gardening is concerned. The gardeners adopted an open door policy, inviting inspection and profiting through their sale of food and drink to visitors; there is no doubt that the kitchen gardens of the gentry benefited as a result. The effect on agriculture is more doubtful. The advocacy of thorough tillage may have had some effect although experiments with digging in agriculture were soon abandoned. However, the discussion of other garden-based developments including row cultivation and hoeing continued and may have received some impetus from those who visited the gardens.

Malcolm Thick's greatest disappointment is that few business records relating to the operation of the gardens have survived. Thus we know very little about the levels of man- and woman-power needed to keep the earth in good heart and bring forward its wonder crops year after year. Similarly, there is only a small amount of probate material to suggest levels of wealth and life-styles, although some benefit can be derived from the hearth tax returns for 1664. The majority of gardeners seem to have been comfortably off; of those assessed for the tax – and a few were not – half lived in houses of five or more hearths; most of the rest lived in three- or four-hearth houses. Moreover, some of the gardeners rose to positions of authority in the London Gardeners' Company. Eventually urban pressures grew too great for the gardeners and their days were ended by house-building at the start of the second decade of the nineteenth century. Small in scale, rich in significance and output, Malcolm Thick is to be congratulated on opening up this small corner of exceptional productivity to the gaze of garden and agricultural historians.

DONALD WOODWARD

JOHN CHAPMAN AND SYLVIA SEELIGER, *A guide to enclosure in Hampshire 1700–1900*, Hampshire Record Series XV, 1977. xi + 403 pp. 5 illus; 184 maps. £15.

JOHN CHAPMAN AND SYLVIA SEELIGER, *Formal and informal enclosures in Hampshire*, Hampshire Papers 12, 1997. 24 pp. Illus. £1.75 inc. p. & p.

The first and more substansive of these two publications, both published by the Hampshire Record Office, is a guide and resource for research rather than a book to read from cover to cover. The second is a booklet, aimed at a more general audience, though both works will be of interest to readers of this journal.

The book is, as the title says, a guide to enclosure in Hampshire 1700–1900. It is divided into five main sections: a parish by parish summary of information on field systems, commons and enclosure; a complete list of all parliamentary enclosures in the county with summary information; a complete list of all known formal enclosure agreements in the county with summary information; a register of all enclosure commissioners known to have worked in the county; and finally a series of detailed maps showing the locations of enclosures, fields and commons where known.

The parish summaries include Ordnance Survey grid references and the names and areas of known open fields. This is followed by cross references to any parliamentary enclosures or formal enclosure agreements. Full information on any known or suspected informal enclosures is provided in the parish summary. This generally takes the form of the last known mention of any open fields together with the earliest date by which they are known to have disappeared. Commons are treated in the same way as field systems.

The parish summaries are followed by summaries of Hampshire's 162 parliamentary enclosures. Each entry starts with an Ordnance Survey grid reference and the names of the parishes or manors affected. This is followed by full references to the act and award. The acreages affected are given. Where known the names of fields and commons affected are listed. This is followed by the names of enclosure commissioners. Where values or surveyors are known to have been involved their names are also given. The total number of allottees is provided and those allotted more than 10% of the total are named and the size of their allotment given. The notes at the end of each entry give relevant cross references to other entries and references to the relevant map.

The sixty formal enclosure agreements for the county found by Chapman and Seeliger are detailed in the next section. The format corresponds to that described above for parliamentary enclosures. Each entry is headed by the parish, manor or tithing affected. References and dates are provided for any known agreement and award. The acreages enclosed and the names of pieces of land affected, the names of commissioners, surveyors or valuers are given where known. Again allotees with more than 10% of the total are listed together with the size of their allotments. Any cross references to relevant maps are contained in the notes which follow each entry.

The next 28 pages list all the enclosure commissioners known to have been involved in parliamentary enclosure or formal enclosure agreements in the county. Each entry gives all known residences of the commissioner, the period in which he was active, the number of Hampshire awards (parliamentary and formal agreement) he was involved in and cross references to those awards in the previous two sections of the book. Where known, the number of enclosures in which each commissioner was involved outside the county are given though without specific references. This latter information is clearly not comprehensive as it would require research on the same scale as that in this volume for every county in the country, a feat regrettably beyond the capacity of even such prodigious researchers as Dr Chapman and Dr Seeliger. This section will provide anyone researching a particular enclosure with the kind of background information on the commissioners that it would normally be quite impractical to attain. It would also make an excellent starting point for much needed systematic research on the activities of enclosure commissioners.

The last substantive section of the book contains 184 maps. The Ordnance Survey 1:25,000 provisional series has been used as a base. Fields, commons, and enclosures have been superimposed where precise boundaries are known. In other cases approximate locations have been indicated. In a few cases the reductions necessary to fit the map on a page have rendered it less legible than it might have been. However, this is not a serious problem and the only alternative would have been to produce a larger format book at a considerably higher price.

The book is completed by two indexes. The first covers all persons mentioned in the text whether as commissioners, valuers, surveyors, or allotees. This will prove a minor godsend to the researcher interested in the activities of a particular individual. The second index is of place names including fields, commons, manors and tithings. Again this will prove useful to the local researcher. All in all this is a very thoroughly produced book which must have involved an enormous amount of work. For the period 1700–1900, enclosure is now better documented in Hampshire than any other county. One can only hope that this kind of work will be emulated elsewhere.

The second publication is the twelfth in the Hampshire Papers series and effectively forms a companion work to the Guide, containing a fuller analysis of the

various forms of enclosure than the introduction to the Guide. This booklet contains much introductory information on enclosure and is very nicely illustrated with reproductions of enclosure maps, enclosure acts, commissioners' minute books, estate maps, tithe maps, enclosure maps, enclosure awards and first edition Ordnance Survey 6 inch maps. It would therefore make a very good introduction to enclosure for a local history class. But it also contains material of considerable interest to other readers.

Parliamentary enclosures, of which there were 162, only affected some 14 per cent of the county area. As the authors show this is a potentially misleading statistic. Two other forms of enclosure proceeded alongside parliamentary enclosure. Firstly, there were also sixty enclosures by formal agreement. The authors have already analysed these in this journal (43 (i), 1995, pp. 35–46). These generally covered smaller areas than parliamentary enclosures and were much more common in the eighteenth than in the nineteenth century. Secondly, there were a considerable number of informal enclosures. The nature and extent of informal enclosures in Hampshire is presented here for the first time. These were enclosures where no formal agreement appears to have been made though tacit agreement must have been present. The authors calculate that 51 per cent of the field systems present in Hampshire in 1700 disappeared as a result of informal enclosure, compared with 33 per cent by parliamentary means. This statistic does not, however, appear in the booklet but in the introduction to the Guide. Similarly, full statistics on the extent of formal agreements are not to be found in the booklet but only in the earlier article. So one needs to read all three publications to get a sense of the relative extent of the three types of enclosure. Unfortunately due to the paucity of the documentary evidence the area enclosed by informal agreement cannot be measured though the authors conclude that it greatly exceeded that by formal agreement (2.23 per cent of the county area) and may have equalled that enclosed by act (14 per cent of the county area). Thus the generally accepted view that after 1700 virtually all enclosure was by act of parliament cannot be sustained for Hampshire. Nor as the authors pointed out in their 1995 article would it seem to be true of Sussex, Dorset, Lincolnshire, Yorkshire or Cumberland. However, given the amount of work which has clearly gone into the Hampshire project it may be a long time before the national position becomes clear.

LEIGH SHAW-TAYLOR

G. E. MINGAY, *Parliamentary Enclosure in England: an introduction to its causes, incidence and impact, 1750–1850*, Longman, 1997. vii + 168 pp. 4 maps. £11.99 pbk.

Professor Gordon Mingay's long-standing interest in the subject of parliamentary enclosure is well known, and, indeed, some of his own early writing helped to spark the modern phase of interest in the topic. It is therefore a great pleasure to welcome this volume, which succinctly summarizes the present state of our knowledge and the various controversies which still exist. It offers a balanced coverage of the classical works and devotes a chapter to modern views on the scope and nature of parliamentary enclosure, stressing the regional and chronological variations which receive scant attention in much of the literature. The objectives of the process and the gains which accrued from it are discussed in some detail, and the actual mechanics of obtaining an enclosure, often ignored but crucial to the outcomes, have a chapter in their own right. Professor Mingay has interesting comments on some of the more neglected motives for enclosure, pointing to its considerable significance as a means of freeing land for non-agricultural purposes, notably urban expansion, mining and quarrying, and not merely in the newly-industrializing areas of the North and Midlands. He also lays great stress on the importance of parliamentary enclosure as an instrument for improving roads. He points out that many individual acts in the early period and later parliament itself laid down strict criteria for the newly-built roads, and the prospect of a major improvement in local transport conditions must have been an element in the calculations of many of those contemplating enclosure. The highly controversial issue of the costs of enclosure and the impact of these on the various strata of eighteenth and nineteenth century society form a focus for a further chapter, and he devotes a complete chapter to the single issue of 'Parliamentary Enclosure and the Cottager', perhaps the most debated aspect at the present time. As a well-known protagonist in the debate, he offers some telling rebuttals to those who see enclosure as a main cause of rural poverty. He points out, however, the potentially disastrous impact which enclosure might have on particular groups in local society. The maps are already familiar to students of the enclosure movement, being based on those of Michael Turner and Rex Russell, illustrating the general distribution, and before-and-after situations in Lincolnshire, respectively.

Throughout, Professor Mingay stresses the variability of the process, both regionally and in terms of each individual enclosure, a point so often overlooked in much of the more polemical writing which the subject has attracted. He illustrates also the highly complex and variable rules which characterized many of the areas

subject to common rights prior to enclosure, a factor frequently ignored by those attempting to draw general conclusions about the effects of the process. One minor criticism would be the use of the dates 1750 to 1850 as the boundaries for the study. While this covers the overwhelming majority of the parliamentary enclosure movement it seems curious that both the start and the end should be excluded, especially since omitting the two ends somewhat distorts the regional pattern. As a geographer, I would also personally have been interested in rather more maps illustrative of the variations which are discussed, for example a map of the great waste enclosures and another of the small fragmented enclosures as a contrast to that derived from Russell. Having said this, this book is a very valuable addition to the literature on enclosure, especially as it is within the pocket of the student and the general reader. Perhaps it is too much to expect it to supplant the outdated and partial views derived from the Hammonds and from Slater which remain so deeply entrenched amongst the general public, but this scholarly, readable and balanced account certainly deserves to do so.

JOHN CHAPMAN

P. S. BARNWELL AND COLUM GILES, *English Farmsteads 1750–1914*, Royal Commission on the Historical Monuments of England, 1997. xiv + 175 pp. 150 illus. £15.

English Farmsteads 1750–1914 is a very welcome and useful addition to books on historic farm buildings. It is based on recording work carried out between 1992 and 1995 in five different parts of the country, chosen because little or no recording had previously been done there. The work is well and lavishly illustrated with photographs, plans, axonometrics and various other drawings. Block plans are used to show the general form and development of the farmstead, including the position of the house.

The five areas were chosen to cover different farming methods. Three are basically arable, but with different emphases, being in west Berkshire, south Lincolnshire and north Northumberland; the two sections in south Lincolnshire are slightly contrasting in that one is fenland and the other nearby upland. South Cheshire provided a predominantly dairy area with emphasis on permanent grass and east Cornwall an upland area. Between forty and fifty farms were examined in each, more in Lincolnshire. The farms recorded are listed, but the basis on which they were chosen within the areas is not stated. The terminal date was chosen to allow the effect on new and earlier farm buildings of the great depression in farming after about 1878 to be assessed.

The book begins with an important introduction by N. Harvey, president of the Historic Farm Buildings Group. The main part of the work describes the five areas; in each the local development of farming, land ownership and topography are discussed, followed by a detailed examination of the farmstead, and of the individual buildings of which it is formed. Care is taken to show how the various buildings related to each other, as well as showing their relationship to the type of farming.

The areas examined are all different. In Berkshire, buildings were altered or added to rather than completely re-built; farmsteads tended in consequence to be informal groups of buildings. Aisled barns were built into the early nineteenth century. One barn on staddles was found. Provision for cattle in Lincolnshire did not appear much before 1840, and the cowhouses were then small, a point the reviewer has found in nearby south Nottinghamshire. The lack of early pigsties leads the writers to suggest that pigs were fattened in the yards. North Northumberland was an area of large farms, with a distinctive barn developed for fixed threshing machines, generally powered by steam or water. Provision of horse yards suggests that, as in Lincolnshire, horses were kept in the open at night, at least in summer. In Cornwall the most distinctive feature was the bank barn (locally chall barn), a low barn built over cow housing, sometimes with power for threshing. That steam power was not used to drive the machinery may well have been owing to the small size of the farms, making such provision uneconomic. Changes in cowhouse design in Cheshire throughout the period are noted. An interesting excursion outside the period was the recording of a post First World War council small holding, noting continuity in the general layout with earlier work.

The book ends with a chapter drawing together the findings and discussing the effect of published planned farmsteads. Structural details are also discussed, but the different types of truss found over stables in Berkshire and Cheshire are surely related to the height of the loft walls, rather than having a regional significance (fig 7.15a & b).

Lack of reference to eighteenth- and nineteenth-century textbooks on farming has affected some conclusions and interpretation of buildings. For example Loudon calls horizontal boarding at the bottom of barn doors a 'lift', not a threshold. This was to enable the doors to clear manure in the yard, and, supplemented by a cloth hung above, to catch grain with flail threshing, as well as to keep out small animals. The term 'hammel' is misused, being defined by Loudon, Scott-Burn, Stephens and Morton as a loosebox for two or three cattle with an opening into a small yard. Winnowing could be with an artificial draught or winnowing machine, not just a natural wind across the threshing floor. No reference is made to portable threshing machines being used on the threshing floor of traditional barns. Sub-division of

shelter sheds for loose cattle could also be to prevent bullying and promote equal feeding. There has been some confusion on feeding of cattle in Lincolnshire: Caird states that some farmers were changing to chaff mixed with linseed in the mid-nineteenth century, not that this system had been in use for the previous half century.

These are, however, minor defects in what is a very important and useful survey, considerably extending our knowledge of farm buildings.

J. E. C. PETERS

JOSE IGNACIO JIMENEZ BLANCO, *Privatización y apropiación de tierras municipales en la Baja Andalucía: Jerez de la Frontera, 1750–1995*, Biblioteca de Urbanismo y Cultura; EMEMSA; Ayuntamiento de Jerez, 1996. 333 pp. No price given.

When Alfonso X liberated the Andalusian municipality of Jerez de la Fontera from the Moors in 1264, he handed over vast tracts of forested mountainsides (*montes de propios*) to its inhabitants. Two generations later, Fernando IV granted the population of Jerez more territory in order to compensate them for the past sacrifices as well as to secure the continued support of this important frontier town. Legally, the *montes de propios* were treated as private property owned by the town government. Throughout the next six centuries, these lands were to remain the main source of income for the town's coffers. Owners of livestock were forced to seek representation on the local council (*cabildo*) since the latter determined both the amount of land available to individuals and the costs of grazing. After 1750, however, due to strong demographic pressures, Spain witnessed an intense process of privatization of municipal lands. This culminated in the infamous Madoz disentailing legislation of 1855 which was introduced by the liberals to pay off mounting debts and finance public works. The Madoz Act called for the selling off of municipal lands by auction to the highest bidder. As José Ignacio Jiménez Blanco recounts in this detailed and well written monograph, up to the end of the eighteenth century the *montes de propios* of Jerez de la Frontera were largely used by locals for the production of acorns while – in the absence of transhumance – the adjacent valleys were dedicated to the pasturing of cattle and horses which fed upon the acorns. The area was a fine example of the *monte mediterráneo*, resplendent with wild olive trees (*acebuches*) in the lower zones and gall oaks (*quejigos*) and cork oaks (*alcornoques*) on higher grounds.

Jimenez Blanco's impressive study traces the origins of the Jerez's traditional patrimony in the late middle ages followed by its almost complete disintegration during the final years of the *ancien régime* and the various phases of nineteenth-century liberalism. He also casts a critical eye on the organization of the residual lands which, for 'strategic purposes', survived the disentailing process down to the present day. What he uncovers from a mass of documentation is impressive and fits nicely into the lively ongoing debate south of the Pyrénées on the fate of Spain's peasant farmers during the liberal era. Almost three decades ago, Joseph Fontana argued for a 'Prussian model' of agrarian reform in nineteenth-century Spain which allowed agriculture to adapt to the needs of modern capitalism without substantially weakening the position of the dominant classes. This 'reform from above', aimed at averting a violent revolution from below, is said to have excluded the peasantry who are portrayed as the primal victims of the legislation, expelled from the lands which they had traditionally cultivated and subsequentially proletarianized. The other main losers, as elsewhere, were the church and the municipalities. The latter were impoverished by the liberal state which forced them to exchange land for public debt. Fontana's Prussian model was applied to Andalusia by the leading scholar, Antonio Miguel Bernal. Yet lately this Marxist approach has come under strong attack from a number of young researchers. Antonio Cabral, whose studies of the province of Cádiz include Jerez de la Frontera, questions the received wisdom that the landlords lost nothing while small peasants, landless labourers and municipal councils were ruined. Instead, he contends that, even after the 1855 Act, much land remained in the hands of the peasantry. Jiménez Blanco's revisionist account argues that the initial aim of the liberals, as manifested in legislation of 1813 and 1822, was indeed to create a large group of self-sufficient peasant proprietors in a clear attempt to establish social harmony, widen political support for the new order and extend the market for agricultural products. The results, however, were not always in line with the expressed intentions of the early reformers. To begin with, successive legislation left ample room for manoeuvre on the part of the threatened municipalities. Moreover the original reform project was not shared by all liberals and became a dead letter during the rule of the more conservative *moderados*. In addition, the aims of Spain's agrarian reformers were modified over time in response to fluctuating social, economic and political circumstances often beyond their control. Before 1855, the radically inclined *progresista* faction defended the peasant component of agrarian reform. However, the Madoz Act cut off this option by selling off the land to the 'haves' rather than the 'have nots' at enormous economic and social costs in the long term. Jiménez Blanco's splendid book is an important contribution to the agrarian history of southern Spain and adds significantly to the general

debate on the aims and achievements of the country's liberal reformers.

JOSEPH HARRISON

SUSANNA WADE MARTINS AND TOM WILLIAMSON, eds, *The farming journal of Randall Burroughes, 1794–1799*, Norfolk Record Society, LVII for 1993, 1995. 138 pp. Illus. £15.

Although a considerable quantity of farming journals and diaries has survived, and a number have now been transcribed, the publication of *The Farming Journal of Randall Burroughes* is a welcome event. As a source, the farm diary is distinct from other types of farm records. Many diaries provide an insight into the focus, concerns, and strategies of the farmer keeping the journal as he planned, undertook, and finally examined the results both of his routine practices and of changes and innovations. On the other hand, they generally lack the structured data available in labour books, farm accounts, and the like. In collections where a number of different sorts of records have survived, a good diary can provide the narrative to complement and enhance the statistics of other records. While the Burroughes archive deposited at the Norfolk Record Office includes only the journal, Randall Burroughes was a coherent and comprehensive diarist. He wrote a particularly informative account of the daily running of the farm and the relationship between the farmer and his workforce. In addition, Burroughes recorded an unusual amount of data. These make it possible to relate statistical details generally found only in other types of records to a narrative missing in labour books and accounts. Thus, the perks earned by the labourers, the treatment of growing crops, the feeding regime of livestock and the like, can be related to the productivity of labour and wage rates, crop rotations and yields, livestock weights and age at slaughter.

This journal is significant for several other reasons. Randall Burroughes was a landowner and farmer at Wymondham, on the claylands of southern Norfolk, in the final years of the eighteenth century and the early part of the nineteenth. The journal was kept between Michaelmas 1794 and the end of December 1799. It is important in both time and location. During the period, Britain was at war with France, and there were particularly bad harvests in 1794, 1795, and 1799. The holding was in Norfolk at the time when the county was under the influence of Thomas William Coke of Holkham. Although there is no indication that they met, Coke and Randall Burroughes were contemporaries, and Burroughes appears to have been influenced by the events at Holkham. Unlike Holkham, Wymondham is not on the easily worked, light sandy soils of the north of the county, but instead on the heavier, more difficult, soils of the south. The journal explores many of the problems of heavy soil agriculture – the impact of wet weather on the daily farm labour routine, the vital importance of soil conditioners, the underdraining techniques employed in East Anglia before the introduction of mass-produced tiles – so helps to balance the conventional image of Norfolk farming.

The excellence of the diary is matched by the introduction, footnotes, and glossary. The archival research done by Tom Williamson and Susanna Wade Martin makes them particularly well qualified to undertake this work. The editors identify and explain elements and concepts central to the farming regime of Randall Burroughes. This has been done using a good general knowledge of the techniques of agriculture along with a combination of extracts from the diary and a variety of contemporary printed and archival material. They have thereby produced a text that is sufficiently comprehensive and detailed to interest and enlighten the more knowledgeable reader, and, at the same time, contains good general information to provide a background for anyone new to the subject.

The book is ideal reading for anyone interested in agrarian history, particularly for those seeking a more comprehensive understanding of the farming calendar and the relationship between a farmer and landowner and his environment.

BETHANIE AFTON

JANICE E. CROWTHER AND PETER A. CROWTHER, eds, *The diary of Robert Sharp of South Cave. Life in a Yorkshire village 1812–1837*, Records of Social and Economic History, New Series 26, British Academy and OUP, 1998. lvi + 666 pp. £35.

This is a gem. The bulk of the volume comprises Sharp's daily diary from 1826 to 1837, though there is a major gap for the year 1828. Sharp compiled it for periodic dispatch to his son, William, domiciled in London with his family, and working for the publisher, Longman, to keep him in touch with events in this modest East Riding market town to which his parents had moved in 1804. Robert was the master at the Anglican school, though his teaching activities – which he clearly relished – are but rarely mentioned. Virtually everything else which moved in South Cave was, together with Sharp's observations of other events, mostly regional and 'national', though on occasion literally global.

Diarist Sharp was an intellectual; he read broadly and avidly, and the editors have compiled an appendix listing the works and authors cited by him. He also literally digested the contents of the press, local, London dailies, and periodical; until late 1830, he subscribed to William

Cobbett's hugely influential *Political Register*. The editors believe, on fairly solid grounds, that Sharp was a shoemaker by trade. He certainly spent much of his leisure time in the private house of another and practising cobbler, who had for a time lived in London, Old Willy Atkinson. Here an assortment of friends convened regularly to discuss current affairs over their pipes. Sharp was, like so many of his original trade, a Cobbettite, though not an uncritical follower. Despite his employment, he was virulently anti-Anglican, and the diary is peppered with derisory, and oft hilarious comments on the incumbent, his curate – dubbed the vicar's apprentice – and a host of other features, including the quality of sermons (and their regular inaudibility) as the schoolmaster was required to attend two services on Sundays in order to register and then control his young charges. How he really maintained himself in post, to the point of defeating an attempt to bring his school formally within the national schools district organization, is unclear. He does observe on 12 March 1830, that 'the parsons and patrons' would have sacked him 'if they could have their own wills and ways. But I remain not by their permission but in spite of them'. Although Sharp had a strong puritanical streak, for example abhoring gambling, fox-hunting and game-shooting, he exuded a good-humoured tolerance of his neighbours' penchant for drunkenness, and if he periodically complained over the thieving propensities of some of the 'idle' poor, he repeatedly expressed sympathies for local under-employed, underpaid and underfed farmworkers. He also condemned enclosure, and through the medium of the diary gave his son details of farmers and their open field holdings at his birthplace, Barming (on the coast some six miles south of Bridlington), in 1739. This revealed one large, nine modest (58 to 130 acres) and nine small farmers (12 to 46 acres), together with six smallholders of under ten acres. Sharp's father was among the latter group. Like Cobbett, Sharp was particularly critical of the rise of large farms tenanted by substantial capitalists, a feature of South Cave too and reflected in the decline in the number of farmhouses, and he was also incensed at such farmers' refusal to compensate labourers with allotments for their loss of access to commons and wastes. In Sharp's diary we gain some intimate insight into that rarely documented phenomenon of this period, the knot of countryside political radicals and what they really thought, a phenomenon which but for such sources would have been largely lost to history.

As a literate and numerate man, Sharp played a broad role in local society. A sometime holder of unpaid parish offices, he also earned more through a range of employments including friendly society clerk, letter writer, accountant, collector of local and assessed taxes, and land surveyor. For a few years he experimented with shopkeeping, though its day-to-day running was left to his wife. Some of the detail revealed here about such modest entrepreneurship also comprises a rare historical record of rural retailing, a very common form of dual-occupancy. In short, the diary throws considerable light on a rural community, and historians will be surprised at the rich rewards garnered by trawling through the details as recorded by Sharp.

Only an impertinent reviewer would try to pre-emptively enumerate these, but an exempilfication of one significant theme might be less offensive. In his classic article on 'moral economy', E. P. Thompson wrote that 'every harvest was accompanied by talk of mildew, floods and blighted ears', a comment which this reviewer once felt exaggerated. Sharp proves Thompson's point. Although Sharp had some personal interest in farmers' prosperity, not least through his land surveying, which often established precise acreages for the purposes of contracts for harvesting and stock grazing on root fodder crops, a combination of his sensitivity to the adverse effects of rising prices for plebeian consumers, the fact that he himself was dependent on the market for everything other than possibly some vegetables, and his animosity to especially farmers' incessant complaints over weather, harvest prospects and market conditions, generated his perennial suspicion over farmers' motives. 'To hear the farmers talk you would think that there is nothing but famine staring us in the face'; 'they say barley is ripening very unkindly... what they call night ripe or Moon ripe'; 'another such [wet] day and all the wheat will be sprouted'. Market-day manoeuvrings between farmers and corn factors at South Cave are also repeatedly documented. On occasion Sharp unambiguously endorsed moral-economic notions, among them the need for legal powers to force all farmers to 'bring their articles to market in a regular way', rather than withhold stock in attempts to drive up prices. Like Cobbett, Sharp argued that farmers should campaign for lower rents, rather than clumsily contrive to push product prices upwards, and specifically condemned the biggest local landowner for being 'a great ... stranger here as any Irish absentee' who spent none of the income derived from his South Cave estate in the place itself. Not surprisingly, Sharp loathed the corn laws as symbolic of the self-interested use of oligarchic political power by the aristocracy; the country was 'kept under the tyranny of a corn monopoly'. Although the diarist was very friendly with the drunken miller Marshall – 'the man of dust' – he condemned his parsimony and several of his sharper business practices, including flour adulteration. Sharp adopted several of Cobbett's derisory linguistic devices – 'jolterheads' and 'bull frogs' among them – and agreed with the great

polemicist's view that 'where the countries are most fertile the poor live the worst'. 'Prodigality and penury rule the land'. Nor did Sharp invariably restrict expression of such opinions to Old Willy's parlour; sometimes he spoke out, thus suggesting that even in the heart of Tory-dominated rural England, radical interpretations of the great issues during the last decade of Hanoverian rule found their relatively humble articulators.

ROGER WELLS

BARRY REAY, *Microhistories: demography, society and culture in rural England, 1800–1930*, CUP, 1996. xxv + 288 pp. 49 tabs; 36 figs; 29 plates; 1 map. £40.

In this ambitious and stimulating study of the three parishes of Boughton-under-Blean, Dunkirk and Hernhill in the Blean area of Kent, Barry Reay seeks to entwine two historiographical strands which have all-too-frequently tended to diverge, even in the 'new rural history'. On the one hand, the demographic techniques of the Cambridge group (especially family reconstitution) are brought to bear on a core sample of 401 families to facilitate analyses of trends in marital and extra-marital fertility; on the other, more intimate social and cultural details are revealed through the imaginative use of qualitative sources such as petty sessions records, school log books, and the reports of the medical officer of health. In this latter enterprise, Reay has two further invaluable weapons in his methodological armoury: the remarkable investigation carried out by the barrister Frederick Liardet in his role as investigator for the Central Society of Education in the wake of the *Last Rising of the Agricultural Labourers* of 1838 (about which Reay wrote so passionately in 1990); and a series of oral histories gathered both by Michael Winstanley in the 1970s and by Reay himself in 1991–92. Accordingly, the thematic chapters range from the purely demographic (dealing with fertility decline; and with health) to the broadly cultural (the social economy; class; family life and kinship; and literacy), with one especially significant contribution (ch. 7 on sexuality) standing somewhere between the two.

The result is a thoroughly absorbing book which is able not only 'to inject some class and cultural context into the demographic analysis' (p xxi) but also to go some way towards answering Edward Thompson's famous question: 'how did a society whose manifest ideology was paternalism feel from below?'. The inequalities of wealth and power to which the inhabitants of the Blean perforce accommodated themselves are vividly encapsulated by the fact that the annual dog-biscuit bill of one of Hernhill's absentee landlords was the 'equivalent of the yearly wage of two agricultural labourers' (p. 15). In this context, it is little surprise that Reay's evocative reconstruction of the multi-faceted social economy through which the poor put together a living (ch. 4) should include such incisive discussions of both credit and of theft.

Reay modestly but convincingly challenges a whole number of shibboleths held dear by early modernists and nineteenth-century specialists alike. He is particularly concerned to demolish the Laslett-Robin model of a 'bastardy-prone sub-society', and indignantly rejects the loaded language historians have brought to bear on this emotive subject (p. 190). He argues that whenever the demographic transition was completed in the Blean it had a history which stretched back to the early nineteenth century, and speculates about the earlier history of the 'push him off' method of birth control and the abortions to which his twentieth-century oral informants refer (p. 259). His discussion of 'literacies' (the plural is significant) self-consciously emphasises those least affected by the nineteenth-century transition to predominant literacy, and concerns itself with the ambiguous significance of literacy for those (particularly the agricultural labourers) who stood at the interface of the oral and the literate, both within their own households and over their life-course. In this, as much else, Reay had successfully brought the insights of a distinguished historian of the seventeenth century to the very different terrain of the nineteenth. For early modernists in particular the challenge is now to find a research method which might allow the analysis of the transformation of rural England from the Terling reconstructed from hearth tax records and probate inventories by Wrightson and Levine to the Blean recreated here through 'total reconstitution' of census and parish register.

There are, inevitably, criticisms. Although Reay argues (almost in passing) that the most significant fall in family size occurred in the period immediately following the institution of the new poor law of 1834 (p. 64) and that 'playing the poor law system' (pp. 128–30) was a central plank in the makeshift economy, there is rather less on the meaning and experience of parish relief than some readers might expect. Historians of religion and crime might also feel that their interests receive short shrift. But this is arguably to miss the point. Reay regards his project as 'strategically situated social history', reconstructing 'knowable communities' in the wider worlds of demographic, social and cultural change (p. 262). As a series of essays demonstrating the importance of local context for the understanding of the variegated process of social change, *Microhistories* successfully combines the merits of the long and highly-developed tradition of English local history with those of the ethnographic tradition of *Quaderni Storici*. Whether or not Reay would follow his Italian counterparts in wishing that his project might render macrohistorical analyses irrelevant, it is to his

credit that all our 'visions of the people' – in the seventeenth-century as well as in the nineteenth – will be influenced by his determination to interpret 'place' in terms not only of *class* but also of *locale*.

STEVE HINDLE

MARION SHARPLES, *The Fawkes family and their estates in Wharfedale, 1819–1936*, Thoresby Society, Leeds, 1997. xvi + 210 pp. Illus. £15.

This is another of those useful small monographs that help inform 'broad brush' publications which identify national trends. The book is derived from a M.Phil dissertation and although Marion Sharples is the author, due to her illness the thesis was edited for publication by Gordon Forster and David Steele of Leeds University. The context of the book holds no real surprises in terms of the process and progress of a landed estate but it is scholarly in its research, is very readable, has drawn on a wide variety of sources and contains a wealth of detail. The structure of the book is thematic. The family and its management of the estate is examined in the first few chapters while the second part of the book concentrates on agricultural practice, farmer responsiveness and local diversity. A useful survey of sources identifies the problems inherent in this type of research and throughout the work there are attempts to position the findings in a broader context.

Generally the Fawkes family were efficient stewards of their estate, being responsive to opportunity but drawing in their belts in difficult periods. They were progressive estate managers and in the late 1820s were spending in excess of an estimated 15 per cent of their income on land improvement. They continually encouraged farmers to move more fully into mixed farming. The position of the estate, on the outskirts of the West Riding conurbation meant that land values were high. The Fawkes family were able to capitalize on demand and sell portions of their estate in order to retain the rest. The growth of social concerns and leisure interests in the late Victorian period also advantaged the estate as land was sold for reservoirs, a hospital and golf course. In addition the proximity to the West Riding also enabled sales of perishable products and the estate benefited particularly from the sale of milk.

In common with other estates, the Fawkes estate carried the financial burden of encumbrances and settlements throughout the nineteenth century. It is estimated that in 1899 the family's debt stood at *c.* £100,000, probably little changed since 1824. Financial crises occurred at specific points during the century but were largely related to family events such as death and generous settlements rather than to exogenous factors. The family's dairying business which had been established in 1888 was sold in 1899 along with part of a valuable collection of paintings to service debts. The estate was able to stave off the worst effects of depression by building on the advantages of mixed farming and taking full advantage of nearby markets.

The family were at the forefront of developments in agricultural education and were keen to disseminate progressive ideas in agriculture. They were instrumental in the establishment of both the Yorkshire College (which subsequently became the University of Leeds) and the Yorkshire Agricultural Society. Due to the encouragement of Frederick Fawkes, President of the Yorkshire Council for Agriculture Education, land near York was purchased in 1938 for educational purposes. This later became Askham Bryan Agricultural College.

In the second part of the book the close oversight of tenant activity by the estate's agent is examined and a useful analysis of MAF statistics is undertaken. Finally a brief and rather inexplicable comparison of the experience of estates in the East Riding is undertaken. The conclusion drawn is that the experience of the Fawkes estate in the nineteenth and early twentieth centuries was similar to that of many other estates. The study concludes by showing that the family had proved the success of their strategies for survival and even by the 1930s they still owned over 4000 acres.

Overall this is a valuable and well written study and is recommended to those with an interest in agrarian history at both local and national level.

CHRISTINE HALLAS

VICENTE PINILLA NAVARRO, *Entre la inercia y el cambio: el sector agrario Aragonés, 1850–1935*, Ministerio de Agricultura, Pesca y Alimentación, Madrid, 1995. 546 pp. No price given.

With the odd exception, such as in the writings of Leandro Prados, it is commonplace for all general interpretations of modern Spanish economic history to single out the agricultural sector as a leading factor behind that country's relative economic backwardness before the outbreak of the Civil War of the late 1930s. Yet for over two decades Spain's agricultural historians have been demonstrating the existence of dynamic change in the countryside, especially during the first third of the twentieth century. This optimistic approach to Spanish agriculture, first elaborated by the Catalan historian Roman Garrabou in the mid 1970s, and reinforced by the detailed and exhaustive studies of the Grupo de Estudios de Historia Rural in the 1980s, forms the background to Vicente Pinilla's nicely constructed account of Aragonese agriculture from the middle of the nineteenth century to the Spanish Civil War. Indeed, Pinilla's work, published by the Ministry of Agriculture, is the first volume to appear

of a third generation of research consisting of regional approaches to Spanish agriculture at this time. As such, it will surely be a model for future investigation. Its title *Between Inertia and Change* bears witness to a marked dualism in this region of north-eastern Spain between the remarkable transformation which took place in the irrigated lands of the Ebro valley in the province of Saragossa and the limited possibilities for growth and development in the dry farming areas of Huesca and Teruel. Pinilla's painstaking approach builds up a detailed picture, based on a variety of hitherto little consulted data, of the contrasting fortunes of the two zones, focusing on the role of the environment on potential economic development, the availability of water resources, soil quality, climate and altitude.

Part Two of the work details changes in agricultural production, particularly from the late 1880s onwards. Here he shows that cereals dominated Aragonese agriculture throughout the period. The vine, hit by the ubiquitous phylloxera outbreak of the 1890s, experienced a sharp reduction in the surface area planted, despite the introduction of American vinestock, at considerable cost to the region's small landowners. The most rapid changes occurred after the turn of the century with the introduction of industrial crops, especially sugar beet, forage and alfalfa, thanks in no small part to the provisions of both irrigation and artificial fertilizers. If the general outlines of Pinilla's study were already familiar to specialists, his use of sources and careful marshalling of the evidence make this a most valuable contribution to our growing understanding of Spanish agriculture during this formative period.

JOSEPH HARRISON

BRIAN SHORT, *Land and Society in Edwardian Britain*, CUP, 1997. xviii + 380 pp. £45.

In 1981 David Spring delivered the Tawney lecture to the Economic History Society on 'Land and Politics in Edwardian England' (subsequently published in *Agricultural History*). In the same year Avner Offer published his *Property and Politics 1870–1914*. To many of us these were ground-breaking studies: before 1980, economic historians rarely worked on landownership in the period after the great agricultural depression and many books on the theme ended with a short 'sunset' chapter, picturing the twentieth-century owners of land dwindling in number and status, within a world of debt, depression and death, taxation, rural poverty and the casualties of 1914–1918 completing their ruin. Brideshead had finally succumbed to the age of Hooper.

There were obstacles to investigating the financial state of landowners in the twentieth century, in particular the difficulty of finding good primary sources. The state, in the nineteenth century, had quantified and described many aspects of rural life, through a series of royal commissions and select committees. Record offices housed large collections of estate archives from the nineteenth and earlier centuries. Much less was available, however, for the twentieth century. The surveys of the state were closed for periods ranging from thirty to 100 years. In some localities, archivists were not interested in gathering bulky modern archives, which often came with restrictions placed upon their use. Many estate owners and their agents were unwilling to allow scholars access to their 'modern' records, in some cases their unwillingness being strengthened by their suspicion that left-wing academics were looking for material with which to blacken them.

There existed, however, a vast survey of landownership and land values for England, Wales, Scotland and Ireland, the so-called 'Domesday', which was one result of Lloyd George's people's budget of 1909–1910. The records of the survey were released by the Inland Revenue Office in the late 1970s: Brian Short has now (following his earlier articles and short book of the 1980s) written an excellent and very detailed account of the surviving archives. His purpose is the exploration of an archival source of enormous size (he estimates some 40 million pieces of information for England and Wales). His book serves admirably to lead scholars through the intricacies of the interrelated material in its various locations.

When the archives were released, the Public Record Office decided to keep the field books (IR58) and the Ordnance Survey record sheets (IR121, 124–35). The remaining material was offered to county and other record offices, some of which declined the whole, some only accepted part. It is disappointing that Short's list of valuation documents held in local repositories contains so many 'not known', 'no information' or 'no reply' returns. Record offices receive too many questionnaires, but 'no reply' from the National Library of Wales? And did not the PRO keep a record of whom were sent what, possibly even a receipt? These are national archives. The North Yorkshire set was housed, filthy and unlisted, in need of repair, in an unheated workhouse. Short in his appendix records that Sheffield Library staff alleged they had refused the valuation maps, but the South Yorkshire CRO claimed that the Library had destroyed them. Many of the archives are unlisted and so currently untraceable. County boundary changes in 1973 and later have further complicated the location of material: some areas have been in three counties in the last twenty-five years.

In general Short's explanatory text is excellent for England and Wales, rather more abbreviated for Scotland and Eire, and there could be no discussion of

Northern Ireland as all the material is missing. The book has an admirable bibliography and a useful index. It is generally free of misprints, although BPP LXXII, 1874 should be *Return of the Owners of Land*, and there is a curious error on the copyright page which suggests Short's title was once *The Land of Edwardian Britain*. As well as detailed descriptions of the process and product of the survey, Short includes a number of case studies. He warns that there are problems, but shows just how useful the material can be for research into land-ownership, housing, land use, industrial and commercial structures (including farm buildings). Agricultural historians will be interested in his case study of the Ashburnham estate in East Sussex. Using the field books and plans in the PRO, and the valuation books in the East Sussex CRO, Short shows which properties the estate held and to which parish they belonged. Valuations were rare on this estate, and tenure was rarely recorded, but property descriptions were generally very good. The sizes of holdings, tenancy agreements and rents are noted. Information on houses includes the number and use of rooms in 238 houses. The principal house was carefully described, down to the colours of some rooms, the outbuildings, the home farm, the lodges and the garden. A farm description, quoted by Short, includes the building material of the farm and its outbuildings, and a sketch plan of the layout of the cart lodge, stable, store room, granary, loose box, meal rooms, oast kiln, cow lodges and pig pound. Combined with MAF returns of 1909, census material and surviving farmsteads, it would be possible from this material to reconstruct an immensely detailed agricultural survey of this or other estates in late Victorian and Edwardian England.

Ten years after the great valuation began, it was still not complete. It was drowning in its own details: the outbreak of the 1914 war and some adverse judicial decisions caused additional problems, and in 1920 it was finally abandoned. Enough remains, however, to provide material for an army of agricultural historians. Short's book is the essential guide to the use of the 1910 'Domesday' archives.

BARBARA ENGLISH

ROBERT F. ASH, ed., *Agricultural development in China, 1940–1989. The collected papers of Kenneth R. Walker (1931–1989)*, OUP, 1998. xiv + 367 pp. 112 tabs; 7 figs. £45.

Kenneth Walker, of London University's School of Oriental and African Studies, had a considerable influence on the study of the modern Chinese agricultural economy during the 1960s, 1970s and 1980s. This volume, which starts with a short introduction from the editor, brings together papers published by Walker (mainly in *The China Quarterly*) between 1964 and 1989. It also includes a previously unpublished study by Walker of the provincial-level impact of the so-called 'Great Leap Forward' on grain production and food supply, a study which, with characteristic unremittingness, describes how and explains why widespread rural famine occurred.

Walker's academic background seems to have been a fairly conventional one for a British agricultural economist – his doctorate from Oxford University's Agricultural Economics Research Institute was on the competition between the Forestry Commission and the agricultural industry for marginal land in Great Britain. At Oxford, like so many others, he was influenced by Colin Clark whose ability to gain insightful understanding of economic development from world-wide quantitative evidence has become legendary. The result was a relentless, possibly obsessive, attention to detail in Walker's work (which is manifested in the number of tables in this book). How he came to focus his intellectual energies on China and how he became adept at using Chinese-language information sources (an important characteristic of his later work) are matters on which the book's editor is silent.

The volume essentially covers the Maoist (collectivist) and Dengist (reformist) periods of Chinese agricultural history, and only touches upon the topical concerns of rural industrialization and regional disparities in rural development. The book is, however, more than simply an historical record since the subject matter has present-day relevance for at least three reasons. Firstly, Walker's writings stress the persistently central role (at times inhibiting, at times facilitatory) of the agricultural sector in China's economic development, a feature which is as relevant today as it ever was. Secondly, agricultural problems in China (especially in the grain sector) remain of major concern both within the country and in world markets. Thirdly, the continuing lack of a 'solution' to China's agricultural problems has led to some disenchantment with the private farming which was encouraged during the reformist period and to the possibility of a degree of re-collectivization being introduced at the local level. Walker's papers are valuable aids to the understanding of the origins of such contemporary issues.

Two strands run through the book. One is Walker's interest in the institutional aspect of China's agricultural development. In particular, he focused attention on the theoretical case for collectivization and on the vexed question of incentives in a collective economy. The second is Walker's interest in the grain sector. The central economic issue for China has long been its ability to feed a large and often densely distributed population, and Walker immersed himself wholeheartedly in collecting

statistics and in making calculations and estimates to assess production and consumption trends.

Ultimately, however, the modern reader must squirm a little at Walker's approach. His 'fieldwork' was conducted in libraries rather than in the Chinese countryside, and one suspects that this was not entirely due to the practical difficulties of working in China in his time. Further, he worked comfortably within a conceptual and practical framework of top-down planning, grandiose management, satisfaction with aggregate statistics and single-minded productivism. Now that such a framework is largely discredited, agricultural economists are increasingly open to anthropological, sociological and even ecological perspectives, and they are more inclined than in Walker's day to consider the impacts of economic developments on ordinary people. Accordingly, Walker's library-based academic method and its focus on major institutions and on central government policy today seem coldly technocratic.

T. N. JENKINS

ROSEMARY FENNELL, *The Common Agricultural Policy*, Clarendon Press, 1997. xiv + 439 pp. £48.

This is a very thorough, intense and detailed study of the evolution of the Common Agricultural Policy, extending to over four hundred pages. It has been written by an agricultural economist but the author deliberately avoids technical economic analysis: in only one of the book's thirteen chapters does the reader require a reasonably sophisticated knowledge of economics.

The author seeks to explain why the policy-makers acted as they did: 'what were their intentions in devising and implementation of the policy; what have they had to say about its effect, and how has the outcome compared with their intentions?' (p. iv). The evidence is drawn primarily from literature emanating from the institutions of the European Union, and particularly the Commission, rather than that of economics and other academic disciplines. This emphasis is clearly reflected in the narrative as well as the bibliography, which is large, extending to some eight pages of institutional references, compared with just over two pages of 'other references'. Economists requiring a survey and evaluation of the economics literature on the CAP may be disappointed. Thus, for example, the 'economics chapter' provides little on the various empirical estimates of the economic costs of the CAP or on the practical and theoretical limitations that are inherent in this kind of analysis. This, however, does not detract from the merits of the book, as it is pitched at a wider audience; indeed non-economists may regard it as a blessing!

The coverage and detail of the book is impressive. It is well written and its writing must have been a monumental task, as indeed is its reading. The early chapters cover the foundations of the CAP in the 1950s and 1960s, and it is interesting to read how far-sighted were policy-makers in their analysis of the problems that were subsequently to bedevil the CAP, even if the policies adopted failed to reflect their foresight. The subsequent chapters are thematic, focusing on specific aspects of the CAP. Two chapters provide statistical evidence on farm incomes within the EU, as well as a discussion of the problems of their measurement, comparability, interpretation, and questions of welfare, household and non-farm income sources. Some of this is fairly technical but a thorough discussion of income issues is to be welcomed given the centrality of agricultural incomes in policy formulation. Further chapters discuss price and market policies, the reasons for their pre-eminence over structural policies (a major criticism made of the CAP), the famous and to some, infamous, Mansholt Plan, the weaknesses of structural policy, the *ad hoc* measures to help disadvantaged farmers and problem regions, production and marketing policies, commercial policy, and the most recent policy dimensions concerning environmental issues and rural development, culminating in a final chapter on unresolved issues. In this the author essentially does a stock-taking exercise, covering all the different aspects of policy, their successes and failures and potential future directions. The unresolved issues are many, so much so that the reader might wonder as to what precisely the CAP has achieved.

The discussion of incomes policy is particularly interesting although the author does not consider what income and employment in agriculture might have been in the absence of the CAP, for example in a more or less free market situation. The sections on eastern enlargement of the EU and environmental policy are also thought provoking. In conclusion, the appropriateness of the continuation of a sectoral policy for agriculture is seriously questioned and the proposal made that the EU's objectives might be better achieved, not only by further policy reform of the CAP, but by a broader multi-sectoral approach to rural areas and their problems. Despite the CAP's long history, the author demonstrates that there are clearly important unresolved issues and whilst the reader may not agree with all the conclusions in the final chapter, it is a stimulating and thoughtful one. This is a valuable book which fills a large gap in the literature of the CAP and the history of the EU and the author is to be congratulated.

GARTH HUGHES

B. POWELL AND N. WESTACOTT, *The Women's Land Army, 1939–1950*, Sutton Publishing, 1997. 126 pp. Illus. £9.99.

Indifferent as I am to the opinions of post-Freudian analysts, I freely admit that among my most treasured possessions from childhood is a pair of rather ragged shorts cut from my mother's Land Army corduroy breeches. It will come as no surprise then, that my reading of this book, comprising more than two hundred photographs celebrating the achievements of the Women's Land Army during the last war, was an experience wherein enlightenment was intermingled with *frisson* and nostalgia.

Under the direction of the inimitable Lady Trudie Denman, Women's Land Army county committees were estblished in 1938, and the Army itself officially formed in June 1939. As recruiting got underway numbers of landgirls expanded from 7445 in November 1940 to a peak of 77,000 in August 1943, after which recruitment declined in the face of advancing demand for women to work in munitions factories. Clutching their joining certificates and copies of W E Shewell-Cooper's *Land Girl*, a manual for volunteers published in 1941, the girls, some eagerly, and some with misgivings, underwent a brief period of training before being allocated to farms. While some volunteers travelled each day from their homes, others were billeted with farmers and their workers, the remainder being lodged in hostels which might vary in salubrity from a dank Nissen hut to a palatial country house. Many, of course, were away from home for the first time, and it required considerable strength of character to cope with the temporary severance of family ties, the social and cultural isolation of rural life and, in the case of town bred girls, the frequently churlish attitude of their country cousins. But there were compensations. Saturday nights out on the town with the girls (the more pleasurable if a RAF or USAF base happened to be nearby), membership of the YFC, tea parties with the local gentry, and other innocent diversions provided some escape from the agricultural treadmill.

Powell and Westacott's book, based upon a large collection of photographs accumulated after an appeal in 1994, is divided into a sequence of sections dealing with aspects of the landgirl's life, each preceded by a brief introduction. Admirable as the photographs are, the book tells us little about the landgirl's attitude towards her work, her hopes, concerns and fears; or of the often ambiguous attitude of her employer and his male workers. As the authors freely admit, the photographs were submitted in the main from W.L.A. members who enjoyed their days on the land; those for whom it was unmitigated hell (and there were many) are not represented in this volume. Thus we have smiling girls on tractors, girls leading horses, happy looking maidens hoeing mangolds under the sunshine, bare legs tanning in the harvest fields and so on. Not much sign here of the rotten winter jobs: mucking out bullock yards by hand, picking brassicas in January frost, ploughing hour upon hour in driving rain on a cabless Caterpillar tractor, one's shoulders protected by a hessian sack! And how clean and well-scrubbed some of the girls seem, looking for all the world like Stubbs' haymakers or Francis Wheatley's milkmaids! This is especially so in the minority of carefully-posed photographs in the collection. In one case three girls are creosoting a poultry house, a worthy and creditable task, although surely not one to be undertaken in shorts with what appears to be an artist's paintbrush.

But these are carping criticisms and one is constantly impressed both by the range of work and the sheer hard labour undertaken by members of the W.L.A. I shudder at the thought, let alone the sight of a rat, and cannot but admire the enthusiasm with which the two hundred W.L.A. pest controllers went about their noisome and grizzly task in the winter of 1942. Again, it was fascinating to read of all-female itinerant threshing gangs, the photographs of which invite comparison with Hardy's description of threshing in *Tess of the D'Urbervilles.* One particular (posed) photograph of girls loading 18 stone sacks of wheat on to a trailer recalled for this reviewer many hours spent dragging 'railway sacks' of grain across rutted fields, and the silent prayers of thanks offered for the development of the tanker combine. On many holdings the arrival of the landgirls coincided with the arrival of the farm's first tractor, perhaps on hire or on loan from the War Ag. There was much muttering and moaning among the rural wiseacres as to the competence of females with machines, particularly with the early tractors which were frequently reluctant to start and often eccentric in steering and braking. Yet, for all the comment, the girls mastered the tractors and appurtenant machinery with no difficulties, and as the war passed on even the most obscurantist males grudgingly admitted that the women at last were doing a man's job.

In fact, they did an absolutely vital job. Without the W.L.A., the armed services and prisoners-of-war, Britain could not have farmed its way through the period of hostilities, which makes it all the more surprising that demobilized landgirls (unlike their colleagues in the fighting forces) received no monetary gratuity. Since Vita Sackville-West's 1944 volume there appear to have been few attempts to produce a definitive scholarly history of the W.L.A. Although the official records were destroyed after the War, there remain collections in local archive offices which might form the basis of such a work; compensation in a sense to surviving W.L.A. members treated

in so offhand a way by a niggardly government. Powell and Westacott's collection of photographs duly whet the appetite.

R. J. MOORE-COLYER

ROY BRIGDEN, *Ploughs and Ploughing*, Shire, 1998. 32 pp. £2.95; DAVID HANCOCK, *Old Working Dogs*, Shire, 1998. 32 pp. £2.95; IVAN G. SPARKES, *Old Horseshoes*, Shire, 1998. 32 pp. £2.95.

These three volumes comprise reprints originally published in the 1970s and 1980s in the informative and lavishly-illustrated 'Shire' series. Brigden's rather breathless run through the history of the plough from ard to three-point linkage includes much useful technical detail and an excellent section on the craft of ploughing itself, a craft whose mastery raised the dignity of the practitioner above the common run of labour. The development of the light 'Rotherham' plough, a defining moment in the history of British agriculture, occurred in response to the need to reduce draught power and as these implements became factory-produced, so their basic features were incorporated in ploughs for the next century or so. Nevertheless, the village ploughwright's craft was still required as ploughs evolved in accordance with regional and local needs and soil types. In the early nineteenth century, for example, visitors to local and national agricultural shows were able to inspect a great variety of ploughs, some matched to soil characteristics and others to seasonal requirements.

Despite the appearance of steam ploughing in the 1870s, the self-lifting ploughs of the inter-war period and eventually of Harry Ferguson's mould-breaking three-point linkage system, ploughs were predominantly pulled by animal power from the Bronze age to the outbreak of Hitler's war. Draught animals, of course, needed to be shod, and Ivan Sparkes' *Old Horseshoes* traces the horseshoe from the Roman *sola ferrea* via the early nailed shoes of the fifth century, to the racing plates and ploughing shoes of the present day. In so doing he emphasizes both the variety of design and the ingenuity with which shoes met the conformational and veterinary needs of animals of different shapes and sizes. The farrier's art seemed capable of accommodating every contingency from overshoes, mud shoes, leather shoes (for ponies dragging movers across genteel lawns), shoes for oxen, donkeys, laminitic animals and so on. I have long been impressed by those scholars who can sustain, over a long period, a narrow focus on the arcane and esoteric, particularly where this involves mastering a vocabulary of technical terms often of baffling complexity. Sparkes manages to write interestingly on the horseshoe without feeling the need to resort to the sort of exclusionist language employed by many commentators on equine and equestrian matters.

So too does Colonel Hancock in his volume *Old Working Dogs*, meaning, incidentally, working dogs formerly numerous, rather than working dogs stricken in years. Having been bitten by, mauled by, and generally pestered by dogs for a long while I am not over-enamoured by the creatures. Yet I found Hancock's work of abiding interest. Whether he is describing terriers, shooting dogs or pastoral working dogs, he writes with the sort of enthusiasm which one might expect of a regular contributor to *Dogs Monthly*. What is particularly remarkable (and this is paralleled in sheep, cattle, pigs and horses) is the steep decline in the number and range of local types, when the list of recognized Kennel Club breeds is compared with the situation in the past. If animals like the Sealyham, the Cardiganshire Corgi and the Sussex Spaniel are now numerically weak, the Wheaten Norfolk Heeler, the Antrim Glenwherry and the Sussex Bobtail are finally extinct, with the usual implications for genetic diversity. Like other volumes in the 'Shire' series, this is a most useful little reference work. I did not know, for example, that the Pembrokeshire Corgi probably originated from Swedish Vallhund blood introduced by early Scandinavian settlers in south Wales, or that that most unprepossessing of dogs, the Dandie Dinmont (chosen, peculiarly enough, for stardom by Scott in *Guy Mannering*), is close to extinction. Referring to the inevitable whiff of anthropomorphism among breeders of élite animals, Harriet Ritvo observed some ten years ago that in the pursuit of pedigree such people celebrated themselves as well as the breeds they were perpetuating. In this context I loved Colonel Hancock's rather sniffy references to the 'artisan sportsman' who prized Scottish Deerhound blood in their lurchers; men 'who show no respect for pedigree'. But the three volumes mentioned above lend lustre to the Shire pedigree, and one looks forward to more in the same vein.

R. J. MOORE-COLYER

Agricultural History Review

A journal of agricultural and rural history

Editors:
Prof. R. W. HOYLE (articles)
and Dr J. R. WALTON (reviews)

Agricultural History Review is published twice yearly by the British Agricultural History Society and issued to all members. The editors welcome contributions on any aspects of the history of agriculture, rural society and rural economy. Articles are normally expected to be about 8,000 words in length, but the editors are willing to consider longer papers on their merits. The *Review* also publishes occasional supplements. Proposals for supplements, which may be monographs or collections of essays about a common theme, should in the first instance be sent to the editors. All intending contributors are advised first to obtain a copy of the *Reviews's* 'Notes for Authors and Reviewers' from the editors. (This can also be found on the society's web page, http://www.bahs.org.uk/)

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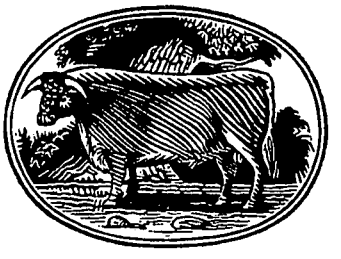
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Book Reviews

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The British Agricultural History Society

1999–2000

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Chaloner Memorial Lecture*

The paradox of the Marks. The exploitation of commons in the eastern Netherlands, 1250–1850

by Jan Luiten van Zanden

Abstract

The paper presents a survey of the development of the *markengenootschappen*, the institutions which governed the exploitation of the commons in the eastern Netherlands between 1250 and 1850. It deals with the principles which governed the management of the commons, relates these to the 'moral economy' of the peasants, and addresses the question of whether the marks were able to prevent their overexploitation. Finally, the division of the *marks* and the enclosure of the commons in the nineteenth century is described.

In the past, almost every agricultural society had to find a way to organize the exploitation of the commons, meadows, wastes and woods which were communal property. These commons were essential to the economy of the village community. They were used for grazing cattle, which in turn supplied manure for the arable, for the acquisition of firewood and peat, and the provision of a great diversity of subsistence goods. Game was poached on the commons. Herbs, mushrooms, nuts and berries were gathered there, wood was assembled for building houses and stables, leaves were collected for fodder and so on. Commons constituted an important part of the economic basis of agricultural societies: therefore the inhabitants of a village depended heavily on the good management of this collective property.

The common grounds were in constant danger of being overexploited. This problem is the focus of Hardin's classical study of the 'tragedy of the commons'. Hardin showed that the individual farmer acts in a rational way when he maximizes his use of communal property. The immediate private benefits accruing to the individual are usually more significant than the 'delayed costs of overexploitation' which were suffered by the community as a whole. This results in the 'tragedy of the commons', namely that overexploitation leads to the degradation of common property and its ultimate destruction. In Hardin's view, this symbolizes the degradation of the environment as the consequence of the search for individual, short-run, profit. Hardin concludes:

> Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit in a world that is limited. Ruin is the destination toward which all men

* A lecture given at the Society's Shrewsbury conference, 7 April 1998, in honour of the late Professor W. H. Chaloner (1914–1987), a member of the Society and its Executive Committee over many years.

rush, each pursuing his own best interest in a society that believes in the freedom of the commons.[1]

In a pioneering piece of research on the actual management of common grounds, Elinor Ostrom has disputed Hardin's pessimistic conclusion that all resources held in common will ultimately be destroyed because of overexploitation. Ostrom shows how in the past, in order to solve or control this problem, agricultural societies instituted organizations which served to regulate the exploitation of the commons. In very different environments, extremely stable management of common resources by these organizations could be found, whether in the Alps with their extensive pastures, in areas reliant on irrigation, where the supply and division of water had to be regulated, or in coastal areas where fishing grounds had to be managed.[2] Sustainable management of commons was achieveable if certain conditions could be met. According to Ostrom, a sharp demarcation of both common grounds and those entitled to use them are among these conditions. To this end, the institution that regulates the allocation of common rights needs to draw up clear rules and operate a system of supervision, linked to sanctions in case of abuse. Mechanisms solving possible conflicts and a certain degree of involvement by the commoners in decision making are also of the utmost importance. Finally, Ostrom shows how intervention by a central government can seriously disturb the equilibrium within the organization.[3]

In this paper, I want to discuss some of these questions on the basis of the development of communal institutions in the eastern Netherlands. This study focuses on the provinces of Drenthe, Overijssel and Gelderland, and in particular on those areas characterized by relatively poor, sandy soils. It was, certainly by Dutch standards, a region of low population density throughout the period of study; levels of urbanization were also relatively low, although along the borders of the IJssel river there existed a number of towns (Kampen, Zwolle, Deventer and Zutphen) which played a role in international trade and which acted as regional centers of trade, industry and government. A rather one-sided agriculture came into existence in the early modern period, which can best be characterized as an infield-outfield system. The relatively small fields – which made up of less than 10% of the total area – were cultivated intensively with rye, buckwheat and (less importantly) barley and oats. In some fields rye was cultivated year after year, the only change consisting in its alternation between a summer and a winter crop. This necessitated intensive manuring of these fields, which was done through a combination of grazing the cattle on the stubble after the harvest, and mixing the cattle and sheep dung with turf which was cut on the wastes. Almost all arable fields seems to have been held in severalty relatively early – that is, by the late Middle Ages – but certain practices related especially to the collective sowing and harvesting of the crops and to the cattle grazing after the harvest did continue until the seventeenth and eighteenth centuries, after which they gradually disappeared.

In this region, *markegenootschappen*, marks in short, were instituted in the thirteenth, fourteenth and fifteenth centuries in order to manage the common grounds. According to Slicher

[1] G. Hardin, 'The tragedy of the Commons', *Science* 162 (1968), pp. 1234–8 at p. 1244.

[2] Elinor Ostrom, *Governing the commons. The evolution of institutions for collective action* (1990), pp. 58–90.

[3] Ostrom, *Governing the commons*, p. 90.



Map of the Netherlands in the seventeenth and eighteenth centuries; the shaded area is the region studied in the paper.

van Bath, the first marks were founded between 1250 and 1350 in a period of rapid population growth, when the original forests threatened to disappear because of large-scale reclamations, and common grounds were becoming increasingly scarce.[4] Unfortunately, due to a lack of sources, the circumstances in which the marks were established is shrouded in mystery. In Overijssel and Guelderland, the initiative to establish marks was presumably mostly taken by the large landowners of these communities, whether local landlords or landowners from outside the countryside, such as religious houses and cities. As a result of the extensive reclamations during this period of population growth, landlords probably believed that their rights to the common grounds were being threatened. In Drenthe, where large landownership was almost absent, and most farmers did own their land, the organization of the mark was probably initiated by the farmers themselves, perhaps copied from other regions. As a result of the lack of outside involvement, the distinction between the mark, which regulated the management of the commons, and the village community, was often unclear in the latter case.[5]

Throughout the eastern Netherlands, the owners of the farmland were entitled to exploit the neighbouring 'wastes'.[6] This legal situation sharply contrasted with the western part of the country, where the sovereign – the count of Holland or the bishop of Utrecht – had acquired the rights to all the wastes. As a result, similar organizations never came into being in the western Netherlands. As the population started to increase rapidly during the Middle Ages, the feudal lord sold the wastes to farmers – most of them new settlers – in individual plots.[7] But in the eastern Netherlands, in order to protect the landowners' rights on the neighbouring wastes, the marks were set up as owners of the commons. This legal innovation (which, in the northern Netherlands, appears to coincide with the foundation of guilds in the cities[8]) was presumably modelled on German institutions and spread from the areas directly neighbouring the cities in the eastern Netherlands to the rest of the region.[9]

When the mark was founded, the village consisted of a number of farms that had access to the commons. As a result, the owners of this original group of farms gained possession of mark shares or *waardeien.* In practice, this implied that the peasants who were either owners or tenants of these original farms would in the future enjoy full common rights. They were known as *gewaarden* and formed the upper layer of the peasantry: their farms were known as *gewaarde erven.* The group of landowners who possessed these original farms met regularly – usually annually on a fixed day – in order to decide on the use of the commons, to impose fines on those who had offended against the mark's by-laws, and to consider all other matters concerning the management of the mark. Depending on the specific structure of landownership, the formal participants in mark meetings were representatives of nobility, of religious houses, town governments, of the urban middle class, and of a few landholding farmers. In fact all peasants had to be present at the mark meeting, since they all had to be informed about the rules to which

[4] B. H. Slicher van Bath, *Mensch en Land in de Middeleeuwen* (s. l. 1944), pp. 55–69.

[5] See J. Heringa, 'De buurschap en de marke', *Drentse Historische Studien* 5 (1982); B. H. Slicher van Bath, 'Buurschap en Markegenootschap' *Ons Waardeel* (1983), pp. 129–133.

[6] Slicher van Bath, *Mensch*, pp. 69–75.

[7] H. van der Linden, *De Cope* (Assen, 1956).

[8] Some marks were also called guilds, Slicher van Bath, *Mensch*, pp. 84–5.

[9] Slicher van Bath, *Mensch*, p. 67; the parallels with marklaw in the neighbouring German area have been established by J. Buis, *Historia Forestis. Nederlandse Bosgeschiedenis* (Wageningen, 1987), pp. 200–205.

they had to adhere. Up to the sixteenth century, the nobility and clergy predominated at these meetings in Overijssel and Guelderland: after the Reformation, the role of the clergy was gradually taken over by representatives of towns and the nobility, and by members of the middle class who had bought former clerical properties from the government. The yearly meeting was chaired by the *markerechter* who had a dominant position in the formal organization of the mark. He was normally a nobleman with extensive landholdings in the community. Sometimes, where this position was linked to the ownership of a specific farm, it fell into the hands of the noble family that owned the farm in question.

With the foundation of the marks in the thirteenth, fourteenth, and fifteenth centuries, a category of farms with full common rights was established. New farms founded later did not have shares in the mark and were therefore being referred to as *keuters,* 'cottagers' or 'crofters' (also called *ongewaarden*). Generally speaking they had (much) smaller holdings and had only limited access to the commons. The original farms, with full common rights attached to them, could, however, be subdivided, resulting in two farms with a half share each, or even four with quarter shares. In later centuries, common rights could be bought and sold, sometimes leading to a very unclear structure with dozens of rightful or presumed claimants. Occasionally, a distinction was made between various groups of cottagers. In these cases, the cottagers who had lived at the mark the longest were allowed to graze more cattle than more recent settlers. In 1561, the mark of Ruinen acknowledged four different groups of cottagers, who were allowed to pasture fifteen beasts and three horses, ten beasts and four horses, ten beasts and two horses, and three beasts respectively; by comparison the *gewaarden* who enjoyed full rights were allowed to hold 35 beasts and six horses in the mark.[10] In practice, the establishment of the marks resulted in two groups of peasants: those with and those without shares in the commons.

This structure, with many regional variations, remained essentially the same until the first decades of the nineteenth century. In 1809, the government attempted to abolish the marks, particularly because it was assumed that they were thwarting the reclamation of the wastes. This ignited a process of enclosure, which accelerated when the government started to put more pressure on the marks in the 1830s. Between about 1300 and about 1800, marks were, however, the institutions that regulated the exploitation of the commons in this part of the Netherlands.

Marks are deserving of study for several reasons. In the first place, the rules that governed the exploitation of commons may illustrate aspects of the economic behaviour of the farmers. I hope to show that these by-laws, to a certain extent, codified the customs and values of the peasantry, or what might be called their 'moral economy'. Furthermore, I want to investigate how successful the marks were in avoiding the 'tragedy of the commons': did they succeed in avoiding overexploitation of common resources? To what extent did they meet Ostrom's criteria for a stable management of common resources? Next, I will describe the dissolution of the marks in the nineteenth century, a process which was, to some extent, comparable to the English enclosure movement. Finally, I want to address the question who profited the most from the marks: the landowners, who had instituted the marks in order to protect their properties, or the cottagers, who, to a certain extent, were also allowed access to the common grounds?

[10] J. G. C. Joosting, 'Willekeuren van Drentsche Marken', *Verslagen en Mededeelingen Vereeniging tot Uitgaaf der Bronnen van Het Oud-Vaderlandsch Recht* (6 vols, 1915), VI, pp. 27–97, at p. 71.

I

The most important sources for the study of common rights are the many surviving mark regulations – *markerechten* or laws of the mark – of which the earliest date back to the fourteenth century.[11] It is immediately clear from these sources that the most significant goal of the mark was to maintain the commons by preventing overexploitation. Therefore, rules were instituted to limit the maximum quantity of wood which could be cut down, the amount of peat which might be dug, and the number of horses, cattle, sheep, pigs and geese that could be kept on the commons. Furthermore, many regulations also applied to the construction of fences between farmland and pasture land, to the grazing of cattle on the stubble after the harvest, the maintenance of dikes and ditches, and to all other matters that were of interest to the village. The legislation on the exploitation of the commons was, however, of central importance for the village.[12]

It is also evident from the mark laws that the rules concerning the commons were based on the customs of the peasantry. This is immediately apparent in the laws of the mark Lutte, dating from 1497. The rules were formulated by the *markerechter*, who systematically enquired about the prevailing customs, and the peasants, who, in reply, gave an explanation of their practices. For instance Leppinckhof, the *markerechter*, wanted to know what were the rights of cottagers. The peasants replied that cottagers were allowed to gather wood in the mark, and that they could, in return for a small fee, cut down one oak and one beech per year.[13]

The example of Lutte is typical of others found in Overijssel and Gelderland. It was the custom there that cottagers had clearly defined rights, even though they were not formally owners of the mark. In a substantial number of marks, this entitled the cottagers to graze approximately half the cattle of landholding peasants. The right of cottagers to get wood or peat from the commons was also often limited to about 50 per cent of the quantity allowed to the *gewaarden*.[14]

Turning to the reclamation of the wastes, we can distinguish two sorts of provisions in the *markerechten*. Sometimes it was completely forbidden, but mostly maximum limits were laid down, these in turn being dependent on the degree to which the farmer was a tenant or owner of a *gewaard erf* or just a cottager.[15]

[11] Collections of marklaws have been published by Joosting, 'Willekeuren'; J. Heringa, *Drentse willekeuren, uit oudere uitgaven verzameld* (Zutphen, 1983); *Overijsselsche Stad-, Dijk- en Markerechten* III. Markerechten I–XXV (Zwolle 1873–1967). The individual by-laws (*markerechten*) cited subsequently are all from this series. J. J. S. Sloet, *Gelderse Markerechten* (2 vols, The Hague, 1911–3).

[12] Compare Slicher van Bath, *Mensch*, pp. 77–82; a more recent overview is given by J. Buis, *Historia*, pp. 35–161.

[13] *Markerecht Lutte* 18 (1497); a comparable dialogue can be found in *Markerecht Losser* 3 (1533).

[14] For instance, in the Dalmsholter mark, an owner of a farmstead was allowed to get six cartloads of wood, a cottar three cartloads and a cottar without a carriage one cartload of wood (*Markerecht Dalmsholte*, 9); later (between 1471 and 1484) these quantities were lowered to three, one, and half a cartload respectively (*Markerecht Dalmsholte*, 12); the number of examples is very large: for instance, in the mark Herfte, the shared were allowed to have six geese in 1531, and the cottars only three (*Markerecht Herfte*, 9–10); in Albergen (1466), the shared were allowed to graze 40 sheep, the cottars only 21 (*Markerecht Albergen*, 7).

[15] *Markerecht Dalmsholte*, 8 (1457); implicitly, this restriction was present in many marks, compare *Markerecht Bathmen*, 25 (1591); *Markerecht Gooi*, 18 (1631).

A typical part of the mark laws were the rules forbidding the commercial use of the commons. Agistment, the pasturing of outsiders' cattle, was usually prohibited; selling wood and peat from the village was also forbidden.[16] It was normally held that only cattle that had been fed by the farmers during the winter were allowed to graze on the common pasture. In this way, a 'natural' upper limit on the exploitation of pasture was created.[17] In order to recognize the cattle of the village community, they were collectively branded; sometimes a new brand had to be used every year.[18] Such measures made possible the effective supervision of the grazing of the commons. The reason given for forbidding the commercial use of the commons was that they had to be reserved for the subsistence needs of the peasants. This was regularly referred to as an important 'moral' basis for the management of the marks. In Gietmen, it was, amongst other things, stated that no more peat should be cut than the peasants would need for their own houses: in Lutte, it was determined that peasants were only entitled to take away wood from the mark if their houses had either collapsed or been destroyed.[19]

The obvious reason for placing limits on common use was that production for the market knew no natural boundaries and would easily result in overexploitation. In modern words, the management of the commons was aimed at sustainability, at the conservation of these natural resources in order to pass them on to future generations. The continuity of the village economy was, after all, dependent on these resources. The by-laws which governed mark management testify to the fact that peasants thought there was a tension between this long term perspective and the short-term gains of market exploitation.

There are a number of differences between the earliest *markerechten* from Overijssel and Gelderland and those from Drenthe. In the latter province the impact of the village community on the common rights was probably even greater because of the virtual absence of large landowners. Oddly, in the earliest marklaws of Drenthe, the common rights of the cottagers were much more restricted than in the rest of the region.[20] A possible explanation for this difference could be that peasants in Drenthe wanted to discourage newcomers, propertyless cottagers who intended to settle on the commons. In the other provinces the situation was different. There, the mark was largely the property of landlords from outside the village. Consequently, the peasants were more likely to strive for a liberal use of the commons.

Another peculiar feature of the laws of the marks in Drenthe were rules which forbade the selling of shares to non-residents. Sometimes the provision was made that a share, and accordingly the farm, had first to be offered to an inhabitant of the village.[21] This right of pre-emption was already well-known at the beginning of the fifteenth century when it applied to all transactions in farmland.[22] By means of these rules, the peasants of Drenthe tried to exclude external large landowners from their community. These rules were fairly effective in the long-term as the peasants in this region remained largely in control of their land. Another remarkable law

[16] *Markerecht Emmen*, 11 (1500); *Markerecht Gietmen*, 8 (1551); *Markerecht Gooi*, 7–8 (1399); *Markerecht Dalmsholte*, 8 (1457, 1498); *Markerecht Stegeren*, 11–12 (1501).

[17] *Markerecht Emmen*, 15 (1545).

[18] *Markerecht Dalmsholte*, 17 (1502).

[19] *Markerecht Lutter*, 26 (1466); *Markerecht Gietmen*, 7 (1551); also compare *Markerecht Tjoene*, 2 (1454); *Markerecht Lenthe*, 21 (1625); *Markerecht Epse en Dommer*, 16 (1566).

[20] Joosting, 'Willekeuren', *passim*.

[21] *Ibid.*, pp. 40, 92.

[22] Slicher van Bath, *Mensch*, p. 75.

was issued in the village of Roden (Drenthe): it ordered that bread, beer, and other foodstuffs had to be offered to members of the village before they could be sold on a market outside the village.[23]

The surviving by-laws of the marks of the eastern Netherlands are able to give us a glimpse of the customs and the mentality that governed economic behaviour in this period. One of their aspects seems to be that they aimed to keep the market at an arm's length. The tension between the long term aim of protecting the value of the commons and the short term gains from exploitation for the market are clear from these sources. In recent writing, too little attention has been paid to this phenomenon. On the contrary, historians have actually emphasized that the economic behaviour of peasants was strongly market-oriented. This has been argued for the farmers of the eastern Netherlands by Jan Bieleman in a number of publications on the agricultural development of the region in the early modern period.[24] Bieleman's argument is based on long series of annual data of the arable production and the livestock of farmers in Drenthe. On the basis of this quantitative evidence, Bieleman has concluded that they responded to changes in relative prices and that they were (therefore) significantly producing for the market as early as the fifteenth and sixteenth century. According to this view, peasant and market co-existed in harmony.

The information from the archives of the marks clearly shows that the relation between peasant and market was not as easy as Bieleman (and others) have suggested. Moreover, as I will try to show in the next sections, the gradual evolution of the *markerechten* during the early modern period bears witness to the process of commercialization, which was slowly transforming both the management of the mark and other relationships within the village community. In the fourteenth, fifteenth and sixteenth century, peasants, did, however, still acknowledge a clear tension between the slowly expanding market economy and the necessity to maintain a balance between the commons and the subsistence needs of the village community.

II

In order to establish the strengths and weaknesses of marks, I will first discuss the Ostrom's criteria for long-enduring institutions that successfully managed commons.[25] The first condition formulated by Ostrom, namely that the borders of the commons and the identity of the commoners have to be well-defined, was generally fulfilled by the marks. Despite the fact that the histories of several marks were characterized by conflicts with neighbouring marks over the exact boundaries, this does not appear to have posed a significant problem. Because mark law, especially in Overijssel and Guelderland, recognized the rights of cottagers to common land use, this group was probably less well defined, which was, purely from an institutional point

[23] *Ibid.*, p. 63.

[24] J. Bieleman, *Boeren op het Drentse zand 1600–1910* (Wageningen, 1987); Bieleman, 'Boeren en Rekenmeesters', *Tijdschrift voor Geschiedenis* 101 (1988), pp. 201–221; Bieleman, 'De verscheidenheid van de landbouw op de Nederlandse zandgronden tijdens "de lange zestiende eeuw"', *Bijdragen en Mededelingen betreffende de geschiedenis der Nederlanden* 105 (1990), pp. 537–52.

[25] Ostrom, *Governing the commons*, p. 90.

of view, a weakness. As a result of population growth, the number of users could increase – I will return to this later – and this led to increased pressure on the commons.

The rules that were issued regarding mark management to some extent reflected the 'moral economy' of the peasants and could therefore count on support by the commoners, so fulfilling Ostrom's second condition. In Drenthe, where large landownership was absent, the acceptance of the regulations must have been stronger than in Overijssel and Guelderland, where the mark was owned by large landowners who set the rules. Government influence, which could, theoretically speaking, interfere in mark management, was as good as absent; in this respect, the situation in the eastern Netherlands almost completely fulfills Ostrom's third criterion. Only after 1809 did the central government begin to become involved with the marks, with the intention of bringing about their dissolution. Fourthly, marks had a mechanism, the annual mark meeting, to resolve conflicts regarding mark management. From the available sources it becomes clear that these meetings were regularly used and that the opinions of peasants were heard there.

The weakness of the mark lay in its inability to compel peasants to obey its rules. In each mark a number of *gezworenen* were chosen from the peasantry to fulfill a police role (which is in accordance with Ostrom's model). This was, however, not a popular position. Despite the fact that the *gezworenen* could keep a portion of imposed penalties (the rest normally went to the *markerechter*), the peasants were anxious to avoid service as a *gezworene*. As a result, many mark laws contained a by-law which stipulated that elected persons could only refuse to become *gezworenen* under penalty of severe fines.[26]

This supervision disappeared entirely during times of war. During the first quarter of the sixteenth century, and again between 1579 and 1627, the countryside of the eastern Netherlands was the scene of large-scale warfare. This was accompanied by looting and by heavy taxation. Consequently, many farms were abandoned as peasants fled to the cities, and the social structures of the countryside came close to collapse. For instance, in the mark meeting of Bathmen, which was held in the town of Deventer in 1591, complaints were made regarding the many reclamations by cottagers. This had arisen from the flight of many farmers from the theatre of war, who had left large pieces of land uncultivated.[27] Subsequently, it took the mark years to recover from these events.

Together with the *markerechter*, *gezworenen* were, as representatives of the peasants, responsible for managing the commons. In practice it turned out to be very difficult to control overexploitation. Woodland, which was still extensive during the Middle Ages and which, for the landowners, was often the most interesting part of the mark, suffered severely from overexploitation. During the fifteenth and sixteenth centuries, several marklaws still contained rules regulating the pasturing of pigs in the woods, on felling trees and wood gathering. In the mark Lutte, for example, the restraints on wood cutting and pig keeping became more and more strict in the sixteenth and seventeenth century, but excessive wood gathering continued unabated. Finally, the mark meeting in 1693 decided to sell the remaining woods and to divide

[26] *Markerecht Leusen*, 2 (1516); *Markerecht Emmen*, 6 (1470); *Markerecht Lenthe*, 7 (1470); *Markerecht Gooi*, 3 (1399); *Markerecht Verssen*, 8 (before 1518).

[27] *Markerecht Bathmen*, 24–25; also compare *Markerecht Wesepe*, 5 (1580).

the proceeds amongst the owners of the shares of the mark allowing the high debts, which were the result of heavy taxation by the invading army of the bishop of Munster during the war of the 1670s, to be paid off.[28] Subsequently, the mark was concerned to restrict sheep keeping on the heaths, to regulate turf and peat cutting, and to fight the sand drifts.

The disappearance of woods from the mark Lutte was more or less typical of the environmental degradation that was taking place over the longer period. During the fifteenth, sixteenth, and seventeenth centuries, failing mark management caused the gradual disappearance of the woodland. These were, in the long run, replaced by arid heaths, on which only sheep and lean cattle could graze. Many attempts were nevertheless made to prevent the woods from disappearing: marks increasingly restricted the exploitation of woods and ordered peasants to plant new trees. Generally speaking, these attempts at collective forestry were virtually futile. Jaap Buis, who has written an account of forest management in the eastern Netherlands during this period, had to conclude that the marks were unsuccessful in maintaining the forests.[29]

The vast heaths that came to dominate the landscape of the region in the early modern period were also used intensively. Peasants cut turves there in order to manure farmland. Sheep, cattle, and horses were grazed on them, and they were also used to supply turf for heating (if no peat was available). In Drenthe a kind of slash and burn cultivation of buckwheat was practiced on some of the heaths. At the same time reclamations continued: the attempts of the mark to halt them were undermined by mark law, which held that once smoke was coming from the chimney of a new house, it could not be pulled down. Moreover, the mark subsequently often had to allocate a piece of land to the new settler, so that he could maintain himself and his family. In Tjoene in 1701 it was explicitly determined that someone who had built a house on common grounds had to be given a small piece of farmland.[30] The alternative was probably that the cottager became dependent on poor relief, which was itself sometimes financed by the mark. Eventually, marks made a virtue from the demand for land and housing by asking for money in return for (small) reclamations of land and by demanding rent from houses that were set up on the commons. These are signs that the money economy was emerging. This naturally led to even more long-term pressure on common grounds.[31]

Another reaction to the growing pressure on the commons was the enclosure of the best pastures, often those near streams which were regularly flooded. Enclosure made it possible to better maintain pastures, to improve drainage and to increase yields. In Drenthe, the government began to stimulate this process by establishing rules for these partial partitions.[32] Elsewhere too, partial enclosure seems to have occurred on a large scale in the seventeenth and eighteenth centuries, and this led to a rise in the share of the total land which was privately owned.

The enclosure of the pastures resulted in pressure on the remaining commons becoming even greater. The heaths were used too intensively, which resulted in the emergence of sand drifts where vegetation had not had time to recover from grazing or turf cutting. Drifting sand

[28] *Markerecht Lutte*, 86; also compare *Markerecht Losser*, XI, where the forests were sold in 1711; a survey of the deterioration of the forestry in Buis, *Historia*, pp. 35–161.

[29] Buis, *Historia*, pp. 266–73.

[30] *Markerecht Tjoene*, p. 18.

[31] *Markerecht Herfte*, 15 (1623); *Markerecht Rande*, 14 (1719); *Markerecht Bathmen*, 72 (1725); *Markerecht Gooi*, 27–28 (1717–1725).

[32] Bieleman, *Boeren*, p. 192.

caused considerable problems when it became 'mobile' and blew onto farmland or penetrated villages. Consequently, a large part of the activities of the mark was aimed at combating these sand drifts by ordering the planting of trees, by sowing sandoats, by laying sods on the sand, and by proclaiming bans on exploitation of the heaths.[33]

The government was also alert to the problem of sand drift. In 1650, a special office, the *Zandgraaf*, was created at the district of Veluwe (part of Guelderland) in order to fight sand drifts. In Drenthe, a similar decree was issued in 1651. Overijssel followed in 1754.[34] These interventions from provincial governments were not very fruitful, because the actual measures had to be taken by the marks themselves.

Broadly speaking, the impoverishment of the commons had two causes. First, the marks were unable to prevent population growth and the settlement of new cottagers. From the late fifteenth century, when the first data become available, information on the demographic development of the eastern Netherlands shows an almost continuous population growth. In Overijssel, for which the most complete data are available, the rural population increased by approximately 200 per cent between 1475 and 1795, a rise which was probably somewhat higher than in the other parts of the region.[35] The mark archives invariably show that in the eighteenth and nineteenth century, the number of farms was many times larger than that of the original *gewaarde erven* in the late Middle Ages. This population growth resulted in the partition of shares and in the more than proportionate growth of the number of cottagers. The mark simply did not have the means to counteract the rise of village population.

The regional differences in attitude regarding cottagers, which are apparent from fifteenth- and sixteenth-century marklaws, probably influenced the demographic development of the eastern Netherlands to a degree. The population density in Drenthe, where, according to many mark laws, cottagers were refused the freedom to settle, remained relatively low. The proportion of cottagers in the population there increased slowly.[36] In the seventeenth century, this attitude towards the cottagers gradually changed. The older regulations, which had denied them almost all right of access to the commons, fell into obsolesence. According to Bieleman, the underlying reason for this more liberal attitude was the appearance of a group of relatively wealthy peasants who were producing for the market and needed the wage labour of the cottagers.[37]

Secondly, the failing supervision of the mark law also posed an enormous threat to the balance between population and environment. The *gezworenen* – primarily prominent farmers with a certain authority within the village community – could not possibly oversee the extensive forests and heaths. Moreover, they were probably not inclined to prosecute their neighbours.[38] The fact that many *gezworenen* fulfilled their responsibilities only reluctantly did not contribute to the effectiveness of the supervision.

[33] *Markerecht Leusen*, 6–7 (1556); *Markerecht Verssen*, 16 (1566); *Markerecht Stegeren*, 12 (1545); *Markerecht Gietmen*, 7 (1551); *Markerecht Lutte*, 82 (1690); *Markerecht Dalmsholte*, 21 (1639).

[34] Buis, *Historia*, p. 369.

[35] J. L. van Zanden, 'De demografische ontwikkeling van Overijssel, 1475–1795', *Overijsselse Historische Bijdragen* 109 (1994), pp. 39–50; Bieleman, *Boeren*, pp. 71–2.

[36] Bieleman, *Boeren*.

[37] *Ibid.*, p. 128.

[38] Compare Buis, *Historia*, pp. 88.

III

During the later middle ages and sixteenth century, woodland cover progressively disappeared to be replaced by heaths and sand drifts. In the seventeenth and eighteenth centuries, a new balance appeared to have been established between the growing population on the one hand and the fairly impoverished commons on the other. If the rapid deterioration of the natural environment that occured before 1600 had continued, large sand drifts would have come into existence in the region and much farmland would have been lost. It seems that somewhere in the seventeenth and eighteenth centuries, rural communities succeeded in halting the deterioration of their commons.

This new balance was partly made possible by complex changes in agriculture, which led to an intensification of the use of farmland and of the enclosed pastures. As a result, the grain harvest increased significantly: the yield ratio of rye, which had probably been about 3:1 in the sixteenth century, gradually increased to 5:1 at the beginning of the nineteenth century.[39] New labour-intensive crops spread across the countryside during the seventeenth century. The specialized production of tobacco, hop and flax grew in significance; protoindustry, originally based on the processing of flax, became an important source of employment in Twente and the Achterhoek. The backgrounds to these changes have to be sought for in the gradual commercialization of agriculture, which enabled a certain degree of specialisation in these cash crops or in domestic industry. The pressure on the commons probably did not increase any further because of this diversification of the economic basis of the countryside.[40]

It is possible that a stricter imposition of the marklaws also contributed to the new balance. The *gezworene* was gradually replaced by a specialized *markedienaar*, a mark servant who received a separate (but modest) salary in return for his police duties.[41] The spread of this local officer is a good example of the possibilities that were created by the growing commercialization of the countryside. The *markedienaars* probably improved supervision, even though it might be questioned whether they always could or wanted to act effectively.

The discovery of superior ways to fight sand drifts also contributed to the development of this new balance between population and environment. In the eighteenth century, planting with sand reed (*Ammophila arenaria*) was successfully introduced. The Scots pine (*Pinus sylvestris*) was also adopted as a means to combat drifts.[42]

The high level of political stability in the period after 1627 must also have contributed to the improved performance of the marks. Only once, between 1672 and 1678, were the eastern Netherlands again the scene of warfare. The resulting problems, particularly the loans that quite a few marks had to make to pay the levies of the Bishop of Munster, nevertheless contributed significantly to the decision of some marks (for example Lutte and Losser) to sell the remaining woodland.[43]

[39] B. H. Slicher van Bath, *Een samenleving onder spanning* (Assen, 1957), p. 580; Bieleman, *Boeren*, pp. 623–5; J. L. van Zanden, *De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw, 1800–1914* (Wageningen, 1985), pp. 174–6.

[40] Compare Bieleman, *Boeren*; J. Bieleman, *Geschiedeis van de landbouw in Nederland, 1500–1950* (Meppel, 1992), pp. 181–206.

[41] *Markerecht Lente*, 25 (1707); W. Grootenhuis, 'Lenthe, marke en buurschap' in J. ten Hove *et al* (eds), *Uit de geschiedenis van Dalfsen* (Kampen, 1989), pp. 98–116, at p. 109.

[42] Buis, *Historia*, pp. 97, 374, 772, etc.

[43] See n. 26.

Finally, the performance of the marks was altered by a change in the system of grazing, which reflects the commercialization of its management. The system in which all commoners had the right to graze a certain number of cattle was gradually replaced by one in which they had to pay a certain amount of money per cow or horse. If this price ('lockage') was high enough[44] and supervision sufficient, the basic problem of the 'tragedy of the commons' could be resolved. Then, the individual peasant needed to balance the price of pasture against the additional profits that a new animal could give him; the incentive to expand grazing continuously could thus be restrained.[45]

IV

During the eighteenth century a radical change in the structure of landownership occurred, especially in the province of Overijssel, which had important consequences for the marks. In the early seventeenth century, large landowners still owned nearly all farms and almost all peasants were tenants. However, due to reclamations, which were always undertaken by the peasants themselves, and because of the buying of farms by the peasants, the share of free-holding peasants gradually increased in the seventeenth and especially during the eighteenth century.[46] After 1780, this process accelerated; in 1832 the peasants were owners of more than 60 per cent of the farms.

The sources which reveal the distribution of landholding make it possible to estimate the size of the marks. According to Demoed, in the three provinces, probably about 350,000 hectares was owned by 338 marks in 1832; by comparison, the total arable acreage in this region was about 150,000 hectares.[47]

The rise of a class of freeholders, inevitably, altered the balance of power in the mark meeting. The number of farmers that participated in the mark meeting grew continuously, even though noble and middle class large landowners still dominated decision making. They, however, were aware that the wastes were being threatened by continuous reclamations and that their position was being undermined by the growing influence of the peasantry. Already in the latter part of the eighteenth century, 'Enlightened' agriculturalists argued for dissolution of these – so-called – 'feudal institutions', which were assumed to block agricultural progress. In Overijssel, the States were discussing measures aimed at enclosing the commons as early as 1780, although without result.[48] In 1809–10, the national government, inspired by the ideals of the French Revolution, issued a law and a set of rules which made the dissolution of the mark organizations almost inevitable. This legislation was very strict. Each mark was required to appoint a commission which either had to prepare a plan for the partition of the mark lands, or had to explain to the governor why it was not possible to divide the land. When the land was not partitioned,

[44] Strictly theoretically speaking, the lockage had to be equal to the marginal costs (= the marginal decrease in the total proceeds of the pasture) of the addition of another animal to the pasture.

[45] Compare *Markerecht Leusen*, 8 (1575) and 19 (1662).

[46] J. L. van Zanden, 'De opkomst van een eigenerfde boerenklasse in Overijssel, 1750–1830', *AAG Bijdragen* 24 (1984), pp. 105–131; C. Trompetter, 'Burgers en Boeren. Geld en Grond', *Neha-jaarboek* 60 (1997), pp. 7–36.

[47] H. B. Demoed, *Mandegoed, Schandegoed* (Zutphen, 1987), pp. 84, 89–95.

[48] Demoed, *Mandegoed Schandegoed*; Bieleman, *Boeren*, pp. 223–4.

the law required that a proposal for partition be put to a meeting be held annually until a majority voted to dissolve the mark.[49]

The division of the marks, which began in 1810, became widespread after 1830, and assumed distinct forms in the different regions of the eastern Netherlands. Enclosure began rapidly in Gelderland, somewhat later in Overijssel, and, having encountered no systematic opposition, it was virtually complete there by the 1860s.[50] In Drenthe (and in scattered marks in other regions), the division of the marks had barely begun prior to 1850, and were forcibly imposed after 1850 (see Table 1).

To gain some understanding of the factors that determined this process, I have examined in detail the histories of a dozen marks. All the marks reacted similarly to the prefect's letter of 1810 informing them of the new law: a pro forma commission was established as the law required. Subsequently, however, nothing changed.[51] The commission usually neglected even to report why the dissolution of the mark was not possible. The few marks that did compile such reports explained in great detail that enclosure was out of the question because agriculture could not be practiced without access to undivided wastelands for pasturing cattle and digging turf. Due, in part, to the political instability of this period, the marks were able to ignore the law almost completely. The die was cast, however, for groups of large landowners now had a legal basis on which they could force the division of the land. The subsequent enclosure of the marks can be divided into two phases: before and after 1837.

Between 1810 and 1837, parts of the commons, which usually included the best peat land or pastures, were divided in many of the marks. This was sometimes done in the hope that the further construction of canals would permit commercial peat-digging.[52] The farmers' desire for better pastures often also played a role: according to some of them, the yield of existing pastures could only be increased by improvement, especially drainage.[53] The new law of 1810 caused the number of these partial divisions, some of which had taken place already before 1810, to increase considerably. These divisions paid little heed to the rights of the cottagers since they could still continue to pasture their cattle on the remaining undivided land.

Before 1837 the government's role was essentially a passive one. For example, in Den Ham, a plan to divide the entire mark was drafted in 1827 under pressure from Baron van Pallandt tot Eerde, the largest landowner in the village. When the proponents of this plan asked Governor Bentinck (the highest political authority in the province) for his opinion in order to confer their plan with more authority, he reacted completely negatively. Bentinck wanted nothing to do with the division and ordered that any conflicts were to be submitted to the judiciary.[54]

[49] H. B. Demoed, 'Verzet tegen markedelingen: behoudzucht of zelfbehoud?', *Overijsselse Historische Bijdragen* 97 (1982), pp. 81–94, 86; Van Zanden, *Economische ontwikkeling*, pp. 152–5.

[50] For Overijssel see G. A. J. Engelen van der Veen, 'De Marken van Overijssel' *Geschiedkundige Atlas van Nederland* ('s Gravenhage, 1924) which includes a great deal of information regarding the division of the marks; for Gelderland see L. A. J. W. Sloet, *Bijdragen tot de kennis van Gelderland* (Arnhem, 1852–5), pp. 111–124.

[51] Demoed, 'Verzet', p. 86.

[52] As in the Mark of Arrien in 1817 and probably in the Mark of Den Ham in 1814; Rijksarchief Overijssel, Markearchieven, 33 and 455.

[53] For instance, the division of the Koeveen in the Mark of Noetsele in 1826 (Rijksarchief Overijssel, Markearchieven, 904), the upper-fen in Daarle in 1812 (Rijksarchief Overijssel, Markearchieven, 182), the meadowlands in Averlo in 1826 (*Markerechten XXII*), and the pastures in Tjoene in 1822 (*Markerechten XXIII*).

[54] Rijksarchief Overijssel, Markearchieven, 455, meetings of 1827.

TABLE 1 The progress of the enclosure of the marks in the three provinces, 1819–1886

	Gelderland	*Overijssel*	*Drenthe*
1819–36	22	7	–
1837–46	15	29	6
1847–56	17	46	46
1857–66	10	11	27
1867–86	11	6	16
unknown date	41	15	13
Total	116	114	108

Source: H. B. Demoed, *Mandegoed, Schandegoed* (Zutphen, 1987), pp. 97–103

The process of dividing the land clearly accelerated in the 1830s. A new tax on real estate based on the cadastral estimate of the land's rental value was introduced in 1832; consequently, wastelands were taxed much more than they were before 1832. Since marks everywhere had to raise money, pasture fees were often introduced or raised.[55] The introduction of the cadastre itself was another change. Landownership changed from a 'physical' right – one 'acquired' land by digging drainage ditches in the wasteland – to a right on paper. It thus became possible to divide all of the land on paper, without requiring that landowners take immediate possession of it.

The government's initiative, however, was the most important impetus behind the further division of the marks. In 1837, King William I confirmed that the law of 1809 was still in effect, whereupon the Governor of Overijssel, Van Rechteren, immediately prepared a detailed handbook for partitioning the mark lands; this offered solutions to all practical problems.[56] This inspired a campaign to partition all remaining marks, which was wholeheartedly supported by the large landowners and resulted in the dissolution of most of the marks in the eastern Netherlands. The marks that already had plans prepared were able to divide lands quickly, thanks to the support of the governor and the King. The government's initiative probably derived in part from these existing plans as well as from the existing legal uncertainty in this domain. Thus, Governor Van Rechteren was forced to reject a plan to divide the land in the Mark of Heeten because it neglected the interests of the cottagers.[57]

Reactions to the Governor's initiative of 1837 differed widely among the various marks. In some large marks, where many crofters lived, the vast majority opposed the partitions. In the Mark of Hellendoorn, for example, 33 farmers opposed and five favoured dividing the land; in

[55] In the Mark of Raalterwoold the new land tax of £818 in 1833 was the immediate reason for deciding to divide the mark (Rijksarchief Overijssel, Markenarchieven, 1060, meetings of 1835). In the Mark of Rozengaarde the association, in contrast, decided not to divide the mark despite the financial difficulties, 'because the same [the wastelands] were utterly indispensable for the livestock that were pastured in the mark' (Rijksarchief Overijssel, Markenarchieven, 1115, meeting of 1836).

[56] J. Zeehuisen, *Bronnen van volkswelvaart* (Amsterdam, 1850) p. 25 and Rijksarchief Overijssel, Markenarchieven, 717.

[57] Rijksarchief Overijssel, Markenarchieven, 474 and 479.

the Mark of Rozengaarde near Dalfsen, 25 were in favour and five against.[58] The farmers' and crofters' arguments had not changed since 1810: they needed the land for pasture and to cut peat. In many smaller hamlets, where fewer cottagers lived, a decision to divide the land was frequently arrived at in 1837, or it was delegated to a special commission dominated by a few large landowners.

To understand the process by which the marks were divided, the social structure of the countryside in Salland must be taken into account. There were usually three parties in each mark: the large landowners, the *gewaarden* (peasants who owned a share in the mark), and the cottagers, who possessed only use rights to the commons. Each of these groups had different interests in the division of the mark. The large landowners consistently favoured the division of the mark. While the rising liberal ideology played a role in this,[59] economic motives also counted. A share in a mark, which usually involved an additional investment of time and money, could now be converted into a marketable piece of land or a large sum of money. The value of this land might increase significantly through the construction of roads, canals, and, later, railways, and through the commercial exploitation of the peat.

So far as can be ascertained, the commoners at the other end of the social spectrum consistently opposed division of the land. The availability of free wasteland was important to the cottagers and the craftsmen who owned a few cows: this land allowed them to pasture their cattle, to cut peat, and to reclaim some land. The mark thus provided a supplement to their meager subsistence; in a sense, the poor who were still able to work were provided with limited 'social security'.[60] The staunchest opponents of dividing the lands were found among this group who sometimes went so far as to deny that the owners of the mark enjoyed special privileges.[61] As late as 1856, the cottagers of the hut-colonies of Nieuw-Leusen, Den Hulst, Ruitenveen, and Ruitenhuizen wrote to the commission dividing the Mark of Rozengaarde:

> The undersigned ... take the liberty ... of bringing it to the attention of the Commission for dividing the Mark of Rozenwaarde, that they unanimously desire and simultaneously request to have their rights to heaths and pastures and their other rights, such as are known to the Commission and have been practiced in the mark for centuries, maintained. Should their rights be limited by the undesired decision to divide the land, they will attempt to assert their rights and to continue to keep their customary use of that mark.[62]

As was the case with so many petitions made by cottagers, their request made no impression on the commission. When the petitioners turned to the King for help, they had no more success. In 1843, the cottagers in Den Ham submitted a petition to the King, after they had been ignored by a commission charged with dividing the land. An impressive petition was signed by no fewer than 287 'households and small farmers' who claimed that the plan would ruin them. The commission reacted with a counter-memorandum in which they painted a grim picture: they

[58] See Rijksarchief Overijssel, Markenarchieven, 491 (meeting of 1837) and 1115 (meeting of 1838); in Holten and Den Ham, two large church villages, the majority was clearly opposed to dividing the mark (Rijksarchief Overijssel, Markenarchieven, 584 and 456).

[59] See Demoed, 'Verzet', pp. 82–4.

[60] Van Zanden and Van der Veen, 'Boeren', p. 165.

[61] For instance in Daarle, Den Ham, and Noetsele (Rijksarchief Overijssel, Markenarchieven, 185, 456, and 957).

[62] Rijksarchief Overijssel, Markenarchieven, 1215.

claimed the protesting cottagers would 'deceitfully lead astray the right-thinking and incite hate and bitterness in a community that would later have to endure the most unpleasant consequences'.[63]

The resistance of the cottagers did not usually impede the process by which the mark was divided, especially after 1837 when the government began to press again for division. Their protests were seldom taken seriously; they could prevent the mark from being partitioned only in cases where they formed a large majority and had secured relatively generous rights, as in some large villages. The reaction of the Mark of Heeten is characteristic, which in 1841, after the cottagers had protested to the governor, stated

> that, in general, the complaints of people who are not participants appear to be inevitable with all mark divisions, with however much fairness their interests are kept in view, because most of them are already of the opinion that they will have less advantage with a limited allotment than with the unlimited use of the undivided lands, although experience shows the opposite in the other marks where division has already been effected.[64]

The owner occupiers, the relatively wealthy farmers with full rights in the commons, seem to have played a central role in the division of the mark, occupying an intermediate position between the large landowners who favoured the division of the land and the cottagers who opposed it. One can establish a shift in this group's opinion about the advantages and disadvantages of dividing the land. In 1810, these farmers formed a united front with the cottagers against partitioning the land. They did not, however, entirely reject the idea of division: several marks were subsequently partially divided. By 1837 these farmers no longer formed a united front with the cottagers. In the 1840s, they increasingly appear to co-operate in partitioning the marks.

There are a number of reasons why the resistance by the *gewaarden* against the division of the marks was gradually overcome. Clearly, the classic argument against enclosure – that is, that wasteland was required for pasture and peat-cutting and thus, ultimately, for manure production – was not really applicable any more. The many changes in agriculture, made possible by its gradual commercialization, meant that the relationship between the wastes and the arable had become rather flexible.

Raising sheep was the most extensive means of producing manure; vast heaths were required to provide the large flocks with sufficient food. Consequently, the farmers' opposition to dividing the wasteland was often most resolute in areas where sheep played a major role in supplying manure.[65] In Overijssel, for example, sheep farming was important in only a few municipalities along the Salland Hills and in the fen district north of the Vecht River. Moreover, changing relative prices induced farmers in Overijssel to reduce the size of their sheep flocks between 1830 and 1860, and to concentrate more heavily on raising cattle. After peaking during the period of the French occupation (1795–1813), the relative and absolute price of wool dropped precipitously.[66] In contrast, the relative price of butter and meat increased, and after 1840 their absolute price too. In order to profit from these trends, farmers required better pastures. The

[63] Rijksarchief Overijssel, Markenarchieven, 456.

[64] Rijksarchief Overijssel, Markenarchieven, 471.

[65] This was also the case in the Veluwe; see L. T. D. A. Venema, *Hooge Veluwe, bijdrage tot de sociografische studie van dit gebied en zijn naaste omgeving* (Zutphen, 1933), pp. 30–1.

[66] Van Zanden, *Economische ontwikkeling*, p. 110.

dissolution of the marks and the enclosure of these pastures was in part motivated by the desire to improve their quality. Before enclosure, there were many complaints which show that the pastures were neglected: the natural marshlands along the small rivers suffered from poor drainage, while the higher land suffered from lack of manure and overgrazing.[67] In short, due to the growing economic importance of the pastures, it became necessary to divide these lands in order to farm them more intensively.

The commercialization of the rural economy was undoubtedly one factor that stimulated the enclosures. Farmers must also have been aware of the sharply rising market value of the wasteland brought about by the construction of roads and canals, and the higher taxes on this land must have underscored its increased value. Here too a number of different changes reinforced each other. The dissolution of the marks led to a sharp increase in the number of transactions in the real estate market; these transactions revealed the actual value of the wastelands, which often exceeded the farmers' expectations. For instance, each *rod* of reclaimed land sold for 7.5 cents in the Mark of Olst in 1826; this increased to 75 cents in 1829, to *f*1.50 in 1837, and to *f*10 in 1867.[68] By dividing the land, a farmer could own an asset which was rapidly increasing in value. These factors explain why most of the *gewaarden*, from about 1840 onwards, appear to have been prepared to cooperate with the government and the large landowners in dividing the wastelands.

This is not the place to examine in detail whether the division of land was equitable, but a few brief comments may be helpful. In most cases, three criteria governed land division: ownership of shares in the mark (a standard by which to compensate the participants), ownership of arable in the mark, and ownership of a house in the village or hamlet (the latter accommodated the poorest cottagers). The mark assembly ultimately assigned the relative weight of the criteria, and almost always adopted the commission's proposal for the division of the land. To their disadvantage, the cottagers had virtually no voice in the matter; consequently, many complaints were made about the small share of land given to this group. However, since large landowners sometimes also protested against the formula chosen to divide the land, we might conclude that the crofters were not alone in believing that they were treated unfairly. The protests of the *heren* and the participant farmers, however, received much more attention than the protests of non-participants. Even though the large farmers probably profited most and the cottagers probably profited least, the division of the marks did not lead to a sharp polarization of the social structure.

In Gelderland and Overijssel the marks were usually divided quickly and quietly. There was, however, great opposition in Drenthe. The division of the heaths between 1840 and 1860, carried out under strong government pressure, did not lead to the dissolution of the large herds of sheep that were grazed there, nor did it lead to the actual division of the heathlands among the new owners. In many marks the division was largely carried out on paper only, and little changed in the actual administration of the wastelands. The largest share of the land continued

[67] See for instance the report from 1810 by L. E. von Bönninghausen (Rijksarchief Overijssel, Archief Commissie van Landbouw, 31); Harten and Herzberg, 'Ontginningen,' 24.

[68] Rijksarchief Overijssel, Markenarchieven, 993.

to be used as sheep pasture under collective management. Later in the century, after the Mark Law of 1886 had been implemented, the land often had to be divided again.[69]

Several factors account for the collective resistance of the farmers in Drenthe to the division of the mark lands. These farmers wanted to continue to raise sheep because they believed that the poor agricultural land in this area badly needed the manure. Moreover, a very large amount of wasteland was available – in proportion much more than in the rest of the regions – which could be used practically only for raising sheep. The fact that both the cottagers and the larger farmers kept large numbers of sheep in the mark must have increased the likelihood that they would form a united front against the division of these lands. The limited influence of the large landowners in the marks in Drenthe also contributed to the collective resistance. The marks were usually administered by the *gewaarden* themselves, so that in Drenthe the big landowners lacked the political means to liquidate the mark from within. Finally, a further factor that could have played a role was that all of the best pastures in Drenthe were already divided prior to 1830: the marks included only meagre heathland that did not figure in the growing output of the livestock industry.[70]

In summary, the dissolution of the mark societies in large parts of the eastern Netherlands between 1820 and 1860 resulted primarily from the government's strong initiative and the cooperation of a group of large landowners who wanted to transform their share in the marks into marketable real estate. This process, however, cannot be separated from the changes in the agricultural system, in which farmers increasingly specialized in livestock. While these farmers required good pasture, they could increasingly forego poor heathland. As was shown in the case of Drenthe, however, the actual division of the heathland was not a necessary prerequisite for the transformation of agriculture; in Overijssel and Gelderland the division of the marks did play a certain role in the intensification of agriculture. Opposition to the division of the marks was voiced primarily by the smaller farmers and the cattle-owning craftsmen. The minimal 'social security' which the mark lands offered these groups was severely threatened, and they were in danger of being proletarianized.

V

The marks in the Eastern Netherlands were, according to Slicher van Bath, set up between 1250 and 1350 to protect the rights of the lords in the common lands. They were at first sight, stable organizations, which managed the common lands of this area between the late Middle Ages and the nineteenth century. The rules for the management of these commons were based to some extent on the 'moral economy' of the peasants. They aimed at the maintenance of the subsistence needs of the population and the conservation of the quality of common grounds. To this end, exploitation of this common property for the market, with its short-term gains, was resisted.

During the later middle ages and the sixteenth century, the marks failed to maintain a balance between population and environment. The archives of the marks enable us to follow the gradual

[69] H. J. Prakke, *Deining in Drenthe* (Assen, 1951), pp. 51–4, 69–74.

[70] The sheep pastures were the only land that continued to be held collectively, see for example, Prakke, *Deining*, App. II.

degradation of the natural environment. The forests of the eastern Netherlands gradually disappeared, to be replaced by extensive heaths which were, in their turn also prone to over-exploitation, leading to the appearance of sand drifts. From the latter part of the sixteenth century onwards, the fight against sand becomes one of the most important activities of the marks. This degradation of the environment was largely the result of imperfections in its formal organization (notably the lack of policing of the exploitation of the commons), continued population growth and long periods of war, during which the social structure of the countryside broke down. Therefore the development of the marks in this period does not support the 'optimistic' interpretation of their functioning put forward by Ostrom, and is more consistent with Hardin's pessimistic 'tragedy of the commons'.

Through the seventeenth and eighteenth century, a new balance, however, came into existence, and the management of the commons moved into the direction of Ostrom's model. It is ironic that it was indeed the gradual commercialization of agriculture and the rise of proto-industry that offered the possibility of combining a growing population with a new balance between resources and population. The mark organization itself also became more commercial: specialists were hired for police duties, the grazing of cattle and the cultivation of wastes was linked to special tariffs, and the remaining woods were felled (with the proceeds being paid out to the shareholders). The ultimate dissolution of mark societies in the nineteenth century was the last stage in this process. For the large landowners, a share in the mark had become an investment which had to be monetized as soon as possible; for the *gewaarden* the enclosure of the pastures was a precondition for increasing the output of livestock products. Then, only the cottagers, who had acquired important use rights in the commons, still referred to the 'moral economy' which laid at the foundation of the marks. The most striking paradox of the mark is that, whereas it was founded to protect the properties of large landowners, it eventually became an organization that predominantly benefited the landless.

Servants and labourers on a late medieval demesne: the case of Newton, Cheshire, 1498–1520*

by Deborah Youngs

Abstract

The paper examines the relatively under-explored subject of late medieval demesne personnel through the example of Newton, Cheshire. Based on an unusually rich set of accounts, the paper discusses the contracts, tasks and wages of Newton's servants and labourers and seeks to locate the former in relation to established types of medieval *famuli* and early modern servants of husbandry. The paper argues that, in contrast to some recent historical research, the balance of power at Newton lay with the landlord.

Given the detailed research undertaken on the medieval landed estate, it is perhaps surprising that our knowledge of a key aspect of the estate, its personnel, is relatively poor. This is especially so for the fifteenth century, a period that lies between two historiographically distinct pictures of labouring life: the combination of customary labour and permanent manorial staff (the *famuli*) of the high middle ages; and the servants in husbandry and day labourers of the early modern period.[1] For example, D. L. Farmer recently noted the gradual disappearance of the traditional *famulus* in the fifteenth century; he suggested that they 'probably survived in some form ... [b]ut one does not know'.[2] One reason often given for this lack of knowledge is the widespread leasing of farms during the fifteenth century which means that the records of large estates no longer record how demesnes were managed nor their personnel. Yet not all lords leased their demesnes and, if the focus is moved from large institutional estates to smaller and more compact holdings, it is possible to find illuminating documentation on the fifteenth-century workforce.[3]

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[1] For the medieval period see M. M. Postan, 'The *Famulus*. The estate labourer in the xiith and xiiith centuries', *Economic History Rev.* (hereafter *EcHR*), supplement 2 (1954), and E. Searle, *Lordship and Community: Battle Abbey and its banlieu, 1066–1538* (1974), pp. 304–13. Labour in the early modern period has received greater attention. See, in particular, Ann Kussmaul, *Servants in Husbandry in Early Modern England* (1981); A. Everitt, 'Farm Labourers', in J. Thirsk (ed.), *The Agrarian History of England and Wales*, IV, *1500–1640* (1967), pp. 396–465; and A. H. Smith, 'Labourers in late sixteenth-century England: a case study from north Norfolk', *Continuity and Change*, 4 (1989), pp. 11–52, 367–94.

[2] D. L. Farmer, 'The *famuli* in the later Middle Ages', in R. Britnell and J. Hatcher (eds), *Progress and Problems in Medieval England. Essays in honour of Edward Miller* (1996), p. 236.

[3] Examples are C. Dyer, 'A small landholder in the fifteenth century', *Midland Hist.* 1 (1971), pp. 12–14 and R. A. Lomas, 'A northern farm at the end of the middle ages: Elvethall manor, Durham, 1443/4–1513/4', *Northern Hist.* 18 (1982), pp. 35–7.

This article examines the workers on the non-manorial estate of Newton, Cheshire. Between 1497/8–1536 it was held by Humphrey Newton, gentleman (1466–1536), who personally drew up a series of accounts for the holding. These provide an unusually rich source of contracts for full-time workers and references to day labourers at Newton in 1498–1506 and 1519. Several important questions can be addressed by the evidence. Did Newton's full-time workers conform to conventional definitions of *famuli* or servants of husbandry? What influenced the size of the workforce, types of tasks and wages at Newton? And, of particular importance, what was the relationship between the landlord and his labour?

I

The Newton estate lay in the upland region of north-east Cheshire on the banks of the river Bollin, in the shadow of the Cheshire peaks. Its nearest towns were Macclesfield, five miles to the south and Stockport, just over six miles to the north. Technically Newton was not a manor as it had no manor court; nor was it an independent township, but part of the nearby township of Butley. Only a few tenancies were attached to the holding. Between 1498 and 1505 there were at most two messuages, two cottages and a mill rent which brought in between £2 – £4 per year.[4] Newton was smaller than the extensive institutional estates that comprise the majority of studies of estate management and personnel. According to currently accepted criteria Newton was a 'small' estate. The size of the demesne can be partially gauged from Humphrey Newton's *inquisition post mortem* of 1536. The estate comprised 252 acres, consisting of 100 acres of land, 20 acres of meadow, 40 acres of pasture, 26 acres of wood and 66 acres of moor. Despite the historian's suspicions of inquisitions, the total figure appears reasonable when set against the limits described in local land deeds.[5] Newton shared the mixed economy of Cheshire with a combination of animal husbandry and crop growing. Cattle predominated, with income also derived from a small flock of sheep (around 50 ewes, 21–27 lambs and 1–4 rams), a few pigs and hens. Poor climate and soils made oats the dominant crop, although wheat, barley, peas and rye were also grown. Other sources of income included pannage, the rabbit warren, and wood sales.[6]

From the early thirteenth century the estate was held by the Newtons, a gentry family of modest income and, until the sixteenth century, of one major holding. Humphrey Newton was a lawyer in his locality and served as a steward for several Cheshire and Staffordshire manorial courts. His services were required as a witness of deeds and marriage agreements, and in arbitrating disputes between neighbouring gentry. Like other gentlemen, Humphrey's fortunes improved with a successful marriage. In 1490 he married the local co-heiress Ellen

[4] The dependency of Newton on Butley is detailed in PRO, STAC 2/30/86, and [B]ritish [L]ibrary, Add. MS. 42,134A. For the Newton tenancies: Bodleian Library (hereafter Bodl.), MS Latin Misc c 66, fos. 29r, 32r, 35, 37v, 38v, 41ar, 42v, 43r, 47r.

[5] PRO, CHES 3/67/4 (IPM); STAC 2/30/86 (boundary details). For small estates see E. A. Kosminsky, *Studies in the Agrarian History of England in the Thirteenth Century* (1956); Dyer, 'A small landholder', and R. H. Britnell, 'Production for the market on a small fourteenth-century estate', *EcHR* 19 (1966), pp. 380–8.

[6] Bodl., MS Latin Misc c 66, e.g. fos. 24, 27ar, 29–31 and 38v. For a recent consideration of the economy of medieval Cheshire, see P. Morgan, *War and Society in Medieval Cheshire, 1277–1403* (1987), pp. 78–92.

Fitton of Pownall (d. 1536); in 1506 he acquired the 460-acre Pownall estate (near Wilmslow), and lands in mid-Cheshire. Humphrey was an energetic landlord who undertook an ambitious programme of improvement at Newton. In his first six years at the estate, Humphrey rebuilt a corn mill, built a fulling mill and a fishery, and marled the soil, altogether raising Newton's value from £11 *per annum* to over £14.[7]

His energy is also seen in the management of Newton. There was no extensive estate apparatus and Humphrey oversaw and managed the land himself, arranged and supervised building projects, and dealt directly with local traders. There were few labour services, a situation observed generally throughout Cheshire.[8] The tenants at Newton simply provided a few hens and one or two days reaping at harvest. For assistance Humphrey depended principally on wage labour. There was a combination of those employed for a long period, usually a year, for a fixed wage; and those hired on a daily wage. The groups are not mutually exclusive: some workers employed for the year also picked up daily wages during seasonal work.

The following discussion of those workers is based on a remarkable series of accounts found within a commonplace book compiled by Humphrey Newton *c.* 1498–1524.[9] Of particular note are a series of estate accounts dating from 1498 to 1506, that is, between the time of Humphrey's inheritance of Newton and the acquisition of Pownall, when Humphrey was perhaps most focused on Newton. There is little that is systematic or formulaic to the accounts and a diversity of items are juxtaposed, including rentals, lent accounts, harvest records, clothing and food purchases, animal sales, and building works. Information on wage labour is found generally in lists of debts, harvest accounts and investment projects; and more specifically in a series of wage accounts. The problems in exploiting the material arise out of the purpose of the accounts. They are not a series of daily accounts, nor ones offering yearly totals of profit and loss. Rather they cover major items of expenditure like building projects; annual expenses such as lenten accounts; and outstanding debts. Not all are dated or can be confined to a single year. Not every labouring task undertaken at Newton is listed. Nor were they ever intended to record every day labourer's work at Newton: those whose wages were promptly paid feature infrequently if at all. Yet there are important advantages to these accounts. As shall be shown below, they offer fuller information on individual workers than found in the more common lists of wages; and all were written by the lord himself and not by an intermediary, hence offering a more personal side to the accounts. The richness of the material results in a complex web of information which this article organises by discussing

[7] A discussion of Humphrey Newton is found in D. Marsh, '"I see by sizt of evidence": information gathering in late medieval Cheshire', in D. E. S. Dunn (ed.), *Courts, counties and the capital in the later middle ages* (1996), pp. 71–92; and in J. P. Earwaker, *East Cheshire* (2 vols, 1877, 1880), I, pp. 118–27; II, pp. 203–7. For Humphrey's marriage: PRO, CHES 3/67/5, SC6/HENVIII/297, m. 6. Estate value: Bodl., MS Latin Misc c 66, fo. 24r, BL, Add. Ms 42,134A, fo. 9r.

[8] P. H. W. Booth, *The financial administration of the lordship and county of Chester, 1272–1377* (1981), p. 4, and Morgan, *War and Society*, p. 85.

[9] This is Bodl., MS Latin Misc c 66, a 129 folio miscellany also containing legal, religious and literary items. A printed list of contents can be found in *Historical Manuscripts Commission*, 2nd Report, pp. 80–1. For examples of its literary and religious contents, see R. H. Robbins, 'The poems of Humphrey Newton, esquire, 1460–1536', *Publications of the Modern Language Association of America* 65 (1950), pp. 249–81, and D. Youngs, '"A vision in a trance": a fifteenth-century vision of Purgatory', *Medium Aevum* 67(1998), pp. 212–34.

the issues of contracts, composition, tasks and wage rates for the full-time workers and day labourers.

II

The bulk of the work at Newton fell on full-time workers whom Humphrey grouped together in his accounts as 'servauntes'. What distinguished a servant in the middle ages is a difficult subject. Historians have defined the term in a narrow and specific sense: those hired by one master for a long period, usually a year, and who were resident within the household. As a consequence the servants were usually young and unmarried.[10] Contemporaries, however, were not so exacting and used the term in a broad sense: it could refer to anyone employed for a wage and included both the agricultural day labourer and the domestic or 'life-cycle' servant. At times it was used as a synonym for *famuli*, those full-time employees who performed basic tasks on the demesne such as ploughing, carting and looking after the animals.[11] The following discussion adopts Humphrey's term 'servant', while questioning how far the Newton workers conform to the modern definition of the term.

Information for the group is found primarily in a series of accounts of wage payments for the years 1499–1505 with a single account in 1519.[12] Each account contains brief, individual records of workers that begin with the name, wage, duration of the contract and, commonly, the day of hiring. They are followed by Humphrey's notes on his financial exchanges with each worker. For example:

> memorandum. William Hogh was hired at Candilmas anno predicto [i.e. 1499] for xis & if he desired eny bountieth if I wold to gif hym etc. Item he hath resceyved of my wife a payr housecloth price xd. Item at Stopford fer iijs iiijd. Item I must gif hym for Raufe Rider vis iiijd. Item I most gif hym ijd þat I borowed. Item I gaf hym on goodfriday ijd anno xv. Counted with hym on allthursday even & I have gifyn hym xvjd þat I borowed & þe seid iiij for Raufe & also the seid ijd. Item I have geven hym ijd of his wage on the seid even. Item ijd for his bowe. Counted with hym on Seynt Jame even & so we be mete. I have paid hym xix grots of his wage which was all sicut apparet. Item for Nicholl Lees iiijd & so we be mete as for þis yer.[13]

It is possible that the accounts echo formal agreements made between Humphrey and the servants.[14] Fifty contracts, for 31 different servants, were recorded in the eight years. Of those,

[10] Kussmaul, *Servants*, pp. 6–7; P. J. P. Goldberg, 'Female labour, service and marriage in northern towns during the later middle ages', *Northern Hist.*, 22 (1986), p. 21; and L. R. Poos, *A Rural Society after the Black Death* (1991), ch. 9.

[11] P. W. Fleming, 'Household servants of the Yorkist and early Tudor gentry, 1460–1560', in D. Williams (ed.), *Early Tudor England* (1989), p. 19; Kussmaul, *Servants*, p. 6; B. A. Hanawalt, *The Ties that Bound: peasant families in medieval England* (1986), p. 63; Postan, '*Famulus*'; C. C. Dyer, *Lords and Peasants in a changing society. The estates of the bishopric of Worcester, 680–1540* (1980), p. 142; and Farmer, 'The *famuli*', p. 210.

[12] Bodl., MS Latin Misc c 66, fos. 25r-v, 33r, 33v, 39av, 41av, 43v, 46v and 61v.

[13] *Ibid.*, fo. 25r. Punctuation added, English words expanded. 'Stopford' is the town of Stockport. The sentences referring to borrowed money are crossed out, perhaps indicating repayment.

[14] Compare the opening lines of the contract with servants' contracts referenced in P. J. Jones, *The Household of a Tudor Nobleman* (Illinois, 1917), pp. 48–9.

43 contain the date of hire, with a further five containing an end date. Studies have shown that a traditional date of hire existed in England, most often Michaelmas in the south and Martinmas in the North.[15] Newton did not follow that tradition as a number of different hiring times occurred. Some appear more frequently than others: Epiphany (seven times), Candlemas and Easter (four times each). Other hiring days included the Exaltation of the Cross, Christmas Day, and St. Stephen's Day. With no main hiring date, it suggests that the servants were not recruited annually from market towns and fairs. They do, however, bare close similarities to the flexible contracts operating in late sixteenth-century Norfolk.[16] The overlap in the contracts complicates any calculation of the number of servants at Newton during any one year. At any one date there appears to have been approximately five workers, with a mix of men and women (usually at least two or three men each year). The figures can be compared to the number of full-time workers on other estates. The manor of Elvethall, Durham, totalling 240 acres, kept seven *famuli* comprising a reeve, carter and five others. At the larger Essex estate of Porters Hall, with its 300 acres of arable, eleven servants were hired.[17] The number of full-time workers at Newton thus appears commensurate with the estate's size.

The duration of the contract is noteworthy. It has been claimed by both contemporaries and modern historians that workers in the later middle ages were reluctant to accept long term contracts, particularly those running for a year. Rather they preferred employment on a daily or weekly basis that offered the possibility of accumulating higher wages and more leisure time.[18] Yet workers continued to be employed on long-term contracts, as Humphrey Newton's servants clearly demonstrate.[19] Forty of the 50 contracts at Newton were for a full year, and some workers' contracts were renewed for a second or more year. Indeed the men at Newton were particularly attached to the estate. Only 12 different men are recorded as servants between 1498–1505, with half renewing their contracts for a second year. John Aleyn worked at least six years at Newton. Female workers were less likely to stay at Newton. Nineteen women are recorded with only around a third renewing for a second year.[20]

It was the women who were also more likely to end their contracts early. Both Margery Broke and Margery Henshouse left Newton after half a year. The contracts of two others acknowledged the possibility of early departure. Humphrey hired Ellen Porter for a year 'provided þat she may be lose at eny quarter', and Margery Davey was hired 'providet that she shall be lose opon a

[15] e.g. A. S. Kussmaul, 'The ambiguous mobility of farm servants', *EcHR* 34 (1981), pp. 222–3, and *idem*, *Servants*, pp. 50–1.

[16] S. A. C. Penn and C. C. Dyer, 'Wages and earnings in medieval England: evidence from the enforcement of labour laws', *EcHR* 43 (1990), p. 365. Although a few servants received money at Stockport fair, their hiring dates differ from one another and are unconnected with the fair. Smith, 'Labourers in late sixteenth-century England', p. 15.

[17] Lomas, 'Elvethall', p. 36. Poos, *A Rural Society*, p. 213. See also Fleming, 'Household servants', pp. 27–8 and R. H. Hilton, *The English Peasantry in the Later Middle Ages* (1975), p. 34.

[18] A view recently aired by Mark Bailey, 'Rural Society', in R. Horrox (ed.), *Fifteenth-century attitudes* (1994), p. 162. See also Dyer, *Lords and Peasants*, p. 142, Penn and Dyer, 'Wages', pp. 367–9, M. K. McIntosh, *Autonomy and Community. The royal manor of Havering, 1200–1500* (1986), p. 161.

[19] J. Hatcher, 'England in the aftermath of the Black Death', *Past and Present* 144 (1994), p. 28, and J. L. Bolton, '"The world upside down". Plague as an agent of economic and social change' in W. M. Ormrod and P. G. Lindley (eds), *The Black Death in England* (1996), p. 47.

[20] *Cf.* Goldberg, 'Female labour', p. 21.

quarter warnyng'. It is not clear here who would actually do the warning, but it is likely to have been the employees. At Writtle, Essex, for instance, servant agreements included the stipulation that an employee must give a quarter's notice before leaving.[21] A few Newton workers preferred to be held on shorter contractual terms. Jane Short, for example, was contracted for a quarter year and half year in 1499 and 1500 respectively. John Aleyn was hired for a quarter year; his contract was renewed twice, so he worked three-quarters of a year all told. But, as these show, even those on short-term contracts did not necessarily leave once their term had ended. Nicholas Lees was the only one on a weekly rate, but his total work term in 1499 extended to a quarter year.[22] It is also noteworthy that Short, Aleyn and Lees were hired on year-long contracts in subsequent years.

Humphrey's ability to hire workers on long-term contracts and with no apparent need to hire at town fairs is partly explained by the composition of the work force. A proportion was already familiar to him. Significantly they included the tenants of the two messuages at Newton, Thomas Lees and Philip Grene. Margery Henhouse was probably related to Humphrey's cottage tenant of the same surname.[23] Some appear recruited through family connections. From Thomas Lees's family came Phyllis, Janet and Nicholas Lees. Other family connections are suggested in the pairings of Bess and Thomas Astill and Emma and John Aleyn. Ellen Newton may have been one of Humphrey's kin as it was not uncommon to have family, even offspring, employed as servants.[24] A long-term connection was with the Houghs of Wilmslow. In the time of Humphrey's father, Richard Newton (1441–97), one John Hough of Wilmslow worked for five years at Newton; while his descendants William, James and John Hough worked under Humphrey Newton.[25] Overall many shared a patronymic with families neighbouring Newton: for example, Wittonstall, Davenport and Broke. Other servants, particularly the women, are harder to trace. They may have come to Newton asking for work when a previous servant left; and perhaps came from farther afield than the Newton area.[26]

It is difficult to determine the status of all the servants, a situation perhaps indicative of their lowly rank. Those for whom something is known include those drawn from Humphrey's tenants. Both the Lees and the Grenes rented their messuages from Humphrey for 14*s. per annum.* Both produced sufficient cereal to sell oats, rye and barley to Humphrey, and the Lees sold him pigs; they, therefore, did not rely entirely on wages for their income. The Lees were not sufficiently wealthy to buy their own plough as they borrowed one from Humphrey, but they had some local standing: one of the family, Humphrey Lees, was a constable of the township of Butley.[27] The Houghs of Wilmslow were a more prominent family whose members appear regularly in administrative records as yeomen or husbandmen. Servants of the surnames

[21] Bodl., MS Latin Misc c 66, fos. 33v, 39av. Poos, *A Rural Society*, p. 203.

[22] Bodl., MS Latin Misc c 66, fos. 25v, 33r.

[23] *Cf.* tenants of Richard Clervaux who also became his servants, A. J. Pollard, 'Richard Clervaux of Croft', *Yorkshire Arch. J.*, 50 (1978), p. 159. Z. Razi, 'Family, land and village community in later medieval England', *Past and Present* 93 (1981), p. 389.

[24] Hilton, *English Peasantry*, p. 35.

[25] The Houghs lived for at least forty years within 1½ miles of Newton: PRO, STAC 2/30/86.

[26] e.g., 'Bes Bower was her wantyng of a quarter': Bodl., MS Latin Misc c 66, fo. 33v.

[27] *Ibid.*, fos. 27ar, 30r, 36r. PRO, STAC 2/30/86. Could Humphrey Lees have been named after his family's lord and employer? 'Humphrey' was not a name commonly used in the locality.

Wittonstall and Davenport presumably belonged to known families in the locality.[28] Overall, the servants were from families of lesser social standing than the Newtons, all non-gentle, but with a few having some social significance in the local townships.

Historians are divided over whether servants necessarily lived within their employer's household.[29] The evidence from Newton suggests a mix of non-resident and resident. The tenant-servants remained in their own messuages; for example, Thomas Lees' rent was sometimes deducted from his wage as servant. It is noteworthy, however, that Thomas was unmarried during his term at Newton and after his marriage only worked for day wages. It also seems plausible that the women who ended their contracts early lived outside the Newton estate. On the other hand, a known resident was William Hough. In a declaration made by Hough in 1531, he stated that around 1501 he 'was sum tyme dwellyng' with Humphrey at Newton.[30] He was young and unmarried at the time as Humphrey noted William's marriage in 1501–2. Like Thomas Lees, once married William only worked on a daily basis. Another likely boarder was William's brother, James Hough, the only worker identified as a child in the accounts. The timing of James's employment suggests he was Willliam's replacement.[31] For others the evidence is less forthcoming. John Aleyn's residence is suggested by the payment of 4*d.* to 'go home'. One possible indication is the purchase of 'house cloths' for the servants, especially as William Hough received some. Hence, that Richard Coke was given house cloths, hose and shoes could suggest that he was a resident servant. Another possibility is the reference to 'housill'. Although a term generally associated with shriving, Humphrey's use may be related to household provision.[32]

What work did the servants undertake? With no extensive or highly structured estate organization, the workers at Newton were less specialised than on larger estates.[33] With the exception of a wet nurse, no one is recorded in relation to a particular job such as a shepherd, carter or ploughman as the *famuli* were usually identified. Rather responsibilities were shared among the servants and their work overlapped.[34] The tasks undertaken were variously connected with the soil (digging, ditching, marling and turfing), crops, livestock and their produce, major buildings (such as the mills and fishery), and non-manual labour involved in running the household. Some work was shared by both sexes. The reaping and the gathering of corn is the clearest example and is discussed below. In general the pattern of work appears to conform to the recognised sexual divisions of labour. Some work, such as wet-nursing, was necessarily exclusively female.

[28] Hough: PRO, STAC 2/30/86, CHES 24/65, CHES 25/16. For Wittonstall see Earwaker, *East Cheshire*, I, pp. 148–9; and for the prolific Davenport family see, for example, the index in G. Ormerod, *The history of the county palatine of the city of Chester* (3 vols., 1882).

[29] For those who believe the definition of a servant should include residence within a household, see Kussmaul, *Servants*, pp. 5–7 and Poos, *A Rural Society*, p. 184. Those against include Hilton, *English Peasantry*, pp. 31–2 and Hanawalt, *Ties*, pp. 164–5.

[30] John Rylands University Library Manchester (hereafter JRULM), Bromley-Davenport Mss, 'Newton by Mottram', 3/100/7.

[31] James's first record begins with a 13*d.* payment 'to the wedding of his brother', Bodl., MS Latin Misc c 66, fo. 41av.

[32] *Ibid.*, fos. 33v, 41av, 43v.

[33] Cf. R. H. Britnell, 'Minor landlords in England and medieval agrarian capitalism', *Past and Present* 89 (1980), p. 7.

[34] Compare C. E. Moreton, *The Townshends and their world. Gentry, law and land in Norfolk, c. 1450–1551* (1992), p. 137; R. H. Britnell, 'The Pastons and their Norfolk', *AgHR* 36 (1988), p. 135; and M. K. McIntosh, 'Servants and the household unit in an Elizabethan English community', *J. Family Hist.* 9 (1984), p. 12.

The traditional female business of brewing was mentioned in the records of four women, but no man. One brewer, Ellen Newton, is also found undertaking the female task of cheese making. Jane Short had her wages deducted for losing flax and hemp, mishaps that may indicate the predominantly female work of spinning.[35] On the other hand, there were a number of male-dominated tasks, which included digging and clearing ditches, spreading marl, ploughing, maintaining buildings, and undertaking 'iron work'. One task exhibiting a clear division of work between the sexes was turf cutting. At a set time, 'turve time', this employed around a dozen people, with a mix of servants and day labourers. For example, in 1499 eight people were employed to cut the turf and five to lay the turves on grass or hay so that the wind could dry the peat – to 'wyndrawe'. There is a precise division of labour with the men digging the peat for the women to 'drawe'.[36]

Whereas all undertook some manual labour, a few servants performed non-manual tasks and assisted in the management of the Newton estate. These tasks were entrusted to a few servants, roughly two a year, and always male: they were in effect the top positions in Newton. It was these men who travelled to local towns and fairs on Humphrey's behalf. For example, James Hough went to Macclesfield to pay a dyer a 6*s.* 8*d.* debt Humphrey owed. They were delegated the tasks of overseeing and paying other estate workers, duties traditionally associated with the bailiff. Richard Coke counted the harvest of 1503; and Thomas Astill, Thomas Lees, Philip Grene, William Hough and John Aleyn frequently paid workers their wage on behalf of Humphrey Newton. William Hough's special position in the household is suggested by his presence alongside Humphrey's wife in witnessing or paying servants' wages. Humphrey also used the men as witnesses on small local land transfers. One or two servants were trusted with more domestic matters. Hence, Hough and Astill oversaw the dowry payments Humphrey made to his future brother-in-law, Robert Vawdray; and Grene gave to a second future brother-in-law, John Birtils, part of the promised dowry.[37] It suggests that Humphrey's servants were not confined to soil and animals as *famuli*, but undertook tasks generally assigned to the household servant. These examples also intimate that, like the household servant, a close relationship may have existed between the servants and the lord.

The relationship between Humphrey and his servants is brought into focus in their financial relations. Studies show a wide variety in wages across estates, even within the same county.[38] That wages could be high in the fifteenth century was recognised by statute; one acknowledged that the 'common servant of husbandry' might receive 15*s.* in cash and 3*s.* 4*d.* in cloths, with senior workers collecting in excess of 20*s.* Receiving around this rate were the *famuli* at Elvethall manor, Durham, where the reeve received £1 *per annum* and six other men had 16*s.* each. Elsewhere, however, servants received far less. On the Millom estates in

[35] Bodl., MS Latin Misc c 66, fos. 33v, 46v. It is possible that they covered the duties of dairymaids. Among the growing number of works on women's work in medieval England, see S. A. C. Penn, 'Female wage earners in late fourteenth century England', *AgHR* 35 (1987), pp. 1–14; and H. Graham '"A woman's work ...". Labour and gender in the late medieval countryside' in P. J. P. Goldberg (ed.), *Woman is a worthy wight: Women in English society c. 1200–1500* (1992), pp. 126–148.

[36] Bodl., MS Latin Misc c 66, fo. 28r.

[37] *Ibid.*, fos. 27av, 29v, 34cv, 47v; JRULM, Bromley Davenport Mss, 'Newton by Mottram', 3/100/7; BL, Add. Ms 42,134A, fo. 2r.

[38] M. Mate, 'Labour and labour services on the estates of Canterbury Cathedral Priory in the fourteenth century', *Southern Hist.* 7 (1985), pp. 55–67.

Cumberland in 1513–4, servants' wages ranged from 8*s.* to one mark.[39] Similarly, at Newton, yearly wages did not reach high figures: they varied between 5*s.* and 14*s.* 4*d.* with a large concentration around 7*s.*–8*s.* Female wages were fairly uniform. In the 22 figures available, a payment of 8*s.* occurs 11 times and 7*s.* seven times. Male wages are more varied and usually higher. Of 21 contracts available, seven took between 5*s.*–7*s.*, four between 8–10*s.*, with 10 commanding wages of 11*s.* and over. It confirms the generally held view that male workers were more highly paid than their female counterparts. It also suggests that female work was perceived as less skilled than male work; no female had a 'managerial' role for example.[40] Differences between the wages of male workers probably reflected age, experience and work allocation. The higher wages were received by those men with greater responsibilities: William Hough (11*s.*), Thomas Lees (12*s.*), Thomas Astill (13*s.*), John Aleyn (13*s.* 4*d.*) Philip Grene (14*s.* 4*d.*). Length of service was perhaps a determinant. An example is John Aleyn. In 1500 he was employed on a quarterly wage of 20–22*d.*; between 1501–2 he worked for 6*s.* 8*d.* a year; this rose to 7*s.* in 1502–3 and 8*s.* in 1503–4. The lone account for 1519 records Aleyn receiving 13*s.* 4*d.* for the year.[41]

It is debatable whether those wages alone would have enticed servants onto long term contracts at Newton. Similar wages elsewhere in England have compared unfavourably with what was achievable by labouring on day rates (discussed for Newton below) where much higher returns were possible.[42] It suggests, therefore, that other forms of remuneration were influential. In other households servants could expect allowances of grain and provisions of food and drink.[43] Unfortunately, little of this aspect of housekeeping is recorded in Humphrey's account book. No grain allowances are mentioned: this may reflect an absence of documentation, but the Newton estate appears to have been perennially short of grain. A chance reference reveals that ale was provided for the servants: when a servant failed to brew ale she was docked 2*d.* which was used to 'by ale to þe servants'. Only one servant was paid largely in food and drink: Kate Williamson was hired for a year 'for mete and drynk & cloth as much as comes to vs'.[44] What is known, however, is that the majority of Newton servants received a 'bountieth', either in money or in kind. The term, presumably referring to the generosity of the giver, was a bonus. Examples include Ellen Porter, hired for 7*s.* and a handkerchief, Nicholas Lees hired for half a year for 5*s.* 4*d.* and a pair of shoes, and Laurence Bridge hired for 6*s.* 8*d.* and a 'bountieth' worth 4*d.*[45] Other estates offered their servants 'tips' or perquisites in an attempt to encourage workers to their estates.[46] Was Newton doing the same? References to the Newton 'bountieth'

[39] D. L. Farmer, 'Prices and Wages, 1350–1500', in E. Miller (ed.), *The Agrarian History of England and Wales*, III, *1348–1500* (1991), p. 487. Fleming, 'Household servants', p. 24; A. J. L. Winchester, 'The castle household and demesne farm at Millom in 1513–14', *Trans. Cumberland and Westmorland Antiquarian and Archaeological Soc.* 83 (1983), pp. 89–95; Hatcher, 'Aftermath', p. 29; Lomas, 'Elvethall', p. 43.

[40] Hilton, *English Peasantry*, p. 103, Bennett, *Women*, p. 83.

[41] Bodl., MS Latin Misc c 66, fos. 33r, 41av, 43v, 61v.

[42] Some comparative examples are given in Penn and Dyer, 'Wages', pp. 369–70.

[43] In some instances the *famuli*'s food deliveries were worth more than cash wages: Farmer, 'Prices and Wages', p. 481.

[44] Bodl., MS Latin Misc c 66, fos. 39av, 46v.

[45] *Ibid.*, fos. 33v, 39av.

[46] Penn and Dyer, 'Wages', p. 371. For estates offering 'tips' see I. Kershaw, *Bolton Priory. The economy of a northern monastery, 1286–1325* (1973), p. 55; P. D. A. Harvey, *A medieval Oxfordshire Village. Cuxham, 1240–1400* (1965), p. 77; Hatcher, 'Aftermath', p. 29.

suggest it was not always a particularly important part of the wage. Katherine Skenham did not bargain over her 'bountieth': she is recorded as saying it 'shold be worth as plese my wife & me [Humphrey]'. Similarly William Hough 'desired eny bountieth if I wold to gif hym'.[47] In these instances, the 'bountieth' was left to Humphrey's discretion, with little role as an incentive. It may once have had more power, but was now more a symbolic gesture by the landlord.

The contract was written in terms of money, but how much were the servants getting in cash? It has been argued that fifteenth-century servants were in a position to demand and secure entirely monetary payments. Salaries at Elvethall, for example, were almost entirely paid in cash; the exceptions were allowances against rent.[48] However, Humphrey's servants did not, or were not able to, demand payment entirely in money. Rather, a substantial proportion was delivered in kind, including payments of pigs and apples. Clothing was a main form of payment. At one extreme was the contract with Jane Short who was hired for a quarter year for a kirtle worth 18*d.* But other servants received at least part of their wages in clothing. Sometimes money was given for the servants to buy clothes themselves; at other times Humphrey made the necessary purchases; but all were deducted from the wage. Payments appear frequently in the form of hats, shoes, kirtles and gowns. Phyllis Lees, for example, was paid 4*d.* in shoes and 3*d.* for a kirtle, 'sleaves', apron and smock. Humphrey's concern for his servants' appearance is understandable as dirty and torn clothing were viewed as signs of the lord's impoverishment or his tightfistedness. There is nothing to suggest a special Newton livery, although Richard Coke was bought a tawny jacket and white hose.[49]

Even when money was given to the servants, it could be tied to a particular event. Servants were given money for travelling to places such as Manchester and Doncaster and for trips to the local markets of Stockport, Congleton and Macclesfield. Money was given for family affairs, particularly weddings: Humphrey gave Katherine the nurse 12*d.* to go to her sister's wedding, and 4*d.* to John Aleyn to attend his brother's wedding. A regular payment was for attendance at local ales, such as those at Prestbury parish church.[50] In at least some cases it was presumably the servants themselves who made formal requests to Humphrey for financial assistance or advances – they evidently received them. Together the examples also illustrate the distances the servants travelled and the absences Humphrey allowed. The servants' movements do not appear to have been harshly restricted.

Those payments involving cash highlight an important role for credit. Humphrey sometimes lent money to his servants. Thomas Lees, for example, was lent 3*s.* towards his marriage. A few lent money to Humphrey: of William Hough, Humphrey recorded 'I have gifyn him xvid þat I borowed' and Humphrey owed Phyllis Lees 'her wage & money þat I boroed'. The servants also borrowed and lent to each other. In most accounts there are references to Humphrey paying part of one servant's wage to another. As regards Phyllis Lees, Humphrey wrote 'she most alowe me iiijd þat I allowed Philip in his rent wheche she boroed of Philip'.[51] It is not clear from the examples whether money physically changed hands, or the transactions were on paper. It is

[47] Bodl., MS Latin Misc c 66, fos. 25r, 33v.

[48] *Cf.* Hanawalt, *Ties*, p. 165; Lomas, 'Elvethall', p. 46.

[49] Bodl., MS Latin Misc c 66, fos. 25r, 39av, 41av. For the significance of clothing, Fleming, 'Household servants', p. 24.

[50] e.g. Bodl., MS Latin Misc c 66, fos. 25r, 33v.

[51] *Ibid.*, fos. 25r, 33r, 43v.

possible that the Newton district suffered a cash shortage which would explain payments made in kind, or payments by exchange such as the account of Thomas Lees where his debts to Humphrey for cloth (*6d.*), a loan (*10d.*) and rent (*3s. 6d.*) were 'all set in his wage'.[52] Yet there is no clear evidence for a cash shortage, simply the general advantage of using credit.

The debts existing between different members of the Newton estate may have closed some of the social distance between the master and his servants. Humphrey's terminology, 'lent' and 'borrowed', suggests a degree of equality between the parties concerned. But did the servants have a choice in the matter? Humphrey took advantage of his servants. Wage payments were often irregular and sometimes overdue. Nicholas Lees was owed *16d.* of his previous year's hire, which was better than Emma Aleyn who, in her third year of hire, was owed a large part of her previous two years' wage.[53] Humphrey benefited from delayed payments. Debts were a recurrent and important part of Newton estate management. Several pages of accounts reveal the substantial sums they could reach. With Humphrey embarking on a series of high cost investments on his estate – the fulling mill, fishery and marling – delaying immediate payment to servants helped sustain the cash flow to finance the projects. At the same time Humphrey did not extend his own loans indefinitely, nor write-off debts. If a servant was ill or away, wages were docked. When Philip Grene was sick for two days and 'lie alle day on þe axes' he had to repay Humphrey the *2d.* spent on hiring another worker. Thomas Astill owed Humphrey money for the time when he was too ill to fey the marl, dig the turf or sow the seed, and when he let the plough lie because he attended his mother's funeral.[54] Damaged ale, lost sheep or grain, and spoilt cheese, were deducted from the servants' wages.

Wage payments were often, therefore, a complex mix of cash, kind and promises, as the following examples illustrate. The first comes from an account with John Aleyn. Note the unpaid 'bountieth' and the actual amount given in 'untied' cash.

> Counted with John Aleyn for alle thyngs, & so I have geven hym his yere except viijd <sol viijd> the day & yer aboveseid and so we be mete for þe last.
>
> Item I hired from þe xx day anno xix° for a yer for viiis & a per gloves. Item the seid John receyved vid ob at þe wyndam opon a rekenyng. Item ijd in a skyn. Item iiijd per Bradford. Item ijd for ?feny for flessh. Item iiijd to a weddyng. Item for a bonet of Philip xvid. Item for Thomas Lees xijd. Item to Werall vid for shone [shoes?]. Item viijd to William Parsons. Item xijd to William Jammy. Summa vis. We accompted afor Jamys [Hough] & so I ought hym ijs & gloves wherof I have paid hym xijd rend xijd.[55]

A second example demonstrates further the small amount received in cash: Ralph Rider got only *5d.* in cash of *18d.* owed him. But the example also reveals that Humphrey did not have it all his own way.

> Memorandum, counted with the seid Raufe the wennysday afor the fest of seynt Andrewe. And after his awne reconyng he was xviijd behynde of his yers wage & he wanted v weks of his terme day fro þe seid wennysday <to newyersday>. And for thalowance of þe said v weks I asked vijd and for a new pikfork irnes <he proferd> id and for a forkesho ob. and for a

[52] *Ibid.*, fo. 25v.
[53] *Ibid.*, fos. 37r, 43v.
[54] *Ibid.*, fo. 33v.
[55] *Ibid.*, fo. 43v. Angle brackets denote interlineations.

> sicle id whech he had lost and for William Hogh iiijd whech he oughed hym. The summe of the allowance by his agreement is xiijd ob, & so ther remaynes due to Raufe iiijd ob and I have geffyn hym vd to have his goode report afor my wife and the seid William [Hough] & oþer and so we be mete.[56]

The example suggests a level of negotiation over wages on the part of the servants. Ralph had calculated and was claiming his wage arrears and Humphrey wished to have his 'goode report'. It suggests a prominent role for Humphrey's wife and one perhaps that the servants could exploit. Throughout the accounts, the relationship between Humphrey and his servants is revealed as an interactive one. As previous examples have shown, although aided by other servants, it is Humphrey who discusses contracts, often pays their wages, lends and borrows. In turn the servants made their opinions known to him. Negotiations were not always harmonious. A hint of the controversies occurring over payment arises in the case of Ellen Porter who claimed late wages for seven weeks work, but Humphrey disagreed: 'she seid departid at vij wèks end as she seis: and I say she feyned her syk & did nozt iiij weks & marred ij burthen of goode ale'. Who won the case is not disclosed. Humphrey had several problems with one Ellen Newton. Her list of faults, including failing to brew the ale and marring the cheese, led to her early dismissal.[57] Although Humphrey appears the dominant partner, he could not assume his position and power would always secure a compliant labour force.

III

Newton also employed day labourers for a daily wage. These included hired craftsmen employed on large projects on the estate such as the mill buildings, and the smith who mended the plough, made plough irons and a wagon. But the majority of day labourers were agricultural workers. These included, first, those hired to work on specific projects supporting the specialised craftsmen, for example, carters needed to transport marl and turf; second, those who undertook regular maintenance tasks on the estate, such as trimming hedges and clearing gutters; and, third, the seasonal workers, particularly the harvesters. These were not separate or distinct groups; workers performed a broad range of tasks and were flexible in their work. An example is Robert Barlow who dug the marl, maintained the mill and weir, ditched, quick-set, reaped and threshed in the harvest.[58]

Barlow also illustrates that the labourers were not necessarily strangers to Newton or transient workers. Barlow, from neighbouring Mottram St Andrew, was conceivably the yeoman who worked alongside Humphrey Newton as a warden for a fraternity in Mottram (and who stole cattle in the township).[59] Servants undertook extra labouring duties, suggesting that they had time on their hands and a desire to supplement their wages with day labouring. (It is not known whether the accounts simply record the 'worth' of the task or a 'real' payment; the latter would imply that Humphrey was willing to provide supplementary work and wages to already hired hands.) Tenants also assisted: William Small, lessee of a house in Newton, worked in the orchard and reaped the harvest. Other neighbours from Mottram were employed. Henry Mottershead,

[56] *Ibid.*, fo. 25v.
[57] *Ibid.*, fos. 33v, 46v.
[58] *Ibid.*, fos. 27ar, 31av, 32v, 34cv, 37r, 38r and 48r.
[59] *Ibid.*, fo. 46r; PRO, CHES 25/16.

from a yeoman family long associated with the Newtons, worked on the mill and weir, and killed cattle, swine and boar on the Newton estate; he was probably a butcher. Workers also brought family members with them. William Small and his sons ditched together, and relations Richard and Thomas Lymmey, and William and Ambrose Lyngard, marled the Newton fields.[60]

The largest group of day labourers were the harvesters, for whom we have information in the accounts for the six years 1499, 1500, 1501, 1503, 1504 and 1506. The accounts mainly record shearing or reaping, although a few mention ploughing and threshing. The accounts comprise lists of workers hired, days worked, and occasionally wages paid and the fields harvested. Newton's accounts are particularly interesting because they shed light on a non-manorial farm of fewer acres than the manors generally analysed for harvest workers. Although Newton contained 100 acres of land, only a small proportion was ploughed at any one time. As a result the numbers of harvesters at Newton range only between 16 and 22 each harvest: 18 in 1499, 20 in 1500, 21 in 1501, 18 in 1503, 22 (plus children) in 1504, and 16 in 1506. Around 75 work days were needed to reap the harvest.[61] Figures can be compared with the 52 workers employed to supplement the servants in harvest in the 300 acres of Porter's Hall, Essex; it required 222 work days in one harvest.[62]

The Newton harvesters included a large proportion of women. Elsewhere in medieval England, female harvest labour was both large scale and varied. For example, at Stafford castle, Staffordshire, in the mid-fifteenth century, women can be found hay-making, reaping barley and peas, gathering and binding the grains.[63] The figures for Newton are higher than most, perhaps because they focus on reaping. On average the female workers comprised over half the harvesters at Newton. In 1500 the proportion rose to 75 per cent. Furthermore, women worked a high percentage of the work days recorded. In one account women worked collectively 50½ days compared to 20½ days by the men. Individual women worked several days: Alice Prestknave for as many as 11½ days. In common with other studies, the harvest lists show that female workers were not only the single or the widowed. Fourteen of 45 women were specifically noted as married and others share a common surname with several male workers. The majority of wives were mentioned with their husbands in the usual manner of husband's name 'and wife'; the exception was 'Janet Dale and her husband'.[64]

Unlike harvesters in the early modern period, the Newton workforce was neither itinerant nor simply employed for the cereal harvest.[65] Humphrey drew upon familiar and neighbouring resources. Tenants provided regular help both as part of their 'boon' rent, and also without boon for which they received a daily wage like other labourers. William Small, who leased a house at Newton, worked a harvest, as did his wife and relation, Thomas Small. It is likely that the reapers Richard, Margery and Kate Wyatt were related to John Wyatt, the miller at Newton. Several servants assisted, although generally their presence was not substantial. Help also came

[60] Bodl., MS Latin Misc c 66, fos. 27av, 35v.

[61] *Ibid.*, fos. 31av, 34cv, 38r, 43r, 45v, 48v.

[62] BL, Add. Roll, 66,051, Poos, *A Rural Society*, p. 214.

[63] PRO, SC6/988/12, fo. 1d. In Millom 14/31 hired harvesters were women, although a higher proportion of male labour came from servants: Winchester, 'Millom', pp. 91–2. See also M. Roberts, 'Sickles and scythes: women's work and men's work at harvest time', *History Workshop J.* 7 (1979), pp. 3–28; Penn, 'Female wage earners', pp. 7–11.

[64] Bodl., MS Latin Misc c 66, fos. 31a, 45v. *cf.* Penn, 'Female wage earners', p. 10.

[65] Smith, 'Labourers in late sixteenth-century England'.

from those who laboured at Newton at other times: for example, Alice Prestknave helped dry turf and Roger Pymlot marled the Newton fields.[66] The number of family groupings is high. Across the six accounts there are six members of the Lees family, five Prestknaves, Robert Barlow, his wife and children, three Colyns and numbers of husband and wife, parent and child, brother and sister pairings. Taking the harvest of 1501 as an example, a breakdown of the 21 workers gives four Lees, three Mottrams, two Mottersheads and the couples of Small, Pymlot and Mereman. A high percentage of harvesters returned to work a second or more harvest. In five of six accounts between a half and two-thirds of the workers can be found working in another harvest. In 1503 14 of the 18 workers had or would work another harvest.[67] Of course, a short run of accounts is likely to underestimate the actual number.

As it is often held that day labourers could collect higher sums from working day rates than from a yearly wage, it is important to consider the day wages at Newton. Although the fragmentary evidence prevents a calculation of what individuals earned in any one year, sufficient references exist to provide day rates for various tasks on the estate. They were below the payments received by the oft-cited southern labourers and those reported in recent work on northern towns.[68] The Newton unskilled workers commanded between 1–2*d.* per day depending on the task in hand. Robert Barlow, for example, was paid 12*d.* for twelve days ditching and ridding; far lower than the average of 4–5*d.* per day.[69] The payment of 1*d.* was also the wage for labourers who maintained the mill. Male turf diggers received 1–2*d.*; the female turf dryers collected 1*d.* per day, sometimes less. The more skilled 'iron work' paid higher at 2*d.* per day, and the carpenter collected 3*d.* per day; both lower than those found in general analyses of fifteenth-century workers. They were not, however, unique for small northern estates: the estate at Millom, for example, paid several labourers 2*d.* per day.[70] Similarly the evidence for Newton harvest workers points to a wage of 2*d.* per day. In 1499 Christopher Lees was accounted 2*s.* 2*d.* for 13 days shearing; Elizabeth Fandon was paid 13*d.* for 6½ days work; the children of Barlow were given 8*d.* for their total of four days work. For the harvest of 1503 the total of 74½ days worked amounted to 12*s.* 5*d.* As these examples show, there was no wage differential between the sexes for the harvest work; perhaps because reaping was considered a low status activity. The equality is consistent with the findings of Middleton and Hanawalt, although it contradicts the more recent work of Poos.[71] Newton's wage was lower than that received by harvesters in southern England. Poos gives the average figure for Essex as 4*d.* for men and 3*d.* for women. But the rate does not appear unusual when compared with other northern estates. The harvesters at Millom (another small estate), for instance, were paid 2*d.* each, regardless of sex, and reapers at Stafford castle received food worth 2*d.* per day.[72] Even 2*d.* per day would give the Newton labourers 10*s.* in sixty days (one of the higher servant's wages at Newton). Nevertheless,

[66] Bodl., MS Latin Misc c 66, fo. 40r.

[67] *Ibid.*, fos. 38r (1501), 43r (1503).

[68] J. E. Thorold Rogers, *A History of Agriculture and Prices in England* (8 vols., 1866–1902), III, p. 000. D. Woodward, *Men at Work. Labourers and building craftsmen in the towns of northern England, 1450–1750* (1995).

[69] Bodl., MS Latin Misc c 66, fos. 27ar and 37ar. Thorold Rogers, *Agriculture and Prices*, III, pp. 617–20.

[70] The average carpenter's wage for 1430–1500 was over 5*d.* a day: Farmer, 'Prices and Wages', p. 471. Winchester, 'Millom', pp. 92–3.

[71] C. Middleton, 'The sexual division of labour in feudal England', *New Left Rev.* 113–4 (1979), p. 161; Hanawalt, *Ties*, pp. 150–1; and Poos, *A Rural Society*, p. 217. See also Penn, 'Female wage earners', pp. 8–9 and Hilton, *English Peasantry*, pp. 101–2.

those at Newton would have needed to work for longer periods to achieve the sums reached by workers on day rates elsewhere in England.

IV

In drawing the evidence together, consideration is given to the questions advanced in the introduction. First: the nature of the workforce. During 1498–1506 the Newton estate was worked by a combination of full-time workers and day labourers. Of the former, Humphrey does not elaborate beyond the appellation of 'servauntes'. Most conform to the accepted definition of a servant: they were on long term contracts, for a fixed wage, with some resident in the household, although Humphrey also employed those living elsewhere. They appear to share close similarities to the servants of husbandry of the later sixteenth century (like those in Norfolk). They appear less like traditional *famuli* in that they were not employed as ploughmen or shepherds, but performed, as on other small estates, a variety of tasks and travelled on business outside the estate. Indeed some workers combined their mowing and ditching with duties such as witnessing deeds and overseeing dowry payments, tasks more 'household' in nature. It suggests that the workers at Newton were not sharply divided between household/domestic and estate/agriculture as on larger estates and implied in courtesy treatises. Certainly Humphrey did not have the extensive lands or household rooms which warranted a large staff with finely demarcated duties.

Humphrey was able to recruit servants on long-term contracts, a possibility often denied to other fifteenth-century employers. What tempted the employees to work at Newton? It was unlikely to have been high cash wages. Compared to other wage rates, the Newton wages were relatively modest, the 'bountieth' was financially slight, and few servants received the majority of their wage in cash. Humphrey was not seemingly pressurised into enticing servants with high monetary wages. If economic reasons played a part in the recruitment of servants, it may have been related to the day rates for labourers. These low rates presumably made it harder for someone to achieve the high yearly income documented elsewhere in England; and servants could always supplement their work with day rates. Another possibility is that concealed non-monetary forms of payment, such as food (about which little is known for Newton), may have been substantial.

Perhaps Newton's attraction lay outside economic incentives. Recruitment and retention may lie with the size of the Newton estate, Humphrey's active presence at Newton, and his familiarity with employees that included tenants and near neighbours. Humphrey was no distant employer. He dealt with his workers personally, directing their work, negotiating their pay, and often paying them himself. A note that Humphrey paid his marlers 'at þe marle pit' illustrates his contact and close supervision. His part in their lives also extended beyond work. Humphrey's brief reference that he had paid Philip Grene at the wedding of William Hough implies that he attended the nuptials. One of his accounts was dated in relation to the marriage of a servant

[72] Poos, *A Rural Society*, p. 212; Winchester, 'Millom', pp. 90–1. PRO, SC6/988/12, fo. 1d. See also Kershaw, *Bolton Priory*, p. 50, and P. Bowden, 'Agricultural prices, farm profits and rents', in Thirsk (ed.), *Agrarian History* IV, pp. 609–10, 864.

called Thomas Lees, suggesting it was the most significant date that came to mind.[73] It was a familiarity in which the servants regularly travelled to local markets and ales, received loans and collected bountieths. Perhaps Humphrey was perceived as a good lord.

Was it a relationship in which the servants had a dominant hand? Most of the recent historical work highlights the bargaining power of the employees; and the Newton workers do appear to be asserting their demands. A few chose shorter contracts, or ended them early; they kept track of their payments and claimed arrears. At times Humphrey's own recording of events suggests he was answering their 'awne reckonyng'. Yet it is important to emphasise that ultimately they were Humphrey's records, as it was his organisation of servants, his delayed payments, his decision to discharge. There is little evidence that Humphrey felt controlled by his workers. On the contrary: evidence is available to show how he was able to draw on them to engage in law-breaking. There is a Star Chamber case of 1529 in which Humphrey was accused of inciting a group of men to destroy wood and redirect a weir in the lands of a neighbour in Mottram St Andrew.[74] The group consisted of Humphrey's tenants and servants. No other examples of the Newton servants being used in that way are known, yet by itself the case demonstrates the willingness (or compulsion) of Humphrey's servants to commit crime on his behalf. In the complex reading of the lord/employee relationship offered by the Newton accounts, it is Humphrey's power – whether achieved through proximity, leniency, good lordship or fear – which is most striking.

[73] Bodl., MS Latin Misc c 66, fos. 33r–v, 40r.

[74] PRO, STAC 2/6/205.

The female labour market in English agriculture during the Industrial Revolution: expansion or contraction?*

by Pamela Sharpe

Abstract

This article reviews some of the recent literature on women's farm work and adds evidence from sources such as Marshall's *Review* and farm accounts to consider patterns of expansion and contraction in the demand for female labour from the capitalist sector of English agriculture over the period 1700–1850. The amount of work available to women, the sexual division of labour and female wage rates are discussed. It argues that although generalizations regarding the causes of increase or decline in female work and wages are not easily made, the final impression is that both before and during the Industrial Revolution, the demand from agriculture for female labour was limited.

Thomas Hardy describes Tess of the d'Urbeville's slavery to the threshing machine thus;

> For some probably economical reason it was usually a woman who was chosen for this particular duty, and Groby gave as his motive in selecting Tess that she was one of those who best combined strength with quickness in untying and both with staying power ...[1]

While by some accounts, Tess' labours were anachronistic by the 1880s, this article considers the extent to which English women carried out farm work from the seventeenth to the nineteenth centuries. Were female farm workers 'economical' to employ? Did their aptitudes suit agricultural labour? Research and writing in social and economic history has been concerned with patterns of women's work, particularly since the 'new wave' of women's history from the 1970s, but we still have little idea of where and when women worked on farms. Widening our knowledge of the female labour market enables us to develop our understanding of the 'release' of labour from the land to mills and factories (for the main Industrial Revolution labour force was female) as well as to local cottage industries. Nevertheless we cannot assume that expanding opportunities for women in agriculture would have been welcome if more attractive work were available in other sectors of the economy. More generally, historians

* I gave early versions of this article as a seminar paper in Cambridge, Glasgow, Edinburgh and Bristol. Later versions were presented at the Social History Conference and Local Population Studies Annual Conference in 1996 and at the conference on 'Wage Systems and Industrialisation in Europe, eighteenth-twentieth Centuries' in Les Treilles, Provence, in 1999. I am grateful for all the comments received. For remarks on the written text, I thank Pat Hudson, Ad Knotter and the anonymous reviewers for this journal.

[1] Thomas Hardy, *Tess of the D'Urbevilles* (1891, 1985 edn), p. 406.

still disagree on whether or not capitalist agriculture meant more or less work for women. The issue of when and where women worked on farms is considered in Section I. Inextricably connected to this question is the extent to which women's work in farming became more specific in terms of the type of work women undertook. To what degree work was gender segregated and whether this was more rigidly applied over time is explored in Section II. Section III will review wage rate evidence and Section IV will examine the 'female marginalization' thesis in more detail.

The current differences of opinion between historians mainly concern areas of developed capitalist farming, so that this discussion will tend to concentrate on the east and the Midlands rather than smaller farms of the west and uplands which, until recent times, employed more family labour. The focus will not be on live-in farm servants (unmarried young women) but on day- or piece-workers (wives or widows). Feminist historians have taken exception to the term 'family labour', with its implicit devaluing of the contribution of members other than the (male) household head, but a close examination of the identity of female workers in farm accounts shows that they are usually related to the farm labourers who worked on the same farm. Their wives and children found periodic employment, as did adult daughters (some of whom seem to have been women who had illegitimate children and perhaps found themselves excluded on the grounds of respectability from domestic service), and widows of former farm workers.[2] Moreover, at this stage it is easier to review some of the debates and difficulties rather than aiming to produce a definitive view. Ultimately, exploration of the regional context of women's work will provide a fuller and more nuanced picture.

I

An impressionistic overview suggests that in the eighteenth century at least, female farm work was less common in England than in other European countries. As Peter Mathias has recently held, 'Judged against other societies, perhaps the unusual thing is that women's role in agriculture was so limited in England'.[3] Only a cursory glimpse at the writings of late eighteenth-century agricultural observers is sufficient to suggest that they saw a lack of work for women and children in rural areas, especially in the cereal growing areas of south-east England, and connected this to soaring levels of poor relief.

Some recent research on the history of farm labour in England suggests that agrarian capitalism led to a decrease in the work possibilities for women. Robert Allen has pointed out that

[2] Pamela Sharpe, 'Time and wages of West Country workfolks', *Local Population Stud.* 55 (1995), pp. 66–8.

[3] Peter Mathias, 'Labour and the process of industrialisation in the first phases of British Industrialisation' in Peter Mathias and J. A. Davis (eds), *Enterprise and Labour from the eighteenth century to the present* (1996), pp. 41–2. More research appears to have been carried out on women's farm work in Scotland and Continental Europe than in England. For Scotland see T. M. Devine, 'Women workers, 1850–1914' in T. M. Devine (ed.), *Farm servants and labour in Lowland Scotland* (1984), pp. 98–123. Deborah Simonton, *A history of European Women's work, 1700 to the Present* (1998), provides an excellent summary of the literature for European regions. Much of what we do know for early modern England is provided by Anne Kussmaul, *Servants in husbandry in early modern England* (1981), but the evidence for women is scanty.

larger, capitalized, arable farms were likely to employ fewer women and children.[4] This echoes Arthur Young's observations on his *Northern Tour* (1770) that 'great farmers do not keep near the proportion of servants, maids and boys that smaller ones do. Their superiority ... lies totally in labourers'.[5] Burnette's recent research collates wage data for the country as a whole and shows a growing wage gap between males and females over the period of industrialization. She suggests that this was due to a declining demand for women's skills.[6] Her detailed study of a farm near Sheffield shows that work opportunities for female labourers fell between the 1770s and 1830s and it appears that generally increasing agricultural productivity led to a decreasing demand for women workers.[7] The theoretical basis for 'female marginalisation' with the development of capitalism is also well established in sociological texts. Ever since Engels published *The origin of the family, private property and the state*, it has been argued that women have been progressively excluded from productive activities as economies develop.[8] Esther Boserup, in her important empirical work on comparative economic development, also argued that women's status was high where they had a full role in production and tended to decline with progressive economic development and specialisation.[9]

The argument for women's declining involvement is at odds with Ivy Pinchbeck's classic work on the Industrial Revolution written in 1930. By drawing on parliamentary reports and a wide variety of other evidence, Pinchbeck produced a detailed picture of what women actually did on farms. She argued, for the country as a whole, that 'whenever new crops were grown and improved methods adopted, the employment of women as day labourers rapidly increased' and that as 'capitalistic farming developed, and with it the desire to lower the cost of production, women's labour was increasingly in demand'.[10] From a situation where women had only intensively worked in agriculture at haytime and harvest, Pinchbeck argued that the conditions of the late eighteenth century forced women to take on more agricultural labour.[11] Inadequate male wages and falling alternative opportunities, particularly in spinning, coincided with more work suited to the perceived skills of women. Large farms and improved methods meant a more intensive seasonal demand for planters, hoers, weeders and harvesters of intensively grown crops. Pinchbeck was mistaken in her emphasis on the novelty of turnip cultivation in the century after 1750, but evidence from large farms in Essex, an area of advanced, commercial agriculture in the eighteenth century, confirms the role of both women and children in setting

[4] R. C. Allen, *Enclosure and the Yeoman. The agricultural development of the south Midlands, 1450–1850* (1992); *idem* 'The growth of labor productivity in early modern English agriculture', *Explorations in Economic History* 25 (1988), pp. 117–46.

[5] Quoted by W. A. Armstrong in G. E. Mingay (ed.), *The Agrarian History of England and Wales*, VI, *1750–1850* (1989), p. 673.

[6] Joyce Burnette, 'An investigation of the female-male wage gap during the Industrial Revolution in Britain' *Economic History Rev.* (hereafter *EcHR*) 50 (1997), pp. 257–281.

[7] Joyce Burnette, 'Laborers at the Oakes. Changes in the demand for female day-laborers at a farm near Sheffield during the Agricultural Revolution' *J. Economic History* 39 (1999), pp. 41–67.

[8] F. Engels, *The origin of the family, private property and the state* (1884; 1972 edn). For sociological approaches see Alison MacEwan-Scott, 'Women and Industrialisation. Examining the "female marginalisation thesis"', *J. Development Stud.* 22 (1986), pp. 643–680. A comprehensive introduction to historical and sociological approaches is Harriet Bradley, *Men's Work, Women's Work* (1989).

[9] Esther Boserup, *Women's role in economic development* (1970).

[10] Ivy Pinchbeck, *Women workers and the Industrial Revolution, 1750–1850* (1930, 1981 edn), pp. 66, 100.

[11] *Ibid.* pp. 53–66

crops, stonepicking and weed gathering, and as the main workers employed to deal with specialist crops, such as medicinal herbs for the London market, in seed growing, in commercial vegetable production and on fruit farms.[12] On the point that women were a cheap source of labour and capitalist farming methods needed low costs of production, Pinchbeck argued that had women and children not been available 'it is probable that much of the work demanded by the new cultures would have remained undone, or that the expense of employing extra men would have deterred many from adopting new methods'.[13] Recent detailed research on Somerset supports the Pinchbeck view.[14] Helen Speechley finds a rise in the proportion of women employed on farms over the period from the seventeenth to the era of 'high' farming, with a rapid decline before the agricultural depression of the last quarter of the nineteenth century. Until the mid-nineteenth century, female agricultural labourers constituted an average of 20 per cent of the annual day labour force in Somerset. Women's employment declined only in line with the overall trend in agricultural employment in the course of the nineteenth century.

Keith Snell argued for women's reduced role in agriculture in the eighteenth-century south-east of England in his *Annals of the Labouring Poor.*[15] His data, drawn from seasonal patterns of work and wages recorded in settlement examinations, suggested that women's work in predominently arable counties such as Essex, Suffolk, Cambridgeshire, Hertfordshire, Bedfordshire and Northamptonshire became more confined and less well paid as the eighteenth century advanced. Whereas in the early modern period through to the early eighteenth century, the patterns revealed a reasonably equitable sharing of tasks and the involvement of women in multifarious farm jobs, Snell showed that a sexual division of labour developed in the second half of the century. Women no longer worked in harvest operations, and indeed by the mid-nineteenth century had very little involvement in farm work at all. The pastoral west of England presented a different pattern because of female work opportunities in dairying that may have, in fact, increased in the nineteenth century. Snell's views have become widely influential, being recounted in textbooks on women's history, and more widely in general works of economic and social history.[16] Yet Snell himself readily acknowledged that the explanations for his results were tentative.

The broad patterns of women's work are unclear until the onset of the French Wars. We must balance Snell's trend of declining female participation in the cornlands against the evident areas of growth identified by Pinchbeck. The French Wars (1793–1815) are thought to have created more work for women, leading to reports of 'petticoat harvests' in some parts of the country.[17] Can this be substantiated? If we turn to Essex, farm account books show an increase

[12] Pamela Sharpe, *Adapting to Capitalism. Working women in the English economy, 1700–1850* (1996), pp. 92–9.

[13] Pinchbeck, *Women workers*, p. 66. Pinchbeck's view is adopted by Armstrong in *Agrarian History* VI, p. 684.

[14] Helen V. Speechley, 'Female and child agricultural day labourers in Somerset, *c.* 1685–1870' (University of Exeter PhD thesis, 1999), p. 49.

[15] K. D. M. Snell, *Annals of the Labouring Poor* (1985).

[16] Most recently Mark Overton cites the story of declining participation in his *Agricultural Revolution in England. The transformation of the agrarian economy, 1500–1850* (1996), p. 188. Bridget Hill, *Women, work and sexual politics in eighteenth-century England* (1989) follows Snell's line of argument. For examples of more general textbooks, see R. Brown, *Society and economy in modern Britain, 1700–1850* (1991), pp. 321–2; J. Rule, *Albion's people* (1992), pp. 190–1.

[17] C. Emsley, *British society and the French wars* (1979), p. 111; *Agrarian History* VI, p. 684.

in women employed on farms in the first few years of wartime conditions. As the cost of living soared, some cottage industries collapsed and, with many men away on service, there is little doubt that women would have been actively seeking farm work. Demographic conditions of early and near universal marriage, and a high birth rate from the end of the eighteenth century, make it obvious that the supply of family labourers increased. But so did the glut of male farm workers, with farmers using the poor law to subsidize the practice of maintaining agricultural labourers through low points of the year to meet peak seasonal labour demands.[18] Moreover, the incomparably high prices and profits may have meant that farmers placed a premium on expert harvesters. Farm accounts for Essex show that as the wars progressed, harvests were brought in by contracted labour, or sometimes the militia on large farms, while women continued in the areas seen as traditional 'women's work' such as weeding, stonepicking, haymaking, and turnip singling.[19] Rather than employing more women in threshing, the wartime saw the first use of threshing machines. Other positive evidence of women working in Essex during the wars comes from the prizes provided by agricultural societies to women workers. Such measures, and the indications of women and children 'dibbling' wheat rather than sowing broadcast, seem more like efforts to reduce the poor rate by artificially creating work for labourers' families than proof that women's agricultural work was plentiful.[20] Poor relief evidence also casts doubt on a picture of bouyant work opportunities for women. For example, in the typical grain growing parish of Terling in Essex, women's earnings from agriculture were very small. The poor women on listings were only able to earn a third of their livelihood from farm work and many of them were listed as doing 'nothing'. The Terling vestry investigated the situation in 1811 and resolved that they must introduce measures to employ labourers' families.[21] Even in the low-lying area of south Essex, which experienced labour shortages in normal conditions, the exigencies of wartime do not seem to have been met with increased casual female labour. This district seems to have maintained live-in farm servants for longer than the claylands. The surviving accounts of Skinnerswick Farm in Tolleshunt d'Arcy do show wives predominating in sowing and haymaking, but the harvest workforce was supplied by professional reapers who hailed from villages in north Essex and Suffolk.[22]

Whatever the level of female employment in wartime, the demand for women workers seems certain to have shrunk in the agricultural depression from 1815 to 1835. There are grounds for arguing for a revival in women's work between 1835 and 1850, particularly in the cornlands. On the demand side, this was because some farmers diversified away from wheat into other cereals or livestock.[23] On the supply side, the stipulations of the New Poor Law seem to have propelled more women – particularly single women and widows – towards farm work. Although women agricultural workers formed only 1.2 per cent of agricultural labourers in Essex in the 1851 census, there was an increasing barrage of middle class condemnation against women participating in field work in the mid-nineteenth century. The invective against women's agricultural

[18] See George Boyer, *An economic history of the English Poor Law, 1750–1850* (1989).

[19] Sharpe, *Adapting to capitalism*, pp. 38–70.

[20] A. Armstrong, *Farmworkers. A social and economic history* (1988), p. 51. See also Anon, *An account of the Essex society for the encouragement of Agriculture and Industry* (Bocking, 1793, a copy held by the Essex Record Office, hereafter ERO).

[21] ERO D/P 299/12/4–5; D/P 299/8/3, 30 Dec. 1811.

[22] ERO D/DU 623/183.

[23] A. R. Wilkes, 'Adjustments in arable farming after the Napoleonic Wars', *AgHR* 28 (1980), pp. 90–103.

employment ran alongside the factory and mine legislation of the 1830s and 1840s and expressed the conflict between women's work and their domestic role. The Commissioners on Women and Children's Employment in Agriculture reported in 1843 on the notorious gang system in operation in East Anglia, although such gangs continued into the 1850s and 1860s.[24] But factors such as higher male wages and male unionisation, agricultural depression in the last quarter of the nineteenth century, mechanisation of agricultural processes and compulsory education for children only went so far towards changing the position of women and children as a large reserve pool of casual labour which fed the capitalist farming system. Oral reports from twentieth century Essex still mention forms of women and children's rural work which had gone virtually unchanged for centuries, work such as weeding, bird scaring, stone-picking, collecting acorns to feed pigs, clover turning, potato picking and singling of root crops.[25] Women found little work in cereal production, but vegetable cultivation could keep them in sporadic work through the summer. As a result, Steve Hussey's recent oral history might be describing the seventeenth century: work was sex specific, men worked alongside women but in different, more skilled occupations.[26]

This section suggests that given the constraints on comparability of evidence and the ebb and flow of work for women over time, perhaps the existing views of historians are differences of degree rather than being directly contradictory. Pinchbeck describes expanding demand for female labour in the improved sectors of the economy. Snell's evidence reflects female unemployment in localized areas where former servants in husbandry were now cast off in an increasingly casualized and seasonal farming regime. A modern chronology might also suggest that some of the labour intensive production described by Pinchbeck emerged es early as the seventeenth century. Estimates of overall labour productivity rise during the mid-seventeenth century because convertible husbandry led to greater land preparation by ploughing and harrowing and more time spent on pruning and hoeing. De Vries' recent formulation of an 'industrious revolution' preceding the Industrial Revolution suggests that much of this new work reflects a greater input of women and children's labour galvanized by the stirrings of an emergent consumerism.[27]

Comparability over time is vexed by the fact that the reference points for the rise or decline of work availability all lie in the nineteenth century. Except for the few farms which kept comprehensive records, there is no way of measuring the extent of female participation in an earlier period. Many interpretations of decline in women's employment in the nineteenth century have been influenced by census figures. Eric Richards, for example, drew up a U-shaped curve of female labour participation in the industrialising period, drawing on the declining census trend.[28] But Edward Higgs has recently argued that the censuses massively underestimate

[24] Armstrong, *Farmworkers*, pp. 80, 96.

[25] ERO T/Z 25/241 (Old People's essays, 1961).

[26] S. Hussey, 'Out in the fields in all weathers. Women's agricultural work in north Essex, 1919–1939', *Essex J.* (Autumn 1993), pp. 48–58. Hussey suggests that the sexual division of labour in field work may be the result of the mechanization of cereal operations, but I would argue that it had a much longer history.

[27] Jan de Vries, 'Between purchasing power and the world of goods. Understanding the household economy in early modern Europe', in J. Brewer and R. Porter (eds) *Consumption and the world of goods* (1993), pp. 85–132.

[28] Eric Richards, 'Women in the British economy since about 1700: an interpretation', *History* 59 (1974), pp. 337–57.

women's agricultural work in the mid-nineteenth century.[29] Celia Miller had earlier compared farm accounts for Gloucestershire with the enumerator's records for the 1871 and 1881 census.[30] She found that women were employed in a wide range of farm work as cheap labourers, even as harvesters, but they were not noticed in the census as participating in work. This lack of firm information on the numbers of female workers leads us to explore other avenues to secure a picture of female labour participation.

II

Although the supply of female labour available to farmers increased after 1750, women's work depended on the sexual division of labour. The thrust of Burnette's recent argument for 'occupational crowding' is that work was not rigidly gender-segregated in agriculture, but that differences in strength between males and females affected the allocation of tasks.[31] Regarding the sexual division of labour, Snell argued that 'There is abundant supportive evidence for a very wide range of female participation in agricultural tasks before 1750 in the south-east, when their work extended to reaping, loading and spreading dung, ploughing, threshing, thatching, following the harrow, sheep shearing, and even working as shepherdesses'. Indeed, he claimed that there was then 'a traditionally fuller and more sexually equal participation in agriculture' than what was to follow.[32] He did not provide much 'abundant' supporting evidence, however, referring readers to writers on women's work in the early modern period, such as Alice Clark. Clark's book sees the seventeenth century as an era in which women participated in a wide range of work hitherto closed to them, and, she believed, this conferred them with a certain equality in family relationships which subsequently declined.[33] More recent research questions the extent to which work was in fact, carried out as a partnership, and suggests that in urban areas at least, both male and female contributions to the household might be wages from completely different sorts of employment.[34]

Farm accounts can give us a comparable, detailed picture for the countryside, even if there tends to be a bias towards the survival of larger and more capitalized farms where accounts were more likely to be kept and which provide more detail.[35] A. Hassell Smith's research on the late sixteenth century account books of Nathaniel Bacon of Stiffkey in Norfolk is suggestive.[36] He found women's farm work to be complementary to men's, but not the same. Certain tasks

[29] Edward Higgs, 'Occupational censuses and the agricultural workforce in Victorian England' *EcHR* 48 (1995), pp. 700–716. See also his 'Women, occupations and work in the nineteenth-century censuses', *History Workshop J.* 23 (1987), pp. 59–80.

[30] Celia Miller, 'The hidden workforce. Female field workers in Gloucestershire, 1870–1901', *Southern Hist.* 6 (1984), pp. 139–161.

[31] Joyce Burnette, 'Testing for occupational crowding in eighteenth-century British agriculture', *Explorations in Economic History* 33 (1996), pp. 319–345.

[32] Snell, *Annals*, pp. 52, 56.

[33] Alice Clark, *Working life of women in the seventeenth century* (1919, 3rd edn, 1992).

[34] Peter Earle, 'The female labour market in London in the late seventeenth and early eighteenth centuries', *EcHR* 42 (1989), pp. 328–353. Pamela Sharpe, 'Literally spinsters. A new interpretation of local economy and demography in Colyton in the seventeenth and eighteenth centuries' *EcHR* 46 (1991), pp. 46–65.

[35] The main difficulty is locating such accounts. They now mainly reside within collections of private papers in county record offices. However, more research could be carried out on the large collection at the Rural History Centre, Reading University.

[36] A. Hassell Smith, 'Labourers in late sixteenth-century England. A case study from North Norfolk', *Continuity and Change* (1989), 4, pp. 11–52, 367–394.

seem to have always been women's work, especially spring weeding and stone-picking. On Bacon's estates, women did not take part in ploughing, hedging and ditching, reaping or threshing, which were distinctively male tasks. Henry Best's farming and memorandum books for Elmswell, Yorkshire, in 1642 give some of the richest descriptions of farm organisation available for the early modern period. In Best's world there was a strict gender division of labour, farm tasks were not interchangeable, and their allocation depended on age, strength and its application to the soil, or prevailing weather conditions.[37]

On the Antony estate in Torpoint in Cornwall in the seventeenth century, the range of women's employment was much wider. Although they did the planting and cleaning operations, they also winnowed barley and threshed oats.[38] Carol Shammas' study of Swarthmoor Hall in Lancashire in the seventeenth century also revealed gender-specific employment patterns in day labour.[39] Women were involved in harrowing and haying in the arable fields but not in weeding. They were weeders in the garden and flax fields. On the Thornborough estate in Yorkshire studied by Mrs Gilboy, in the third quarter of the eighteenth, century women were employed in 'shearing' or reaping, but they took no part in mowing, threshing, hedging, ploughing or stubbing.[40] Considered together, these various case studies suggest that there were important regional and local differences in the gender-specificity of employment.

Another source, William Marshall's *Review and abstract of the county reports to the Board of Agriculture* made between 1787 (Norfolk) and 1815 (Cornwall), is well trodden.[41] Here the historian relies on whether or not the reporters considered women to fall into the category of 'workpeople'. As their *raison d'être* demanded, the authors of the county reports were concerned with the efficiency of the workforce and the degree to which new farming methods had been adopted, and as a result often comment only on particularly good or bad practice. Moreover, the reports were compiled over a thirty-year period, during much of which there was a wartime economy. The shortcomings are obvious, but, nevertheless, the information which Marshall's *Review* can provide on women's employment has not been given adequate attention. Regional specificity is apparent throughout these reports, but the broad patterns show men's involvement with mowing corn, ploughing, and hedging and ditching; women were concerned with poultry, sheep, weeding, planting and any husbandry which was garden-like such as flax-pulling, hemp cultivation, orchards, vegetables or herb growing.[42] The most distinctive difference was the primary association of women with the dairy and men with arable, but even this was not universal. Men were reported as milking in Buckinghamshire.[43] In other areas, women were reported to be ploughing, as in Berkshire where the Mole Plow was 'drawn by one horse, and

[37] Donald Woodward (ed.), *The farming and memorandum books of Henry Best of Elmswell, 1642*, British Academy Records of Social and Economic History, ns 8 (1984).

[38] Sharpe, 'Time and wages'.

[39] Carol Shammas, 'The world women knew. Women workers in the North of England during the seventeenth century' in R. S and M. M. Dunn (eds), *The world of William Penn* (Philadelphia, 1986), pp. 99–114.

[40] E. W. Gilboy, 'Labour at Thornborough: an eighteenth century estate', *EcHR*, 1st ser., 3 (1932), pp. 388–398.

[41] William Marshall, *The review and abstract of the county reports to the Board of Agriculture* (5 vols, York, 1808–1817).

[42] Marshall, *Review*, IV, pp. 66–7; V, p. 130. For Welsh women working in market gardens around London, see J. Williams-Davies, 'Merched y Gerddi: a seasonal migration of female labour from rural Wales', *Folk Life* 15 (1977), pp. 12–23.

[43] Marshall, *Review*, IV, p. 505.

TABLE 1. Descriptions of English women's work in Marshall's *Review*

South-East	Norfolk	wheat dibbling. Reaping is unusual and day labourers wages do not mention women
	Middlesex	fruit, market gardening
	Surrey	hoeing turnips
	Kent	weeding, dairy, domestic work
	North-East Essex	women as servants mentioned
	South Essex	house servants
	Cambridgeshire	service for women stressed
	Suffolk	no tasks given for women
South-West	Herefordshire	sheep shearing, fruit work
	Worcestershire	harvest, dairying
	Gloucestershire	haymaking, harvest
	Somerset	weeding, common work
	Devon	shortage of women's employment
	South Wiltshire	getting in harvest and gleaning
	Hampshire	dairymaids and cooks
	Cornwall	harvest work, weeding corn, hoeing turnips, potatoes, tending threshing machines
	Oxfordshire	haying, reaping in harvest
Midlands	Buckinghamshire	dairymaids difficult to get
	Bedfordshire	little
	Hertfordshire	strawplait only
	Berkshire	reaping, dairy, plough, planting
	Leicestershire	common work and hay time
	Northamptonshire	hay harvest
	Rutland	little employment except in summer
North-East	Northumberland	harvesting, hoeing turnips, haymaking, scaling and weeding corn, reaping
	Durham	weeding, haying, reaping
	Yorkshire N. Riding	dairy, harvest, weeding corn,haymaking, manuring, same work as men
	Yorkshire E. Riding	men and women day labourers hired
	Lincolnshire	dairying but women lazy
North-West	Cumberland	haymaking, harvest
	Westmoreland	carting dung, driving harrows or ploughs
	Cheshire	dairying

Source: William Marshall, *The review and abstract of the county reports to the Board of Agriculture* (5 vols, York, 1808–17).

sometimes by women, as occasion requires'.[44] In Westmorland female servants were 'toiling in the severe labours of the field, they drive the harrows or ploughs ...' and also carried dung on their backs to the fields.[45] In general, women did a wider variety of farm tasks in the north and western areas of the country, particularly where male labour was needed in industry. For instance, in Northumberland, 'Most of the corn is cut with sickles, by women; seven of whom, with a man to bind after them'; the picture was similar in the North Riding of Yorkshire.[46] In Cornwall, 'The women, everywhere in the county, perform a large share of the rural labours, particularly in the harvest work, weeding the corn, hoeing turnips, potatoes etc., attending the thrashing machines; by the latter business they have more employment in the winter than they formerly had'.[47] An overview of the regional patterns of women's work evident from comment in Marshall's *Review* can be gained from Table 1. Broadly, a highland/lowland contrast is evident, with far less farm work reported for women in the lowlands to the south and east of a line drawn from the Wash to the Severn.

For Snell, the crucial change in the south-eastern arable lands towards male labour took place in harvesting. Drawing heavily on the research of Michael Roberts but making more of the late eighteenth century evidence than Roberts, Snell argued that women's progressive withdrawal from farm labour in arable areas was connected with the replacement of the sickle by the scythe in corn-growing regions, the scythe being less physically manageable for women.[48] But there is little wholesale evidence for the replacement of the female reaper by the male mower, or for any other determinative technological change when we examine farm accounts such as those available for some Essex farms. The two technologies could, and did, co-exist and were used when most appropriate for the crop mix and the weather. As E. J. T. Collins has written, 'the exact tool mix in any one season [was] determined by labour supply and crop condition'.[49] Farmers could strike a balance between speed and care in cutting. In Marshall's *Review* we read in Northamptonshire of 'wheat reaped with sickles, barley, oats and beans mowed with a scythe'. In Berkshire in 1794 'the usual practice of the county is to let the harvest work by the great; and many of the women are employed in reaping, as well as the other labour necessary for getting in crops'.[50] Scythes may have been used mainly by men, but the argument is inadequate to substantiate a wholesale change in labour practices happening in the late eighteenth century. The corn scythe may have become established in southern England during the medieval period: the 'revolution' in adoption of heavier tools in the rest of the country was delayed until 1835–70. Overton suggests that whereas in 1790 some ninety per cent of the wheat harvest was cut with a sickle, by 1870 it was twenty per cent.[51] Not only does this suggest a slow transition in the

[44] *Ibid.*, V, p. 84. This was as used by Mr Loveden of Buscot Park and the footnote comments on 'the *magic* of *invention*, drawn by one horse, – and even by women!' It is notable that development economists have drawn attention to the fact that ploughing is almost always a male job in agrarian systems worldwide.

[45] Marshall, *Review*, I, p. 234.

[46] *Ibid.*, I, pp. 73, 474.

[47] *Ibid.*, III, p. 538.

[48] M. Roberts, 'Sickles and Scythes. Women's work and men's work at harvest time', *History Workshop J.* 7 (1979), pp. 3–28.

[49] E. J. T. Collins, 'Harvest technology and the labour supply in Britain, 1790–1870', *EcHR* 22 (1969), p. 462.

[50] Marshall, *Review*, IV, p. 356; V, p. 56.

[51] Collins, 'Harvest Technology', pp. 456–7, 463; see also the discussion in Chris Middleton, 'The familiar fate of the *famulae*. Gender divisions in the history of wage labour', in R. E. Pahl (ed.), *On Work. Historical, comparative and theoretical approaches* (1988), p. 34. Overton, *Agricultural Revolution*, p. 124.

nineteenth century rather than a late eighteenth century transformation, but it seems that in areas where women already formed the bulk of harvest workers, as in the Borders, the scythe was unlikely to be adopted at all.

Marshall commented on a broad contrast between the north-west and the south-east of England at the end of the eighteenth century. In the North harvesting was mainly in the hands of women, but this was certainly not evident in the counties of the south-east.[52] For Essex, it is the case that descriptions of harvest work in the late eighteenth and early nineteenth centuries are male-orientated. Harvest operations were invested with a great deal of symbolic importance. Boys became men when they first took their place in the line of harvesters. On some farms, the first cut was taken by the oldest male villager present. However, the evidence not only suggests that the role of women was limited at the end of the eighteenth century, but that this had long been the case. In the extant sixteenth and seventeenth-century Essex farm accounts, such as those of the Petre family, the largest landowners in Essex, women were mainly involved in spring weeding and haymaking. Women's work in the harvest was confined to raking oats.[53] It might be argued that these documents are providing an early view of the 'Allen effect'. However, the accounts of Thomas Cawton, who was farming on a much smaller scale in Wivenhoe and Great Bentley in eastern Essex in the early 1630s, give a very similar picture. As in the Petre accounts, most of the workers are in family groups. The women were spring weeders, sometimes working with their husbands. Again many women were involved in haymaking. For the grain harvest, however, women's role was relatively marginal with a limited involvement in the oat harvest alongside their husbands. Women had the additional jobs of gathering up the wool from sheep shearing in Great Bentley and picking seed rye in Wivenhoe. Just as Hassell Smith found, all the winter work of ploughing, hedging, ditching and threshing was done by men.[54] Evidence from this local economy suggests another significant change due to alterations in the crop mix. In the sixteenth century, hops were grown in almost every parish in Essex and provided an intermittent amount of work for women, from tending the plants through to meticulous harvesting from March to late September.[55] When economic circumstances favoured grain production, hops were judged to be too liable to crop failure and demanding of manure, and their acreage shrank on the Essex heavy clays in the late eighteenth century. The result was a substitution of male for female labour.

In summary, close analysis of the sexual division of labour does not give as straightforward view as Snell and those who have repeated and extended his arguments have maintained, and would lead us to eschew a view of technological change explaining female expulsion, in favour of a more nuanced approach which gives greater weight to local variations due to geography, regional culture and time-honoured patterns of customary work. Despite the availability of more labour by the end of the eighteenth century, we can argue that there is evidence of a long-standing sexual division of labour on capitalist farms in the south-east. While an explanation based on technology transfer may be too limited, it is possible that a drive for efficiency may have excluded less productive parts of the labour force, except in specific, limited ways. It

[52] Marshall, quoted in Gilboy, 'Labour at Thornborough', p. 391.

[53] ERO, D/DP A18–22, A57.

[54] ERO, TA287.

[55] C. Shrimpton, 'The landed society and the farming community in Essex in the eighteenth and early nineteenth centuries' (University of Cambridge Ph.D thesis 1965, pub. New York, 1977), p. 306.

was also the case that as the nineteenth century advanced, a growing sense of domestic ideology encouraged married women to move away from the more strenuous types of outdoor work. We should not underestimate the fact that like labouring men, poor women, especially those who were single, could and did exercise considerable mobility, both geographically and in terms of shifting occupation.[56] Back-breaking labour, low pay, and long-standing customary practices which relegated women to the most degrading and monotonous tasks would not be endured if alternatives were available.

III

Turning to wage rates, Snell accumulated a large amount of evidence of declining female wage rates, comparing the south-east of England with the south-west, to support his view of a declining participation rate and increasing gender division of labour in the south-east. Burnette by contrast, has recently argued that agricultural work was not well defined by gender, but that women's lack of strength and relative productivity had an impact on the low wages offered for farm work.[57] It should be noted that she assumes women's farm labours were unskilled and therefore substitutable, but this is not borne out by Pinchbeck's assumption that women's dexterity made them the best workers to carry out new agricultural tasks, or by evidence such as Valenze's regarding the expertise necessary for dairying operations. There are also, of course, very many problems in assessing female farm worker's wages, not least the prevalence of wives doing task work for a family wage.[58] However, the evidence from both farm accounts and Marshall's *Review* is that female day labourer's wages show little movement or variability, being normally 6*d.* a day. This rate was 'sticky' through the year and between regions from the seventeenth century onwards. This is demonstrated if we revisit the Cawton farms in eastern Essex and examine the case of a single labourer and his wife in the 1630s. Thomas Toball of Wivenhoe joined his wife and some other women for a week's weeding in June. They were both paid 6*d. per diem.* By July they were both still employed in weeding but Mr Toball was paid 8*d.* while his wife still received 6*d.* a day. At the end of July he had a shilling a day 'for makeing the stake of hay'. Goodye Toball, along with the rest of the women, still received 6*d.* a day. At the beginning of September, when rye, oats and barley were harvested, Toball bound the oats at a shilling a day while his wife stayed at 6*d.* for 'makeing of bandes for the oates' for three days and then 'for layeing of oats for the binding'. He went on to stack the 'brank' (buckwheat) at a shilling a day whereas his wife raked up at the usual 6*d.* she had been paid all summer.[59] Following Burnette's argument, this payment may be a true reflection of Mrs Toball's productivity. It is possible that wives started work much later in the day than their husbands, perhaps well after daybreak, and that this explains the lower wage rate. Perhaps it

[56] See Bengt Ankarloo, 'Agriculture and women's work. Directions of change in the West, 1700–1900', *J. Family Hist.* 4 (1979), pp. 111–120 for speculations on this in the European context.

[57] Burnette, 'Testing for occupational crowding'.

[58] As reported in the 1843 Report of Women and Children in Agriculture for Kent, Surrey and Sussex, cited by Pinchbeck, *Women Workers*, p. 91.

[59] ERO, D/DA A3.

TABLE 2. Female wage rates given in Marshall's *Review* (1780s–1810s)

	Day Work	*Harvest*
Northumberland	6*d.*	1*s.*–1*s.* 3*d.*
Durham	6*d.*	2*s.*–2*s.* 6*d.*
Cumberland	8*d.*	10*d.*
Herefordshire	6*d.*	
Worcestershire	6*d.*–8*d.*	
Warwickshire	1*s.*–1*s.* 6*d.*	
Somerset	6*d.*–8*d.*	
Cornwall	6*d.*–8*d.*	
Suffolk	6*d.*	
Leicestershire	6*d.*–8*d.*	9*d.*–10*d.* haying
Oxfordshire	1*s.* 2*d.*	
Berkshire	6*d.*–8*d.*	
Kent	8*d.*–10*d.*	

Source: William Marshall, *The review and abstract of the county reports to the Board of Agriculture* (5 vols, York, 1808–17).

is, in effect, a sort of piece rate.[60] Another factor is that women's unpaid labour within the rural community was of vital importance to the well-being of labouring families. Women were the main procurers of fuel and water, they prepared the meals for the men after their long hard days of work, and they managed the informal exchanges of farm products to which historians are now paying more attention, for example, trading eggs or vegetables to the large farms in the district. Time spent on these tasks would have been weighed against that allocated to the labour market for those with some land or produce of their own.[61]

Alternatively, perhaps women's wages contain a large customary element and the rate paid may bear little relationship to the task carried out. This explanation is rejected in Burnette's work, but the endurance of 6*d.* a day across geographical areas and time is striking particularly when compared to changing male wage rates. From Best's Yorkshire in 1642, to the Spindleston,

[60] The suggestion of a later start is made by Judy Gielgud 'Nineteenth-century farm women in Northumberland and Cumbria: the neglected workforce' (D. Phil thesis, University of Sussex, 1992), p. 459. Mark Overton commented to me that 6*d.* may have represented a certain agreed amount of work. Speechley 'Female and child agricultural day labourers', p. 113 argues that the discrepancy with male wage rates 'was not only due to the higher daily wage rates for men but also because they [men] worked more days per year, they were more likely to receive higher harvest wages, and, they were more frequently employed in piece rate work, which could bring in higher wages'.

[61] See M. Reed, 'The peasantry of nineteenth-century England: a neglected class?' *History Workshop J.* 18 (1984), pp. 59–60 and D. R. Mills, *Lord and peasant in nineteenth-century Britain* (1980). For the endurance of family labour on small farms, see M. Winstanley, 'Industrialisation and the small farm. Family and household economy in nineteenth-century Lancashire', *Past and Present* 152 (1996), pp. 157–195.

Northumberland farm account for 1676 analysed by Gielgud, to the eighteenth-century Cornish barton farms studied by Pounds, the rate was 6*d.*[62] Table 2 shows, for the counties for which evidence is available in Marshall's *Review*, the prevalence of 6*d.*, sometimes rising to 8*d.* in summer, for female day labour. So despite their multifarious activities noted in the *Review*, in Cornwall 'The women have from 6*d.* to 8*d.* per day'.[63] The exceptions were only two in number, both of which show that the market certainly had some effect. Firstly, women were paid more when they did more specialized work, as with reapers in northern England who might be paid 1*s.* a day. Secondly, in areas where there was competition for their labour, their wages could be double, as in Warwickshire agriculture due to the effect of the Birmingham and Coventry trades. But even within living memory in Essex, the rate had risen to only 8*d.* for female day labourers. It is startling to note that this rate, including food, was paid to women in 1377![64]

Looking at this in more detail, however, some differences are apparent. Going back to the sixteenth-century Petre farms in Essex, we detect a difference between women.[65] It seems to have arisen because wives were paid less than widows. A widow was paid 5*d*, but a woman working alongside her husband was only paid 3*d*, less than a girl who had 4*d*. The women involved in these operations were usually the relatives of agricultural labourers, sometimes accompanied by children, and this suggests the payment of a family wage to widows must be seen within a context of local paternalism. It is, of course, possible that farmers felt they were maintaining the stability of the male workforce by employing married women. Unless, in fact, widows were able to work longer hours, this suggests that there was a 'social' element to women's wage payments which cannot be entirely explained by economic theory, or indeed, fully comprehended given only the limited detail of bare figures recorded on the pages of farming accounts.

It is also clear that lower wage rates for women were justified by the Bible. Leviticus 27: 3–4 suggests that women should receive three-fifths of the male rate, which is precisely the rate they did receive in many recorded cases.[66] Burnette's argument that women's wage rates reflect the actual work they carried out also fails to explain comments like that made by Frederick Eden in his survey of the poor of the parish of Bromfield (Cumberland);

> The wages of man-servants employed in husbandry, who are hired from half-year to half-year, are from 9 to 12 guineas a year, whilst women, who here do a large portion of the work of the farm, with difficulty get half as much. It is not easy to account for so striking an inequality; and still less easy to justify it.[67]

In summary, we need to know much more about the social history of wage entitlement, especially for women, before we can draw any significant conclusions about labour demand and supply

[62] Woodward (ed.), *Henry Best*, pp. 45, 60; Gielgud, 'Nineteenth-century farm women', p. 129; N. J. G. Pounds, 'Barton farming in eighteenth-century Cornwall', *J. Royal Institution of Cornwall* 7 (1973), pp. 55–75. I am grateful to Mark Overton for drawing my attention to the latter reference.

[63] Marshall, *Review*, V, p. 538.

[64] ERO, T/Z 25/63; Penn, 'Female wage earners', p. 10.

[65] ERO, D/DP A18–22, A57.

[66] See Donald Woodward, *Men at work. Labourers and building craftsmen in the towns of northern England, 1450–1750* (1995), pp. 112–14 for further justification for a customary wage.

[67] F. M. Eden, *The State of the Poor* (3 vols, 1797), II, p. 47.

from patterns of wage movements. However, there is every justification for Pinchbeck's view that female labour would be used where possible on capitalist farms because it lowered the costs of production. Yet there is no firm basis for the belief that this was a post-1750 development.

IV

If low wages and a sexual division of labour were not new in the south-east, are there alternative explanations for the current view that women were marginalized in the eighteenth century? Snell's debate with Norma Landau concerning the function of the settlement examination has, if anything, diverted attention from the interpretation and explanation of the patterns which Snell has drawn from them.[68] To prove that female farm employments were changing in the south-east, it must be clear that we are considering farm servants, rather than domestic servants or industrial workers. Data on domestic servants can tell us very little about changes in the type and timing of women's agricultural work as the moments at which they were likely to find themselves unemployed might have only a limited relationship to agricultural imperatives. In Essex (and probably in other areas of capitalist agriculture where farm sizes were large), indoor and outdoor service would seem to have been well-defined. Maids who did domestic work were not farm workers, except for perhaps tending the garden and poultry. Moreover, some of Snell's settlements for Essex are drawn from urban areas and these are likely to have formed a higher proportion of female settlement examinations, especially as unemployed women gravitated towards towns to find work. Further, if hiring fairs and the institution of farm service were waning in the south-east at the end of the eighteenth century, it is not clear that the Snell sample could contain many farm servants anyway. As a result, it is not evident that Snell's evidence encapsulates only the rural labour market.

While Snell provides unemployment patterns for yearly servants, we know from the writings of contemporaries that the supply of female farm workers was affected by the prevalence and prosperity of alternative forms of employment. In some regions there was an inverse relationship between the female labour supply for farming and the availability of other types of work. Of Marton (Westmorland), to take a negative example, David Davies commented in 1795; 'There is no kind of manufactory carried on in this neighbourhood, for which reason women and children earn little, except in hay and corn harvest'.[69] 'Spring' unemployment would have been alleviated in many of the south-eastern counties by the development of London-based fashion trades and services with their production closely related to the London Season. Not only were employments a draw in London itself, but fashion industries created work for women in the countryside, such as lace-making and straw-plaiting, which pulled women away from service or farm work.[70] This was the type of work in which women were perceived as having a

[68] N. Landau, 'The laws of settlement and the surveillance of immigration in eighteenth-century Kent', *Continuity and Change* 3 (1988), pp. 391–420; Keith Snell, 'Pauper settlement and the right to poor relief in England and Wales', *Continuity and Change* 6 (1991), pp. 375–415; Landau, 'The eighteenth-century context of the laws of settlement', *ibid.*, pp. 417–439.

[69] David Davies, *The case of the labourers in husbandry* (1795, repr. Fairfield, New Jersey, 1977).

[70] Pamela Sharpe, 'The women's harvest. Straw-plaiting and the representation of labouring women's employment, *c.* 1793–1885', *Rural History* 5 (1994), pp. 129–142; Sharpe, *Adapting to capitalism*, pp. 38–70. Eden, *State of the poor*, II, pp. 1–28 comments on this for straw plait in Bedfordshire and Buckinghamshire.

comparative advantage. Snell has presented us with a distribution of cases, so that a factor creating employment can be just as significant as one reducing employment. In fact, the greatest economic change in the eastern counties like Essex (but also Suffolk, Norfolk and even parts of Cambridgeshire) was the decline in spinning opportunities in the late eighteenth century. Indeed the fall off in women's 'work', which contemporaries such as David Davies wrote about, is undoubtedly the collapse of spinning rather than agricultural work. This is likely to have had the most marked effect on Snell's wage rates. Part of his argument for the increasing sexual division of labour concerned the failure of women's wages to move in tandem with male wages, which he used to prove that women were an increasingly devalued part of the agricultural labour force. But given a year-round alternative employment, farmers would have to compete with clothiers for female labour. When spinning ceased to be viable, it is not surprising that the effect was the stagnation of female wage rates.

There is another explanation for why women were not participating in the labour market at harvest time. Women's customary role was in gleaning, picking up the waste or leftover crop after the harvest. Gleaning was probably seen as the married women's and widow's main role in the harvest, and is, in fact, sufficient of itself to explain why women did not engage in cutting the crop. As a reporter describing women's employment in August in the Stowmarket area of Suffolk in the 1840s said 'when gleaning comes in they are all engaged in that and will not leave it'.[71] From medieval times gleaning was seen as beneficial to the farmer as a cleaning operation.[72] Added to the evidence that weeding and stonepicking were women's jobs, this further aspect of clearing the ground may have had almost symbolic importance. Jane Humphries has written of the importance of common rights as an area of women's 'self-employment' and their erosion in the late eighteenth century as private property was vigorously defended and gentry farms consolidated.[73]

Gleaning is an exception to this because the activity was one way in which capitalist farming enhanced the potential of common rights, for gleaning was far more profitable in areas where there was specialisation in cereal production and higher grain yields. Where farms employed a crop rotation, peas, beans, barley and wheat might all be gleaned in one village in a single season. Peter King, using evidence from Essex court cases, has pointed to the importance of gleaning to the eighteenth-century labouring family.[74] Once threshed, the gleanings could provide a household with flour for the year and could account for from an eighth to a tenth of total labouring family income. For women on their own, such as widows, this could be especially beneficial, providing for about a quarter of their annual income. Gleaning was particularly important after the decline of spinning, when all labouring families, but widows in

[71] BPP, 1843, XII, *Reports from the Commissioners: Employment of Women and Children in Agriculture*, p. 229.

[72] W. O. Ault, 'By-laws of gleaning and the problems of harvest', *EcHR* 14 (1961), pp. 210–17.

[73] Jane Humphries, 'Enclosures, common rights and women. The proletarianisation of families in the late eighteenth and early nineteenth centuries', *J. Economic History* 50 (1990), pp. 17–42. See also Jeanette Neeson, *Commoners. Common right, enclosure and social change in England, 1700–1820* (1993).

[74] Peter King, 'Customary rights and women's earnings. The importance of gleaning to the rural labouring poor, 1750–1850', *EcHR* 44 (1991), pp. 461–76. Pinchbeck, *Women Workers*, pp. 56–7 recognized the importance of gleaning but confused the issue by believing it was only worthwhile on open fields.

particular, were increasingly dependent on the poor law. From the overseers' point of view, gleaning was an effective form of self-help for the poor.[75] King found that most gleaners were married women, a quarter were widows, children or single women. Gleaning was being increasingly regulated by the late eighteenth century as farmers resisted trespassing on private property, but the common right was sustained, if regulated.[76] The importance of gleaning to the family budget and women's primary role as providers of family subsistence largely explain why women did not work as harvesters. Gleaning started in a field as soon as the harvesters had carted the grain out of it and moved on to another one.[77] Gleaning and working in the harvest are then not strictly compatible activities and, in themselves, reinforce a sexual division of labour at harvest time. The persistently low wage for women, with no change over the year, unlike that paid to men, may also suggest why women did not do reaping in the south-east. It was more profitable to glean than to harvest.

It is, then, possible to provide several explanations for declining female labour market participation in rural areas and the associated fluctuations in wage rates in the early industrial period without arguing that this was entirely the result of the expansion of capitalist farming. Alternative employment opportunities for women remind us that while some of the characteristics of rural women's work may not have changed over centuries, taking rural and urban labour markets as a whole, the overall picture of the female labour market was dynamic rather than static as it has often been portrayed.

V

Alun Howkins has recently argued in this *Review* that our picture of farmworkers – and he is considering both female and male workers – is dominated by the traditional concerns of economic history.[78] As a result, they are seen as factors of production, and it is their contribution to a distinctive English model of development which is seen as important. There is no denying that the approach taken here does not escape these criticisms. At the same time, the intention has been to bring into play some of the more 'immeasurable' aspects of women's work. Howkins draws our attention to the importance of regional and local cultures.[79] Agrarian historians obviously have to weigh the differences between arable and pastoral areas or the Highland and Lowland zones. We need to unravel the role of custom at the level of the micro-economy.

[75] Roger Wells, 'The development of the English rural proletariat and social protest, 1700–1850', *J. Peasant Stud.* 6 (1978–9), pp. 115–139. In 1795 Terling overseers restricted gleaning to widows who had to give notice of their intentions and inform on trespassers (ERO, D/P 299/8/2 1/7/1795). Those who contravened this faced a reduction in their bread allowance. In the 1820s, however (ERO, D/P 299/12/7) they supplied bread and cheese to women gleaners.

[76] Peter King, 'Gleaners, farmers and the failure of legal sanctions in England, 1750–1850', *Past and Present* 125 (1989), pp. 116–150; *idem*, 'Legal change, customary right and social conflict in late eighteenth-century England. The origins of the Great Gleaning Case of 1788', *Law and History Rev.* 10 (1992), pp. 1–31.

[77] Charlotte Fell Smith, 'In harvest time', *Essex Rev.*, 48 (1903), p. 246.

[78] Alun Howkins, 'Peasants, servants and labourers. The marginal workforce in British agriculture, *c.* 1870–1914', *AgHR* 42 (1994), pp. 49–62.

[79] Alun Howkins, 'The English farm labourer in the nineteenth century. Farm, family and community', in B. Short (ed.), *The English rural community. Image and analysis* (1992), pp. 85–104.

Despite the emphasis on efficiency on capitalist farms, there is evidence for the importance of cultural factors outweighing rational, economic decision-making. Celia Fiennes, for example, noted on her visit to Cornwall at the end of the seventeenth century that the harvest was put onto yokes on horses that were led by women and supported by two men. She wondered why they did not use carts but commented 'the common observation of a custom being as a second nature people are very hardly convinc'd or brought off from, tho' never soe inconvenient'.[80] Some 150 years later the 1843 Poor Law Commission drew its reader's attention to the 'habits of narrow localities ... The women of one village have always been accustomed to reap whilst to those of another in the immediate neighbourhood, the practice is unknown. Turnip hoeing is by no means an uncommon occupation for women, yet in many villages they never undertake it'.[81] The point here is not only should we be mindful of local distinctiveness, but also that our explanations may be flawed if we assume that only economic rules held sway.

By taking both *la longue durée* and a regional view of what we know about women's involvement in farm work in the period of industrialisation, it is apparent that at this moment, we are actually better informed about the type and amount of work women did in the medieval period, and in the late nineteenth and early twentieth centuries, than we are for the long eighteenth century. The manorial and micro-community basis of much research in medieval economic and social history has provided us with a detailed picture. Judith Bennett, for example, found that in Brigstock in Northamptonshire, women looked after small animals, tended fruit trees, cultivated herbs and vegetables, and grew hemp and flax. Their work complemented that of their husbands in the more specialized production of grain.[82] For the second half of the nineteenth century, Karen Sayer charts the change in attitudes in artistic representations of female farm workers, from their taking centre stage as part of a rural idyll to becoming a despised part of the labour force.[83] Criticism of women's agricultural employment started from the mid-nineteenth century with Parliamentary Commissions which expressed the conflict between women working and their domestic role. Nevertheless, Eve Hostetler and Judy Gielgud have considered the work of a distinctive group for whom demand increased over the nineteenth century, the female bondagers of the farms of the north-east of England.[84] In fact, comparing arable areas in the north-east and the south-east of England during the same time period produces two contrasting views of female participation in the agricultural labour market. While Snell found women's employment narrowing and becoming more acutely seasonal into the nineteenth century in the south-east, Judy Gielgud, in her recent dissertation, shows the opposite pattern for the north-east with women moving from a traditional work pattern of

[80] Christopher Morris (ed.), *The journeys of Celia Fiennes* (1947), p. 265.

[81] BPP, 1843, XII, *Reports from Commissioners on the Employment of Women and Children in Agriculture*, p. 3, cited in Bradley, *Men's Work, Women's Work*, p. 82.

[82] Judith M. Bennett, *Women in the medieval English countryside* (1987), p. 117. See also Middleton, 'Familiar fate'. An impressive, detailed analysis of medieval women's rural work is Simon A. C. Penn, 'Female wage-earners in late fourteenth-century England', *AgHR* 35 (1987), pp. 1–14.

[83] Karen Sayer, *Women of the Fields. Representations of rural women in the nineteenth century* (1995). See also Pamela Horn, *Victorian Countrywomen* (1992) and Jennie Kitteringham, 'Country work girls in nineteenth-century England' in Raphael Samuel (ed.), *Village life and labour* (1975), pp. 75–138.

[84] Eve Hostetler, 'Women farm workers in eighteenth- and nineteenth-century Northumberland', *North East Labour History* 16 (1982), pp. 40–1; Gielgud 'Nineteenth-century farm women'.

haymaking and harvesting to a wider involvement throughout the year.[85] Furthermore, whereas Snell saw the position of the dairymaid of the western counties becoming enhanced in the nineteenth century, Deborah Valenze argues that the expertise of dairying was increasingly being seen as the province of men.[86] Although it may go against the grain of feminist projects which seek to rescue women from invisibility in the historical sources, it may be apposite, as the quote from Mathias suggested, to accept that women are simply invisible because they are not part of the workforce and that locating areas in which women did not participate in the labour market is a valuable exercise in itself.[87] There are also temporal considerations inherent in making comparisons. Conflicting pictures from different regions suggest that we should be analyzing cyclical, not linear, patterns of women's work and questioning how they fit together between sectors and geographical areas.[88] A useful study would also give attention to the life-cycle of female farm workers, perhaps by linking farm records to parish reconstitutions or listings to establish work patterns through the life course.[89]

This article has argued that in trying to take early steps to fill a gap in our knowledge of women's farm work on capitalist farms in the early industrial period, little evidence has been found of a change in the sexual division of agricultural labour over time. The types of farmwork women did in the south-east at least, was not much different in the nineteenth century from the sixteenth century. Keeping regional differences and parish peculiarities in mind, in this area women's day work was probably always relatively limited in arable agriculture on large farms. If anything, the amount of work in weeding and planting increased in the second quarter of the nineteenth century, as Pinchbeck suggested. Before that, however, coupled with population rise, the lack of work suggests an avenue for the early release of labour from the land to go into industry or service sectors of the economy. It can be linked with the female migration of women from rural areas to towns and cities which was such a marked feature of late seventeenth and eighteenth-century England. As a result, this is a direct route by which the 'agricultural revolution' fed the 'consumer revolution'. Women who moved to towns formed a labour supply for the proliferating fashion industries and services of the urban milieu. As research on other European countries finds fieldwork to have a depressing effect on both fertility and survival of infants, it may be possible to link low participation in fieldwork with population rise in the English regions where female farm work was relatively minimal and seasonally short-lived.[90] The 'labour release' is less clear for other parts of England, particularly highland areas, where there is little evidence that women's participation had fallen by the end of the eighteenth century, and in some areas it may have increased.

[85] Snell, *Annals*, pp. 15–66; Gielgud, 'Nineteenth-century farm women', p. 168.

[86] Snell, *Annals*, p. 40; Deborah Valenze, 'The art of women and the business of men. Women's work and the dairy industry, *c.* 1740–1840', *Past and Present* 130 (1991), pp. 142–169, reprinted in her *The First Industrial Woman* (1995).

[87] A point made by Michael Anderson, 'What can the mid-Victorian censuses tell us about variations in married women's employment?' *Local Population Stud.* 62 (1999) pp. 9–30

[88] See the analysis of Pat Hudson, *The Industrial Revolution* (1992), p. 231.

[89] See, for example, the life-cycle analysis carried out by Helen Speechley, 'Female and child agricultural labourers', pp. 124–141.

[90] W. R. Lee, 'Women's work and the family. Some demographic implications of gender-specific rural work patterns in nineteenth-century Germany', in P. Hudson and W. R. Lee (eds), *Women's work and the family economy in historical perspective* (1990), pp. 50–75.

Turning to wages, it is the case that, as Snell found, female wages did not keep pace with male wages over the course of the eighteenth century. For Essex, the wages for female agricultural workers lie at the bottom of the scale of wage payments for women's work by 1800. Whereas they had been between a half and three-quarters of the male rate in the seventeenth century, they were now between a third and a quarter, or even less, because they did not change. As Charles Feinstein has demonstrated for England as a whole in his recent pessimistic, quantitative summary of the standard of living in the Industrial Revolution, taking benchmarks of 1778–82 and 1846–52, all female agricultural workers ended at a lower level than they began. The ratio of the female to male wage showed an initial decline from 50 per cent in 1770 to 40 per cent in the 1820s and was then stable.[91] An element of the female wage was certainly 'sticky' and governed by custom rather than the market. As a result, a clear connection between work opportunities and wage rate movements is questionable. Falling female wages do not necessarily reflect declining labour participation in that there may be no proportionate difference in the amount of work they represent. Industrial work increased for women in the late eighteenth and early nineteenth century whilst their wages fell because employers wanted cheap, docile, nimble-fingered labour and had a labour surplus economy to draw on.

This takes us to the heart of current research in women's economic history which considers how women's position changed with capitalism. Sara Horrell and Jane Humphries drew on wage rates in their collection of budgets for married women to argue that women's opportunities declined.[92] They found that women generated five per cent of family incomes in high wage and twelve per cent in low wage agricultural counties and that women's share fell over time. They argue that 'women were losing what employment opportunities they had through the commercialisation of agriculture and the decline in outwork activities ... The high proportion of households still engaged in agriculture largely ameliorates the increased participation of women found in other occupations'. The problem here is deciding whether we should see falling wages as indicating reduced opportunities, or rather accept that women carried a large burden in supporting an economy in transition. This is not to suggest that custom rules entirely as the market had some effect. For example, in Essex in the French Wars, there was a noticeable rise in payments to women of up to 10*d.* or a shilling per day. After 1800, Helen Speechley's Somerset farms also show the first noticeable rises in female wage rates for two centuries.[93] If female marginalisation with capitalism does apply, we need to see its effects operating from far back in time and encompassing a much longer time span than that traditionally associated with the Industrial Revolution. The suggestion made by Beneria and Sen, when reviewing Boserup's *Women's role in economic development* (1970) was that 'capitalist accumulation can have a variety of effects on women's work depending on the specific form accumulation takes in a particular region'. Perhaps this is more apposite to the case of English

[91] Charles Feinstein, 'Pessimism perpetuated: the standard of living during and after the industrial revolution', Tawney lecture at the Economic History Society conference, University of Oxford, March 1999.

[92] Sara Horrell and Jane Humphries, 'Women's labour force participation and the transition to the male-breadwinner family, 1790–1865', *EcHR* 48 (1995), pp. 89–117, reprinted in P. Sharpe (ed.), *Women's work: the English experience, 1650–1914* (1998), pp. 172–204, quotation on p. 195.

[93] ERO D/DJN E5; Speechley 'Female and child agricultural labourers', p. 107.

rural labour than a unilinear pattern of female marginalisation.[94] Overall, in comparison with other countries, work for women in agriculture does seem limited and this surely is the other side of the coin for an explanation of women's extensive involvement in other economic sectors. Only further local research, which considers both economic explanations and less quantifiable aspects of human experience in tandem, can take us beyond this necessarily sketchy picture.

[94] L. Beneria and G. Sen, 'Accumulation, reproduction and women's role in economic development: Boserup revisited', *Signs* 7 (1981), p. 288.

Reassessing the influence of the aristocratic improver: the example of the fifth Duke of Bedford (1765–1802)

by David Brown

Abstract

The significance of the aristocratic improver has been questioned by recent research which has tended to see financial return as the sole motive for agricultural development. This paper seeks to re-assess the rôle of the improving landowner by offering the first modern study of one of its leading examples, the fifth Duke of Bedford (1765–1802). It argues that he was influential both in his county and in the broader development of scientific agriculture. His motivation was not financial return but derived from the intellectual and political environment of his time. Indeed, his policy was doomed as it took no proper account of return on investment and, if generally pursued by his class, would have quickly destroyed their élite position.

The cliometric calculations of Crafts have re-emphasized the contribution of agriculture to economic growth after 1750. Explanations of the agricultural revolution by historical economists now tend to focus on the operation of the market place in response to the growing demand generated by population growth and urbanisation. In this approach, the rôle of the individual agricultural improver, like the fifth Duke of Bedford of Woburn Abbey in Bedfordshire, is relegated to that of a mere actor imprisoned in an econometric drama, reciting deterministic lines of which he was not the author. Allen, in his chapter on agriculture in *The Economic History of Britain since 1700*, scarcely discusses the motive of the landowner in economic development except to comment that 'higher rent was the motive behind the creation of large farms'. Cultural explanations of innovation (or lack of innovation) are in one case contemptuously dismissed as 'another case of British irrationality like real ale or silly mid-off'.[1] Many agrarian historians and historical economists discount the possibility of a philosophical commitment to the idea of improvement or, indeed, any sense of altruism in favour of pure financial return. To quote McCloskey, 'the assumption of close calculation' should be made by historical economists unless there is strong evidence to the contrary. This profit-oriented approach probably reveals more about our own materialistic society than about the minds of eighteenth century aristocratic improvers.[2]

This has not always been the case. Lord Ernle stressed the critical rôle played by such aristocratic improvers as the fifth Duke of Bedford, Coke of Holkham and Lord Egremont at

[1] N. F. R. Crafts, *British economic growth during the Industrial Revolution* (1985); R. Allen, 'Agriculture during the Industrial Revolution' in R. Floud and D. McCloskey (eds), *The economic history of Britain since 1700* (3 vols, 1994), I, p. 114. D. N. McCloskey, *Econometric History* (1987), p. 28

[2] McCloskey, *Econometric History*, p. 30.

Petworth in setting a fashion followed by their tenants and neighbours. However, these men are now often seen as exceptional and their achievements overrated. Beckett maintains that 'the true credit for agricultural innovation ought perhaps to rest with the lesser landowners, with estate stewards and tenant farmers'. While he acknowledges that a 'handful of leading aristocrats were major figures in agricultural improvement', he thinks that Ernle has largely 'mistaken paternalist endeavour for real achievement'.[3]

While many historians have diminished the significance of eighteenth-century improvers, there are some who would accept that improving landlords were motivated by more than the maximisation of profits. Both the modern studies of Coke argue that his improving activities were as much concerned with display and the search for deference as financial return. Studies of the agricultural improvements made by the heirs of the Duke of Bridgewater have ascribed various dynastic motives to their activities. Other motives have emerged. For example, Wasson's recent study of Earl Spencer indicates that he was motivated by a mixture of evangelicalism, scientific enthusiasm and the necessity of adjusting to the spirit of the age. Nevertheless only Wasson has considered the influence of the landed improver and these individual studies have not changed the general consensus on the issue among historians.[4]

This case study of the fifth Duke of Bedford (1765–1802) will focus on his mind set, activities and rôle as a landed improver. It will show that, like Coke of Holkham, Bedford was a frustrated politician who tried to improve agriculture both on his large estate and beyond. He, and not his steward, was the driving force behind improvement: he was motivated not by financial return but by his physiocratic beliefs as an enlightened Whig. He thought the aristocracy could only survive as the enlightened leaders of a democratic, capitalist, society but, unfortunately for his estate, he had little idea about how to make his policies pay. He adopted the most modern – and expensive – of methods and set up the first agricultural experimental station. His general profligacy and zeal for improvement required various expedients to raise money which all but ruined his estates.

This study will also outline the means by which the Duke's influence extended beyond his own estate and time. It will show that while his Tory enemies rejected his plans as harmful both to his estate and to the community, there were many other enlightened Whigs who shared much of the same kind of philosophy and influence at least in their counties. The distinction between Whig and Tory ideas can also be related to rival strategies for ensuring their survival advocated by members of the élite. Mandler and Hilton have argued that by the

[3] Lord Ernle, *English Farming, past and present* (1936), pp. 207–8, 221; J. V. Beckett, *The Agricultural Revolution* (1990), p. 29 and in his chapter in G. Mingay (ed.), *The Agrarian History of England and Wales*, VI, *1750–1850* (1989), pp. 569–70.

[4] R. A. C. Parker, *Coke of Norfolk* (1975), pp. 200–1; S. Wade Martins, *A great estate at Work. The Holkham estate and its inhabitants in the nineteenth century* (1980); E. Richards, *The leviathan of wealth* (1970), pp. 291, 296; M. Turner, 'Land, industry and the Bridgewater inheritance', in B. A. Holderness and M. Turner (eds), *Land, labour and agriculture 1700–1920. Essays for Gordon Mingay* (1991), pp. 1–25; E. A. Wasson, 'A progressive landlord. The third Earl Spencer, 1782–1845', in C. W. Chalklin and J. R. Wordie (eds), *Town and Countryside. The English landowner in the national economy, 1660–1860* (1989) pp. 83–101. See also B. A. English, *The great landowners of East Yorkshire* (1990), pp. 152, 190, 224.

1820s a majority of the landed élite had accepted a kind of capitalist individualism. Bedford was an early convert to this attitude, but did his version of it help to preserve his position and promote social harmony, or cause social dislocation?[5]

I

The fifth Duke destroyed his private papers: therefore to understand the man, we have to rely on other sources. In some respects these are relatively plentiful: apart from estate records, his activities are recorded in enclosure acts and awards and articles in the contemporary farming journals. Bedford inherited the title and estates in seven counties from his grandfather in 1771 when only six years old. It was possibly the richest inheritance in the country. By 1740 the fourth Duke's annual income was £56,300 and growing as his London estate was built upon. On his coming of age, the fifth Duke's inheritance had grown to £74,000 a year clear of all encumbrances. Bedford decided to emulate his grandfather's career as a prominent Whig. His education – Westminster, Cambridge and the Grand Tour – seems to have imbued him with a mixture of radicalism, physiocracy and agnosticism. Bedford would have rejected any justification by 'divine will' for his élite position, stressing instead his innate intellect and reason. He became a radical Foxite, but the public reaction to the excesses of the French Revolution and the subsequent war against France obliged him to limit his political activity after 1793 to moving motions in favour of peace, much like his friend Coke of Holkham.[6] While advocating democratic reform and continuing to support rational economic change, he believed that aristocrats like him would still form an economic élite, presuming that a popular government would not redistribute wealth from the rich to the poor.[7]

Apart from his political expenses, the young Duke quickly found other ways to spend heavily. Even before inheriting, he had run through £13,000. He loved horse racing, gambled heavily and was a notorious 'soft touch'. To maintain his famous 'open table' for his guests required the produce of two large farms and £20,000 a year. He was master of the Oakley Hunt, keeping 25 fine horses and a pack of hounds. The new stables these required were only part of the huge rebuilding undertaken at Woburn under the eye of the architect Henry Holland (?1746–1806).[8] The Duke did undertake practical improvements in the early years after his inheritance, but largely for aesthetic reasons. Although only allotted 10 acres or so under the Wavendon enclosure act of 1789, land tax returns and the tithe apportionment show that after the award, the

[5] P. Mandler, *Aristocratic government in the age of reform* (1990); A. J. B. Hilton, *The age of atonement* (1988).

[6] E. Johnson, 'The Bedford connection. The fourth Duke of Bedford's political influence between 1732 and 1771' (PhD thesis, University of Cambridge, 1979), pp. 46–51; *Norfolk Chronicle* 15 Apr. 1786, p. 2, col. 2, and cf. Joshua Wilson, *Biographical index to the present House of Lords* (1808), pp. 58–9 who reckoned £90,000 p. a. plus money accumulated during the trust. J. G. Gazley (ed.), *The life of Arthur Young* (Philadelphia, 1973); John Bowles, *A letter to C. J. Fox in consequence of his speech ... on ... the late most noble Francis Duke of Bedford* (1802); M. McCahill, *Order and Equipoise. The peerage and the House of Lords, 1783–1806* (1978), pp. 46, 66, 126, 169, 170.

[7] Wilson, *Biographical Index*, pp. 58–9. I. Christie, *Wars and Revolutions. Britain, 1760–1815* (1982), p. 241.

[8] For Holland, see *DNB*.

Duke purchased over 300 acres of low value heathland adjoining Woburn parish and had planted many hundreds of acres both there and in Woburn by 1794.[9]

The Duke's 'peculiar fondness for farming' only became manifest in 1793 when his existing programme of development expanded in conception under his direct 'enlightened management'. This coincided with his political isolation although one contemporary apologist believed that he had simply 'determined to retrench', and so 'applied himself to nobler objects' involving estate improvement and scientific farming. If altruism did play a rôle, retrenchment certainly did not. Spending remained high. It was claimed that over a ten year period, his general expenditure exceeded £700,000.[10] Certainly the Duke's motivation was not financial return, except in the long-term. Although the general rent increase of the time was creating an environment for profitable investment, his agents told him plainly that the rate of spending was ruinous and many of his plans would be unremunerative. Nevertheless the Duke ignored his employees and was prepared to sell estates to fund his plans. So what were his motives?[11]

For one thing, Bedford's activities gave him the chance to gain the approbation denied to him in the political world. They also seem to have been inspired in part by his belief in possessive individualism. It is true that freehold ownership was necessary for him to effect his changes; but this cannot explain the construction of a brick wall fourteen feet high and four bricks thick at the base which encircled his park and farms at Woburn. Further, his democratic ideas and close involvement in estate improvement indicates he was one of those rational improvers who had been strongly swayed by the ideas of the enlightenment such as economic liberalism. For example, he engaged in enclosures on his own estate and supported a facilitative but not a compulsory general enclosure act.[12]

However, to see his interest as deriving only from liberal economics and an immediate need for status gratification is to overlook much more pressing motives hinted at by his friend, Fox. Britain was facing food shortages and social dislocation due to bad harvests and the interference with imports caused by warfare. As a man interested in 'publick utility', agriculture seemed to Bedford 'the most important [employment] to engage in'.[13] The Duke's own words on the subject echo this view: 'I consider myself a steward to do the best I can with the money placed in my hands, no doubt, for the benefit of others. A rich man can use very little of his riches on himself, and he should use them to promote as much general good as possible'.[14]

Despite this seeming altruism, a more likely construction is that the fifth Duke believed that such action was needed both to maintain and justify aristocratic authority. It is also likely that he realized, much as Peel did fifty years later, that agricultural modernisation represented the only long-term hope for the aristocracy. Put simply, he envisaged an agrarian capitalist system with the aristocracy owning the means of production and maximising their exploitation.

[9] Wilson, *Biographical index*, pp. 58–9; *Trans. of the Society of Arts* 23 (1805), pp. 112–147. T. Batchelor, *General view of the agriculture of Bedfordshire* (1808), p. 464. Buckinghamshire RO, IR74 (Wavendon Heath award); Q/RP17/12–16 (Wavendon Land Tax Returns, 1791–5) and Wavendon Tithe Award; Bedfordshire and Luton RO (hereafter BLRO), X395/80.

[10] Wilson, *Biographical Index*, p. 59.

[11] A. Young, 'Obituary of the Duke of Bedford', *Annals of Agriculture* (hereafter *Annals*) 38 (1802), p. 369. Wilson, *Biographical index*, p. 59.

[12] *The Times* 9 May 1798.

[13] *Worcester Herald* 20 Mar. 1802, p. 4, col. 3.

[14] quoted in G. Blakiston, *Woburn and the Russells* (1980), p. 166.

Country folk would be reduced to an economically dependent rural proletariat, renting their cottages from the landlord, relying solely on wage labour, without any chance to gain an independent living from casual work, or using the commons for grazing or gathering fuel. The goal was the survival of the elite in three main ways. First, by reducing the poor to economic dependency; next, to justify the aristocracy's supremacy by the rational exploitation of their estates; finally to encourage methods to maximize production in order to feed the growing population and avoid social conflict. Whether this would produce profit in terms of financial return on investment appears to have been a secondary consideration; if there was an assumption, it was not of 'close calculation', but that modernisation would naturally bring profit in its wake.

This plan was flawed in several ways; estates which did not pay would not survive long; the poor would not long tolerate quietly what appeared to be simple oppression; and not all aristocrats would follow Bedford's lead. The key flaw was the management of the initiative. Instead of hard-headed, experienced businessmen superintending this initiative – and even they could waste their investment as E. L. Jones showed of the Arkwrights – it would be master-minded by an enlightened nobleman. As a result, Bedford turned not to practical men for assistance but to leading scientists. Apart from receiving advice of Arthur Young, he employed three men of enduring reputation. Robert Salmon (1763–1821) 'conducted the architectural and mechanical departments', patenting many agricultural machines; the geologist John Farey (1766–1826) supervised his plantations and later managed the estates. However, Bedford's commitment to scientific improvement is best shown by his employment of the Rev. Edmund Cartwright (1743–1823), inventor of the power loom, to superintend his experiments from 1800.[15]

Nevertheless these men were merely the Duke's servants; he was the author of these changes. Once he became disillusioned with politics, estate matters preoccupied him; Farey complained of 'the multiplicity of temporary business ... on which His Grace frequently gives me directions'. Indeed in 1801 the Duke was prepared to miss crucial parliamentary debates to attend the sheep-shearing at Woburn.[16]

Bedford had great scope for his plans. His estates, like Bedfordshire generally, were notoriously backward. A three course fallow rotation was generally followed to maximize short-term returns to the long term detriment of the soil. The fields were ill-drained, leading to huge losses of crops and sheep. Bedford extended his demesne at Woburn to some 2251 acres as a centre for innovation based on the home farm, an experimental station and an annual sheep shearing conference. Beyond this, he planned to end the open field system on his estates, convert wastes into productive land and to drain and irrigate fourteen parishes.[17]

His plans required the purchase of several adjoining estates and expensive legislative activity. He needed to obtain several enclosure acts and include provisions within them to drain these and adjoining parishes; to amend the local turnpike act to prevent traffic crossing the extended

[15] E. L. Jones, *Agriculture and the Industrial Revolution* (1974), pp. 160–183. *Gentleman's Magazine* 1821 part ii, pp. 381, 648. Batchelor, *General view*, preface. For Salmon, Farey and Cartwright, see their entries in *DNB*.

[16] BLRO, R/3/1728 Farey to Macnamara 28 Aug. 1794; British Lib., Add. Ms. 51533, fo. 41, Moira to Holland, 13 June 1801.

[17] T. Stone, *General view of the agriculture of Bedfordshire* (1794), p. 31. A. Young, 'The husbandry of the late Duke of Bedford', *Annals* 39 (1802), pp. 387–92, 414–9. Figures from *Staffs Advertiser* 13 Mar. 1802, p. 4, col. 4; BLRO, R/1, 76, 77, 239–40; R 2/67, 68

Woburn park; and to obtain at least two estate acts to allow him to sell, exchange or lease estates to raise the cash for his activities. Even this would prove insufficient and so further expedients had to be found.[18]

Moreover, his experiments and proselytising were expensive. As Thomas Batchelor wrote 'His Grace spared neither attention nor money in the elucidation of any dubious fact' and showed an 'experimental spirit'. The entertaining of three hundred or so guests at sheep-shearings was typical of his spending. Enclosures on the Woburn estate between 1793 and 1799 cost Bedford £11,658 in public expenses and fencing; together with some small purchases and spending on building and drainage, his total costs may have exceeded £30,000; against this the Woburn rental leapt 67 per cent from £8486 to £14,256 in seven years. However, the Duke tried to find relatively inexpensive methods to encourage others to copy his example. For example, Park Farm and its buildings were built of pisé walls, which were praised for their cheapness. He also designed an octagonal farm house which was £60 cheaper to construct. The problem was not what went on beyond the park wall but the unproductive spending on experiments, entertainments and building at Woburn itself and the cumulative rate of expenditure.[19]

The continued high spending had terrible effects even on Bedford's long purse. During Holland's building work, the Woburn steward complained 'the vast expenditure here is beyond conception – I am almost plagued out of my life for money'. Bedford dealt with his financial problems simply by ignoring them. Farey complained in 1798 that 'when His Grace is here he is completely engaged that I can rarely introduce the subject of money, and when I do he is always adverse to talk upon it or give drafts'. Unsurprisingly, the Duke left unsettled accounts of £400,000 at his death because he was 'so disposed to postpone business'. While this may appear shrewd practice, it was really the product of the Duke's dislike of business and meant that he had no clear idea of his financial position, hardly the way in which a successful businessman would operate.[20]

Even Bedford had to face up to his debts eventually. Adopting the last resort of other impoverished aristocrats, he raised £150,000 by the sale of annuities at a high rate of interest. This practice was publicly commended to aristocrats

> as the principal is never returnable, but becomes their sole property; and they have the opportunities of applying the money to great and important purposes. In this, his late Grace will stand ... an ever memorable example by his noble application of it to the highest of all national pursuits.[21]

As Bedford owned much of his estate in fee simple, he was able to raise annuities for the purchaser's life, attracting annuitants by paying 10 per cent rather than the maximum allowed under the Usury Laws of 5 per cent. By his death, only 6 per cent was being paid on the capital and, as many annuitants were frail, it was expected to fall under 5 per cent by 1807. Sales of

[18] 35 Geo. III, c. 151.

[19] Batchelor, *General view*, p. 626; A. Young, 'Husbandry of ... Bedford'. BRO, R5/82/90–102.

[20] BLRO, R3/1252, J. Kingdon to Daniel Beaumont, 7 Dec. 1792; see also R3/1728. K. Garlick, A. Macintyre and K. Cave (eds), *The diary of Joseph Farington* (16 vols, 1978–84), VI, p. 2197, 20 Dec. 1803.

[21] *The Times* 9 Mar. 1802, p. 3, col. 1. H. J. Habakkuk, *Marriage, debt and the estates system. English landownership, 1650–1950* (1994), pp. 262–3, 265, 374.

estates were also required. Holland's fees were in part settled by giving his nephew a moiety of the rotten borough of Okehampton in 1795. Dry Drayton in Cambridgeshire was sold in 1795 and Houghton followed in 1800. Part of the Streatham estate in Surrey and Stratton in Hampshire also went and an estate act was secured to sell Pains Manor in Amersham.[22]

Bedford also explored the opportunities of raising income from non-agricultural sources. Large amounts of timber were cut for fencing and for sale. He accelerated the building development of his London estate. An estate act in 1800 allowed him to demolish Bedford House and make building leases of the site. Moreover the Duke was the first of his family to develop their tin mines in Devon rationally, by encouraging mining speculators with realistic royalty demands and giving the land free for the construction of a canal to connect the works with Mowellham Quay. Nevertheless such investments were necessarily long-term and so he had to rely on sales and annuities to satisfy his immediate needs.[23]

Bedford's plans were attacked by conservative-minded opinion. While Burke satirized his improvements generally in 1796,[24] the most detailed assault came from John Byng (1740–1813, later Viscount Torrington), who described the Duke as 'a compound character of avarice and extravagance, wasting a princely fortune'. The criticism went further; Byng railed against the Duke and his kind in 1793, protesting that

> Nothing has been so baneful to this country as the monopoly of land; for the great holder lays all waste, cuts down his woods, clumps all his farms together ... and wants to diminish his tenantry, and to swell his rents without the expense of repairs and taxes. At his own seat (the school of folly and of prodigality) nothing but waste and intemperance are to be seen; from which only flattery and villainy can prosper; whilst ... benevolence [is] unknown in and about the mansion.[25]

This judgement on the Duke's profligacy was not wholly fair. Bedford made huge plantations which more than compensated for any felling of trees and enabled the Bedfordshire and Buckinghamshire estate to derive 18 per cent of its income between 1816 and 1895 from timber sales. Moreover, his later drainage work increased rents by reducing losses of sheep and cereals. Furthermore Byng was inconsistent about the Duke's wastefulness. When he observed the Duke's men demolishing Houghton House and using its materials to build his new inn at Bedford, he even managed to attack the profligate Duke for his 'cunning stinginess'. Often Byng's political antagonism to the 'leveller' Duke, whom he believed might be levelled in his turn, caused him to criticize Bedford for the wrong reason.[26]

Underpinning these attacks on his profligacy lay a fundamental difference with the Duke

[22] R. G. Thorne (ed.), *The History of Parliament. The House of Commons, 1790–1820* (5 vols, 1986), I, p. 156; VCH *Cambridgeshire*, IX, p. 74; *J. House of Commons*, LIV, p. 597, 5 June 1799; C. Bruyn Andrews (ed.), *Torrington Diaries* (4 vols, 1934–8), IV, p. 32; VCH *Buckinghamshire*, III, p. 150; VCH *Surrey*, IV, p. 85.

[23] Linda Clarke, *Building Capitalism. Historical Change and the labour process in the production of the built environment* (1992), pp. 107, 181. F. Booker, *The industrial archaeology of the Tamar Valley* (1971), pp. 15–16, 106–7.

[24] E. Burke, 'A letter to a noble lord' (1796) in R. B. McDowell (ed.), *The writings and speeches of Edward Burke* (9 vols, 1981–97), IX, pp. 177–9.

[25] Andrews (ed.), *Torrington diaries*, III, pp. 200–1.

[26] H. A. Russell, Thirteenth Duke of Bedford, *A great agricultural estate, being the story of the origin and administration of Woburn and Thorney* (3rd. ed. 1897), pp. 218–26. Andrews (ed.), *Torrington Diaries*, IV, pp. 32–3.

about his political strategy. Thinkers like Byng were convinced that the Duke's plans for a capitalist democracy would destroy the whole landed élite by harming the poor, whereas the Duke's apologists believed exactly the opposite, despite any temporary harm inflicted upon the poor. To resolve this debate, it is important to assess how his improvements affected the poor.

In all his enclosure acts, the Duke maximized his allocation of land, especially at Husborne's Crawley, which was used to extend his home farm and park. He was concerned to acquire the maximum territory to employ in his schemes of improvement. One method that he adopted was pre-enclosure purchases, as at Husborne's Crawley, where he made seventeen small purchases before precipitating the enclosure in 1794 by acquiring the rectoral estate for £9444. This policy was repeated on his other Bedfordshire enclosures. Where he could not purchase the lands he wanted, like the rectoral estate at Maulden, he simply rented the tithe allotment to add it to his managed estates. Exchanges also proved useful in consolidating his estate. For example, the Husborne's Crawley act appointed certain turnpike roads and specific lands to be allotted to the vicar in lieu of his glebe, which the Duke then added to his estate. Perhaps the most pernicious way in which the Duke gained land was to ensure that the poor obtained inadequate compensation for their customary usages of the commons for grazing and fuel. This increased the amount of land available to be allotted to himself and the other freeholders while obviously reducing that available for the poor. Further, he bought cottages which enjoyed common rights and added their allotments into his park and large farms, although he did ensure that small gardens were added to the cottages.[27]

Young praised the effects of the Husborne's Crawley act in 1801. The parish

> before the enclosure, was a scene of filth and ruins: the road a bog, and the houses hogsties. After enclosing, the Duke of Bedford built several cottages new, repaired others, made the road an excellent one, fenced and assigned gardens, paled them, and cleared away obstructions; the whole is now a scene of comfort, and every cottage has a good garden, full of cultivation. A dismal spectacle of poverty is become a clean, well-built cheerful village.[28]

This contrasts with Byng's criticisms of the Duke building fox hound kennels near St. Neots whilst the poor lived in 'miserable mud hovels' which encouraged 'Democracy'. Perhaps Byng suspected that Bedford was deliberately spurring the poor to support his political goals! The real reason was that St. Neots was not the estate village which Bedford employed to impress visitors.[29]

However well the poor were treated in terms of new cottages and gardens, the enclosure acts at Husborne's Crawley and Maulden served to complete the transition of an independent peasantry into a dependent rural proletariat. This process was resisted; for although his enclosures may have been intended to help the poor, they did not view the ending of their traditional 'rights' as beneficial. Attempts in 1794 to deny the poor rights of pasturage and cutting furze on Streatham Common as a preliminary to an enclosure (after which the land was to be sold as building plots for villas) were met by incendiarism and the destruction of palings.[30]

[27] BLRO, X21/104–20. J. Godber, *A history of Bedfordshire* (1969), pp. 363, 404; VCH *Bedfordshire*, III, p. 396.

[28] *Annals* 36 (1801), p. 608.

[29] Andrews (ed.), *Torrington Diaries*, IV, pp. 48–9.

[30] *Gentleman's Magazine* 1794 part i, p. 571. *Annals* 36 (1801), p. 513; 38 (1802), p. 113.

Bedford acted less arbitrarily thereafter. The acts he sought subsequently gave the poor fuel and grazing allotments administered by trustees. Nevertheless the ending of such rights was still resented and caused an enclosure riot in 1796 at Maulden, where 200 people prevented a survey of the common and a cavalry troop had to be stationed at Ampthill.[31]

This incident illustrates another major flaw in Bedford's strategy to which attention was drawn by a local paternalist magistrate. He sent for troops at Maulden because he feared that 'if ye poor people are suffered to make laws for themselves, we shall very shortly have no government in this county'. The grounds for their discontent were that 'part of it [the moor] is to be given up to the poor ... but they are not contented with part of the common, and claim a right to the whole'. The real problem for a democratic aristocrat was this: if the poor were enfranchised, would they allow a law which deprived them of their commons? How the Duke resolved this dilemma is unknown; but one thing is certain. He and his successors stuck to their plans and continued to demand their legal rights and to rationalize the rights of the poor. In 1810, an amending act vested the Wavendon Heath fuel allotment of 150 acres in the sixth Duke for £300 per annum to buy coals for the poor. This demonstrates that the fifth Duke believed in the sanctity of private property and saw the concession of popular democracy only as the way for the landed élite to preserve their economic interests.[32]

Young – elsewhere a champion of the poor – faced difficulties in defending the Duke over the Maulden enclosure. One cottager told him that before enclosing he 'kept four cows ... now I don't keep so much as a goose'. In this light, the violent reaction of cottagers both at Maulden and Streatham appears natural. Young took the line that 'these accounts of advantages, especially when they are gone, are not to be credited'. Further, he implied the Maulden riots were unjustified as an 'extensive' (nineteen acre!) allotment had been made. When Young turned to the improvements produced by the process, he found much to praise. Although leading to a reduction of 115 acres in the land growing wheat by 1801, the Duke's three acts increased yields by allowing drainage, irrigation and the introduction of a new crop rotation. This ended problems with the rot and made worthwhile the introduction by the sixth Duke of John Ellman's Southdown sheep. Young particularly commended a clause in the acts secured by Bedford 'to enable him to irrigate, by carrying a canal through the property of other persons, paying them compensation for damages'. Bedford obtained the boggy land in his enclosures 'because they were in no estimation amongst the proprietors in general'. By 1798, Farey was supervising the reclamation of 200 acres on the edge of Crawley bog. Although Joseph Elkington had failed to drain Prisley bog at Flitwick in 1795, the Duke employed the geologist and engineer William Smith (1769–1839) on the same task. Smith drained the bog in 1802 and won a silver medal from the Society of Arts in 1805 for draining another eleven acres in 1803–4. This success encouraged the sixth Duke to enclose Flitwick in 1806. Apart from converting these 'boggy bottoms' into water meadows, by 1797 the Duke had started to improve 'some poor sandy hills' at Crawley, exhausted by tillage, and used by cottagers for fuel, until the enclosure act gave them an allotment let for £30 a year to supply them with

[31] J. Bohstedt, *Riots and community politics in England and Wales, 1790–1810* (1983), p. 197.

[32] Public Record Office, WO40, 17 Aug. 1796; Batchelor, *General view*, pp. 235, 438.

firewood. The Duke planted this 100 acre allotment for game and shelter. Further he had the heath marled and planted with turnips.[33]

On balance, the Duke's policy as regards his own estate was damaging. The enclosures and even the drainage may have paid, although they provoked popular discontent; unfortunately the experiments – £20,000 a year apart from his other personal spending – certainly did not. His profligacy in only sixteen years forced him to sell huge estates and still leave a debt of £200,000. More judicious and gradual investment might have achieved the same long-term results without jeopardising the estate's survival. Like Coke of Holkham, Bedford continued to spend blindly without any real consideration of cost or return.[34]

As regards the aristocracy's long term survival, certainly capital-intensive improvements were needed to increase their incomes to face the challenge of the emergent bourgeoisie and to prevent food shortages and discontent. Unfortunately such policies inflicted short-term harm upon the poor at a time of social unrest, and engendered hatred. There were disturbances at Bedford's funeral at Woburn, from the local 'populace stealing escutcheons from the hearse' and breaking the church windows.[35]

II

The fifth Duke's objectives – to promote agricultural improvement and to change society – required finding the means to influence events outside his own estate. He did so in several ways. His improvements, especially the creation of a scientific research centre, were intended to persuade other owners to innovate. He then publicised these new methods in order to reach a wider audience. Further he encouraged change by his patronage of agricultural institutions, obtaining changes in the law, as well as benefiting from emulation and personal influence.

Certainly his home estate was planned to serve as a model to his peers. Three hundred acres of his home farm was converted to a scientific research station in 1800, long before the era of John Bennet Lawes and Rothamstead. He installed Cartwright to superintend 'an establishment for agricultural education ... that the improvement and cultivation of his farm might go hand in hand with those scientific inquiries which would offer the most precious opportunity to students'. These experiments were many and various, but mainly concentrated on stock breeding and the value of various crops – chicory, hay, turnips and oil cake – in feeding different types of stock.[36]

All of the Duke's drainage and planting activities were deliberately innovative in order to gain the maximum scientific benefit and publicity. They were reported in the many widely-read agricultural publications of the time. These reports also mentioned the practical inventions and new buildings erected under Salmon's direction. Bedford's innovations were given a showcase at his annual shearings from 1797. Although Coke had beaten him to the idea, his were relatively small affairs, whereas Bedford's was the 'most respectable meeting in the whole

[33] Board of Agriculture [A. Young], *A general report on Enclosures* (1808), p. 232. *Annals* 41 (1803), p. 539. A. Young, 'Husbandry ... of Bedford', pp. 392, 442–3. *Trans. of the Society of Arts* 23 (1805), pp. 148–72. *DNB* XVIII, p. 559.

[34] Parker, *Coke of Holkham*, pp. 188–92; Wade Martins, *Great estate*, pp. 69–70, 156.

[35] *The Times* 13 Mar. 1802, p. 3, col. 1.

[36] Young, 'Obituary', p. 369. Young, 'Husbandry ... of Bedford', p. 387; Batchelor, *General view*, p. 32

world' to which he attracted European and American visitors. In 1805, some 892 people dined at Woburn at the sixth earl's shearings. Many of the ideas propagated there were copied or improved upon by aristocrats on their own home farms and estates. Despite the fact that 'this truly rational Agricultural Fete' was the world's leading agricultural conference, its aim was 'principally of stimulating the Bedfordshire farmers to improvement'. Prizes were awarded to the best tenants, who also acquired status through publicity in the newspapers. This gathering, perhaps more than anything else, helped to establish the idea of farming as a fashion.[37]

The extent to which the Duke's tenantry followed this fashion is hard to assess. Certainly the improved infrastructure produced by the Duke's investment facilitated the adoption of better husbandry. Although the Duke did not adopt improving leases, Bedfordshire tenants were rarely dispossessed of their farms so they would reap the benefits of any improvements.[38] It is true that tenants who had to make their farms pay or face eviction needed hard evidence of the profitability of new husbandry; unlike their landlords, many tenants were obliged to calculate closely. Despite this caution, the attraction of prizes and pressure from the Duke's agents and the landlord himself must have spurred them to adopt a more scientific attitude to their farming. At a minimum, tenants would be expected to at least interest themselves in the Duke's ideas. More conclusive proof of the extent to which improving landlords – in general – influenced their tenantry awaits the work of future historians.

Outside his own estate, he accepted the offer of many official positions in order to promote scientific agriculture. Apart from his patronage of the local agricultural society, he was a founder member of the Board of Agriculture in 1793. Then, at the 1799 Woburn meeting, he was persuaded to help found and act as President of the Smithfield Club for the improvement of stock breeding. He promoted laws to encourage agricultural change. His resolutions to the House of Lords in 1800 to reduce the parliamentary costs of enclosure led directly to the Commons' decision to bring in a consolidated bill on the subject which became the 1801 General Enclosure Act. Embodied in the act was the Duke's proposal that witnesses could prove the allegation of an enclosure petition before local magistrates rather than a parliamentary committee.[39]

Another mechanism for exercising influence was emulation. Take, for example, Samuel Whitbread whom one contemporary described as 'a vain ... ostentatious and expensive man ... was ambitious of being a great landed proprietor and ... [who] bought up all the land offered to sale in his own neighbourhood'. While more concerned about profit than the Duke, Whitbread's keeness to invest in land required large transfers of capital from his lucrative brewery and ruinous loans. Like Bedford, Whitbread used enclosure acts to extend his estate. His keenness to buy led to both high prices and ruinous loans to secure land before others

[37] BLRO, R3/1243, Jones to Beaumont 11 May 1792; *Trans. of the Society of Arts* 23 (1805), pp. 112–72; *Communications to the Board of Agriculture on subjects relative to the husbandry and internal improvement of the country* (7 vols, 1800–13), II, pp. 349–50; IV, pp. 370–81. Batchelor, *General view*, p. 215. Young, 'Husbandry of ... Bedford', p. 420. E. Clark, 'House of Russell', *JRASE* 3rd ser., 2 (1891), p. 132. Parker, *Coke of Holkham*, p. 116. Mingay (ed.), *Agrarian History* VI, p. 933; Young, 'Obituary'; J. V. Beckett, *The Aristocracy in England, 1660–1914* (1986), p. 165; *Staffs Advertiser*, 25 June 1813, p. 3, col. 1.

[38] Batchelor, *General view*, pp. 40–3; J. Caird, *English Agriculture in 1850–1* (1852), pp. 441–2.

[39] *Farmer's Magazine* 8 (1807), pp. 189–92. *The Times* 4 July 1800, p. 2, col. 2; 10 July 1800, p. 1, col. 2; 12 July 1800, p. 2, col. 2 and 15 July 1800, p. 2, col. 2.

could buy it; 'he was obliged to take up money at a high rate of interest whenever he wanted it ... he became a needy man'.[40] Whitbread was keen to emulate the Duke's landed status but also his social and political goals. Whitbread became the Duke's close friend and political ally. He regularly attended the Woburn fetes and was a founder member of the Duke's agricultural society of Bedfordshire: indeed, he suceeded the Duke as President.[41] Between them, Bedford and Whitbread owned a sixth of Bedfordshire – but what about those smaller owners of the other five-sixths who lacked the wealth to aspire to such status? Copying the Duke's example would enable them to be seen in his company. Moreover the Duke would give them the time of day, having 'the intelligence and breadth of mind to listen and evaluate anybody's opinions'. The Duke took his rôle as a local leader seriously and did far more than simply hold his shearings. In Bedfordshire alone he controlled one county seat and one seat at the county town. He was the master of the Oakley Hunt to which Whitbread also belonged. The Duke's enthusiasm and local influence must have led to great interest in the new agricultural methods.

The way in which the Duke's enthusiasm could influence landlords beyond Bedfordshire is perhaps best illustrated by this anecdote. Coke of Holkham was surprised one day to see 30 Devon oxen – a breed unknown in the area – coming up his drive. Upon enquiry, he was informed that they were a present from the fifth Duke who wished him to try this special breed of oxen of which he personally approved. Coke was so impressed with them that he introduced the breed into the county – largely for meat rather than as draught beasts – and popularized them with London butchers.[42]

In fairness, it is true that the Duke's methods were rarely adopted by contemporaries through fear of bankruptcy. Certainly Bedfordshire was never awash with octagonal farmhouses, nor Norfolk with Devon oxen. Nevertheless, he made dramatic improvements on his own estate, set the fashion for farming and created an ethos for change. His influence was such that the whole county's agriculture improved rapidly after his death. Young felt that 'any person that knows tolerably well the husbandry of Bedfordshire will recollect that such a farm as his Grace's was scarcely anywhere more wanted'. Subsequent generations also tried to measure his significance. In 1857, W. Bennett attributed the 50 per cent increase in production on many farms in Bedfordshire since 1794 to the influence of the Duke upon the 'torpor-stricken agriculturalists of his day', particularly in draining their land.[43]

Recent research has shown that the most effective innovators were not aristocratic improvers but professional farmers whose ideas actually had to pay. Nevertheless, the climate where interest was shown in innovation was created by the great improvers through their shows, prizes, publications and speeches. Also, they set the fashion of improving farming as a means of gaining deference which influenced magnates both in establishing model home farms and

[40] Warwickshire RO, CR1381, Memoirs of Sir George Philips (1845).

[41] D. Brown, 'Enclosure and Improvement. An investigation into the motives for parliamentary enclosure' (PhD thesis, Wolverhampton Polytechnic, 1992), II, p. 223. Dean Rapp, 'Social mobility in the eighteenth century: the Whitbreads of Bedfordshire, 1720–1815', *EcHR* 27 (1974), p. 391; Roger Fulford, *Samuel Whitbread* (1967), pp. 78–80.

[42] A. W. A. Stirling, *Coke of Holkham and his friends* (2 vols, 1908), I, p. 258.

[43] Batchelor, *General view*, preface, p. 626. Young, 'Husbandry of ... Bedford', pp. 386–7. W. M. Bennett, 'Agriculture of Bedfordshire', *JRASE* 1st. ser. 18 (1857), p. 28.

in their general estate management. Certainly, the rôle model presented by the fifth Duke locally seems to have been crucial in both these ways to the improvement of his native county. In this he was not alone. Many early nineteenth-century Whigs, Coke of Holkham, J. C. Curwen of Workingham Hall, Cumberland (1756–1828) and Sir James Graham of Netherby, Cumberland (1792–1861), all frustrated at their political impotence, turned to their estates as a means of pursuing their enlightened and rational ideas and obtaining the respect denied them at Westminster. Bedford's status ensured that his ideas permeated throughout Britain; for example, Edward Knight was influenced by his visits to Woburn in his reclamation of Exmoor Forest.[44] Young wrote that 'the agricultural world never perhaps sustained a greater individual loss than ... by the death of the Duke of Bedford'.[45]

III

The case of the fifth Duke of Bedford demonstrates three main points. First it suggests that the rôle of the aristocratic improver has been underrated. The fifth Duke certainly had both a local and a national significance and his part in the formulation of the 1801 general enclosure act should not be overlooked. Nor was he unique. Other Whig improvers had exercised influence upon their peers, Coke of Holkham on his relatives, the first Viscount Anson of Shugborough, Staffordshire (1767–1818), and the third Viscount Talbot of Ingestre Hall, Staffordshire (1777–1849), and Curwen on Sir James Graham, his 'favourite pupil'. As Ward commented, 'the attraction of appearing among such neighbours and such aristocratic celebrities as a great landed proprietor must have been considerable'. Their impact was such that their supporters and tenants were prepared to spend large sums upon testimonies to their influence. Two hundred and ten leading individuals, led by the Prince of Wales, gave a total of £3172 in 1809 to erect a statue (which still stands in Russell Square) to commemorate Bedford's agricultural activities. Earl Talbot was presented with a costly vase in 1818 by the Staffordshire General Agricultural Society 'fostered by his care and animated to useful exertion by his example'. Other examples, like the massive statues erected by the tenantry to the first Duke of Sutherland on his three main estates, could easily be cited.[46]

Much of the debate is based on the attitudes of contemporary writers who often had their own prejudices. Bedford's celebrity was due to his status in Whig circles and in his county, and so panegyrics about his importance could be dismissed as pure sycophancy; but critics of the influence of great landowners could have their own agenda. Whilst the author of the *General view of Staffordshire*, William Pitt, paid obligatory praise to several aristocrats, he felt that it was men like him with under 300 acres who were the real improvers. Yet an outside observer, James Caird, some forty years later, could compile a completely different list of aristocrats as shining

[44] Brown, 'Enclosure and Improvement', I, pp. 312–29; M. Williams, 'The enclosure of waste lands in Somerset, 1700–1900', *Trans. Inst. British Geographers* 57 (1972), pp. 99–100; S. Sidney, The reclamation of Exmoor', *JRASE* 2nd ser. 19 (1878), p. 76; *Gentleman's Magazine* 1802 part i, p. 285. J. T. Ward, *Sir James Graham* (1967), p. 55.

[45] Grazley (ed.), *Arthur Young*, p. 468.

[46] Ward, *Graham*, p. 66. *Annals* 39 (1803), pp. 11–19; *Gentleman's Magazine* 1818 part ii, p. 461.

examples to Staffordshire farmers. On balance, the weight of contemporary evidence points to the significance of the Duke and his kind being greater than is often accepted.[47]

Some qualifications must be made about the influence of the great improvers. Certainly their record on their home estates was not good; Coke and the first Lord Hatherton (1791–1863) of Teddesley in Staffordshire both nearly ruined themselves. Their influence on their tenantry remains uncertain. Further, although they had some national and international significance, most of their sway was confined to their own estates and those of their neighbours, relatives and friends. Few of their peers had either the resources or the manic enthusiasm to pursue their wilder plans. Moreover their influence, as John Beckett points out, is 'fundamentally unquantifiable' and so not susceptible to econometric techniques. This does not mean that this influence did not exist and their potential importance in raising the profile of scientific husbandry should not be underrated. In 1873, only 1688 people owned 43 per cent of England and Wales. This small elite played a disproportionate role in the establishment of the nation's husbandry. What is clear is that at any particular time and in any particular area, much depended upon the accident of the attitude and residence or absenteeism of the leading landowners. Thus, without a resident improving landlord, Oxfordshire in 1850 lagged behind the times; meanwhile great progress had been made by the resident aristocrats of the Nottinghamshire Dukeries. Furthermore, despite its essential patchiness, the influence of the landed improver increased over time. While Adam Smith was probably right to say in 1776 that 'great proprietors are seldom great improvers', but their influence increased thereafter and it seems no accident that this coincides with the fears generated first by the American War of Independence and then fanned by political revolutions in Europe and socio-economic revolutions at home.[48]

This leads to the second point. The motivation of historical actors cannot always assumed to be the close calculation of financial returns. While this assumption might apply to a certain extent to his tenantry, the fifth Duke of Bedford probably never closely calculated anything in his life except the results of agricultural experiments. His policies were the product not only of the economic, but also of the intellectual and political environment of his time. Sufficient studies of individual aristocrats exist to show that the Duke's adoption of some form of capitalist individualism represented the policy of increasing numbers of the élite.

Finally there is the issue of the influence of aristocrats like the fifth Duke upon the long-term prospects of their own estate and their class in general. Despite his appreciation of the new capitalist and democratic ethos of the time, his policies lacked business sense and consideration for the poor. Indeed the survival of the aristocracy depended upon policies like Bedford's being tempered by paternalism and greater economic prudence.

[47] W. Pitt, *General view of the agriculture of Staffordshire* (1813), p. 20; Caird, *Agriculture*, pp. 229–251.

[48] D. Brown, 'The variety of motives for parliamentary enclosure: the example of the Cannock Chase area, 1773–1887', *Midland Hist.* 20 (1994), pp. 111–12; Parker, *Coke of Holkham*, p. 192; Beckett, *Aristocracy*, pp. 50, 205. A similar point is made by Thomas about Welsh agricultural improvement during the period of the Napoleonic Wars. D. Thomas, *Agriculture in Wales during the Napoleonic Wars* (1963), pp. 180–1; J. R. Wordie, *Estate management in eighteenth century England* (1982), p. 275.

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Conference Report: Spring Conference 1999

by PETER DEWEY

The Society's 1999 Spring Conference was held between 29 and 31 March at Caythorpe College, some ten miles north of Grantham in Lincolnshire. Some 40 participants took advantage of the excellent board and lodging provided at the college, and a half-dozen more attended for part of the conference.

The opening paper was delivered by Dr Melvyn Jones (Sheffield Hallam) on the County Wicklow estates of the Watson-Wentworth family, earls of Strafford, in the early eighteenth century. The earls were essentially absentees, resident on their South Yorkshire estates. Their management of their Irish estates was therefore delegated to stewards (about whom Jones told some rum stories) and the estates themselves were largely in the hands of Protestant middlemen. Drawing on a fine contemporary survey Jones was able to show that the best land was in the hands of Protestants, who often employed the Gaelic Irish as labourers. Catholic Irish farmers were predominantly found in the poorer highlands, land unfit for Protestants because it could not raise corn. The one aspect of the estates which was well run was its woods which contributed half the estate's income in the early eighteenth century.

Whilst some conference organisers have expressed fears that the conference would go to sleep after the Monday dinner unless offered strong intellectual stimulation, this conference took the bold step of offering post prandial fare in darkness. David Attfield, in conjunction with John Martin, introduced a unique collection of rural life films produced by David's uncle in the late 1930s and early 1940s. Dealing primarily with the Ashby Magna area of Leicestershire, these professionally made films gave an illuminating and original insight into rural society, wartime mobilisation and Home Guard Sunday. These were accompanied by a film encompassing the wartime mobilisation of the industrial labour force as part of the Dig for Victory campaign. The evening session provided a valuable opportunity for members of the audience to supplement their usual comments and questions with their own personal reminiscences.

Tuesday's proceedings opened with a paper by Dr Gary Moses on the subject of hiring fairs in the East Riding of Yorkshire in 1850–75. The growth of fairs was opposed by the local clergy, since the fairs underpinned the system of farm service, which they viewed with suspicion, as tending to promote geographical labour mobility, and thus harmful to parochial and religious life. But the fairs were in fact a rational response by farmers to the needs of the labour market, and survived the clergy's opposition.

The next paper was 'Local custom, local conflict and the central courts, 1500–1550: Chancery, common law and copyhold revisited' by Prof. Harold Garrett-Goodyear of Mount Holyoke College (Massachusetts). Professor Garrett-Goodyear gave the conference a first account of his work on copyhold cases in the royal courts in the early sixteenth century. Copyholders were accustomed to plead their copyhold title in the royal courts by the early sixteenth century: he suggested that by 1509 it had been established that the royal courts were the appropriate location for the trial of both freehold and copyhold titles. It was even possible to find cases of manorial lords who offered custom as a justification for the eviction of copyhold tenants. The courts looked favourably on manorial custom and assimilated it to law, and by doing so, the character of lordship was transformed. The issues Garret-Goodyear discussed were difficult but pivotal in their implications.

After coffee, Dr. Paul Warde spoke on 'Common Rights, Communes, and the Practice of Customary Law in Early Modern Germany', and examined the process of communal allocation of the products of woodlands in sixteenth and seventeenth century Württemberg. This process, regulated by communal associations and officials, was under pressure from a rising population, so that attempts were made to deny rights to some inhabitants of the villages (or allow them a discretionary access only) and the officials themselves exploited the system to secure a competitive edge over the non-officials. Warde showed how villages could be riven by disputes over access to timber and how disputes could be taken out of the community for settlement by higher authorities.

The first paper after lunch was delivered by Dr David

Stone on 'Farm management during the "crisis" of the early fourteenth century'. Dr Stone gave us the results of a detailed analysis of the demesne accounts of Hinderclay (Suffolk). He approached these by way of some thoughts on current views of the medieval economy as 'commercialised'. Hinderclay, he suggested, conformed to this model. The balance of crops was sensitive to the prices of the previous year, but whilst the manor showed an advanced use of legumes and manure, yields were not especially high. This, he suggested, was because the bailiffs deliberately economised on labour inputs, skimping on weeding. The picture was drawn of a demesne which, perhaps for reasons of relative market disadvantage, had established an equilibrium between labour inputs and outputs which was disinterested in maximising the latter. The implications of this for our understanding of yields was the subject of discussion.

Moving smartly to more recent history, Malcolm Baxter and Dr. John Martin compared the evolution of rationing and food control in Britain in the two World Wars. The 1914–18 experience emerged with less lustre than it is usually credited with, being shown to be a case of a laggard evolution of a partial and unscientific system. The experience of 1939–45 was also shown to evince errors in the wartime policy, which could be traced to failures in the peacetime planning process. It was suggested that policy could have benefited from relying less on production control, and more on rationing.

Last before dinner, Dr. David Brown drew attention to the case of Alstonfield (Staffordshire) which was a kind of winter haven for the many (properly licensed, and, he argued, industrious and useful) pedlars of the late eighteenth century. He used various methods to estimate the numbers of itinerants and their contribution to internal trade between 1690 and the end of the nineteenth century, and argued that peddling played a useful, if unquantifiable, part in English industrialisation. His paper was followed by a reception and the annual dinner of the Society, which was a great success.

On Wednesday, the proceedings began with the AGM of the Society. The paper following this was by Brian Short (Sussex), Charles Watkins (Nottingham), and John Martin (De Montfort) entitled: 'When committees roamed the land: state intervention in British agriculture, 1939–45'. This offered a critique of the organisation and rationale for the County War Agriculture Executive Committees which controlled agriculture during the Second World War. The speakers' continuing investigation into this crucially important topic raised major doubts about the conventional view of increases in productivity levels and the local social impact of the committees, and they are now working towards a major revisionist critique of wartime state intervention in farming, using newly-available documentary material. A lively and informative discussion ensued, primarily centred on the nature of the power wielded by the 'War Ags'.

The final paper, by Dr. Christine Hallas, on 'Rural Responses to Industrialisation: the North Yorkshire Pennines, 1750–1914' sought to move forward the debate on the role of the countryside in English industrialisation. In this region, the major economic activities were agriculture, lead mining, and textiles. It was shown that a flexible response to the demands of industrialisation was provided by the existence of dual occupations, migration and transport. On the whole, these upland regions were responsive to changing demand, and despite some painful shrinkage due to migration, local communities and economies were able to survive into the age of industry and urbanisation.

After lunch, some 20 people signed up for the field study/excursion, led by Dr. Dennis Mills and Mrs. Shirley Brook. A substantial study guide, which was a most useful preparation for the trip, had been distributed earlier in the conference. The journey allowed a view of the various types of landscape and agricultural systems to be seen locally, from heathland in the east to the fenland proper. A notable stop was at Scopwick, where the extensive late Victorian rebuilding of the farmstead owned by the Chaplin family was a tribute to the power of imagination and money to reclaim what was a previously a rather barren tract.

The conference was held to be successful with a succession of challenging and rewarding papers, all of which we look forward to receiving their apotheosis in print. Thanks were due to the local organiser, Dr John Martin of De Montfort University; to Dr Mills and Mrs Brook; and to the staff of Caythorpe for their excellent hospitality.

Book Reviews

The British Isles

FRANCIS PRYOR, *Farmers in prehistoric Britain* (Stroud: Tempus Publishing, 1998). 159pp. 67 illus, 21 plates. £18.99

Francis Pryor is one of Britain's leading authorities on the Bronze Age and his excavations at Flag Fen and other sites near Peterborough have substantially illuminated our understanding of the farming economy of that remote period. The fact that Pryor is also an indefatigable livestock farmer and gardener may account for the clarity and straightforward common-sense which characterize the interpretations in his numerous published archaeological reports. The present work, however, is neither a report nor a textbook, but rather a layman's summary of recent Fenland archaeology wherein the author interprets the archaeological data not only through an archaeologist's eyes but those of an observant practical farmer. In this book, then, we are mercifully spared those endless lists of archaeozoological and archaeobotanical information and those impenetrable pollen diagrams and discussions of pottery fragments which comprise the bulk of the average excavation report. Pryor is concerned, first and foremost, with interpretation which, if occasionally controversial (and I can visualize several archaeologists of my acquaintance bristling as they read) is always logical and closely argued. Moreover, his writing conveys a sense of wonder, of awe almost, at both the physical and spiritual world of the Bronze Age where everything was expressive of everything else and where the worlds of ancestors and gods were as real as the world of air and water. Depositions of ritually-broken weapons, jewellery, pottery, or other valuable items, both in watery contexts and in the causewayed enclosure at Etton were probably viewed by the depositors as no less pragmatic than building a wall or thatching a hut. Some archaeologists are still sceptical over claims for 'ritual' activity, yet the probability is, as Annie Ross and Barry Cunliffe have suggested, that differences between the sacred and the secular in prehistory were rather less clear than is the case today.

In his early chapters, Dr Pryor summarizes the current state of knowledge of the origins of farming in northern Europe and Britain, making the now generally-accepted point that as the 'wave of advance' foundered on the shores of the Channel and the North Sea, agriculture was probably as much a piecemeal indigenous development among Mesolithic peoples as it was the work of small groups of Neolithic settlers. Agricultural historians who take the trouble to read archaeological reports cannot help but be struck by how unimpressive is the evidence for early cereal cultivation in Britain. The odd hint in a pollen diagram, the occasional charred grain or grain impression in a piece of pottery, and the identification of plough marks under barrows (ritual sites, of course) are virtually all that we have to substantiate cereal farming before the middle Iron Age. Perhaps, as many of us have long suspected, cereal farming (gardening?) was of minor importance to the economy in earlier prehistory. Dr Pryor certainly takes this view, and argues compellingly that despite the early arrival of cereals in Britain, they only become of real significance some three and a half millennia after the early Neolithic. Based on his own excavations in the Fens and a careful review of evidence from elsewhere in Britain he concludes that for most of the country livestock formed the mainstay of farming life from 4500 BC until around 600 BC, and society and social institutions were geared up to meet the needs of a pastoral economy. Thus the enigmatic causewayed enclosure, for example, was both a profoundly important ritual site and a place where adjacent communities could meet formally to exchange animals (to prevent inbreeding) and discharge social obligations. The excavations at Etton certainly support a dualistic interpretation and when reading Pryor's account one cannot escape drawing parallels with the medieval village church within whose walls the pursuit of God and Mammon proceeded with alacrity. Again, the development-funded diggings at Welland Bank, Etton and Flag Fen hint at a highly-organized landscape with field systems linking to henges, ringditches and occasionally to 'cursus' monuments, the whole forming key components of a livestock economy carefully adapted to the prevailing environment. The flood-free dryland areas were juxtaposed with the wet fen, and the two environments linked by well-established driftways by which animals and people migrated to the fen to utilize summer grazings before returning to the dryland for the winter. The drylands,

moreover, were divided into banked and ditched fields (with hedges probably atop the banks), while droveways and tracks appear ubiquitous. Consonant with his argument that the area around Peterborough was intensively farmed with sheep before the later Bronze Age climatic decline, Pryor interprets some of the complex ditch structures and enclosures of early Bronze Age Flag Fen as a sheep handling unit and 'communal stockyard' with all the inevitable social and cultural implications. This interpretation is debatable, as is the assertion that Bronze Age sheep reared one lamb annually, or that salt may have been fed to these animals. One cannot help wondering, too, how the 5000 sheep grazing the wetlands of Flag Fen survived the winter as they were 'carefully' managed in the ditched and hedged fields of the dryland. Since haymaking appears to have been unknown before the Iron Age, browse would be the only available forage. Is there any evidence of browse being collected in summer/autumn for winter use (as in Neolithic Switzerland), or did these sheep subsist on winter grazing, in which case some 2500 acres would probably have been needed?

Among the many delights of prehistory is the opportunity offered for intelligent and enlightened speculation. Here Dr Pryor is a master of the craft. If his interpretations are sometimes controversial, his logic, imagination and capacity for lateral thinking are inescapable, while his capacity to relate archaeological discoveries to the realities of practical farming are as impressive as they are rare among his fellow practitioners. It is unfortunate that this most enjoyable, lavishly illustrated and stimulating of books is marred by deplorable proof reading, a point sub-editors should bear in mind with any further title in this series.

R. J. MOORE-COLYER

PAUL EVERSON AND TOM WILLIAMSON (eds), *The archaeology of landscape: studies presented to Christopher Taylor* (Manchester UP, 1998). xix + 198 pp. 29 illus. £47.50.

This well-presented and elegant volume comprises eight essays which collectively offer not so much a survey but an imaginative update on English landscape archaeology. It is driven in part by the efforts of contributors to take up and further develop ideas or research themes dear to the heart of Christopher Taylor, to whom the whole is affectionately dedicated, but it is far more than that. Taken together, these essays plot the subject's recent development and explore some of its current potential.

First comes a wide-ranging review by Williamson which starts as an introduction to the volume (and to the subject itself) but then takes on a life of its own to engage with the complex interactions between landscape archaeology and the later history of use of the landscapes concerned. There follows an essay by Fowler which takes trackways and movement through the landscape as its theme and explores British evidence in the light of historic patterns of transhumance *et al.* in rural France. Fleming's is an associated theme, focusing on the theoretical constructions of space and territory in prehistory and the ideas about variable land-uses which those imply. Brown and Foard focus specifically on Saxon period settlement and land-use in Northamptonshire and environs, while in contrast Roberts and Wrathmell provide a national distribution of post-medieval dispersed settlement, and commentary thereon. Aston and Bettey take up the post-medieval theme with an exploration of the impact nationally of economic change on landscape *c.* 1540–1700 – albeit with an understandable south-western perspective. An interesting essay on 'Gardens and designed landscapes' by both editors has perhaps more significance for landscape than agricultural historians, but the final essay by Pearson argues effectively for a less typological approach to vernacular buildings in favour of topographical analysis and a congruence of landscape and building research.

From the perspective of an agricultural historian, the essay by Brown and Foard is pivotal to this collection. Based on a mass of field-walking and detailed local archaeological research spread over decades and carried out by numerous individuals, Chris Taylor included of course, the authors revisit the 'great replanning' of the landscape and village formation of the late Saxon period. It was these little-understood phenomena which set off the transformation of a largely dispersed settlement pattern with unsystematized fields into the open fields and nucleated villages which, by the 1200s, had become almost ubiquitous across central England in a great band stretching from the Isle of Wight and Hampshire through the east Midlands and lowland Yorkshire up into Northumberland. The origins of open field and nucleated villages have been inextricably linked in the minds of researchers since the late nineteenth century, and the assumption that both came into existence as part of some grand, one-off reorganization has rarely been challenged. Brown and Foard propose a more complex model, starting with the establishment of royal vills with dependent settlements in the middle Saxon period and the later fragmentation of many of those estates to create 'manors' on which few tenants were free. The abandonment of marginal settlements and the development of villages is therefore examined against a tenurial and status-centric backdrop. Thereafter, 'the imposition of a regular open-field system over whole townships fixed the settlement pattern at whatever level of nucleation it had reached, and controlled the basic form of subsequent expansion' (p. 91). This, the authors

suggest, was a replanning of a primarily pastoral landscape for the purpose of expanding agriculture without losing pastoral capacity – as Harold Fox long since surmised.

At the centre of this model, therefore, is the assertion that settlement nucleation and landscape replanning are separate problems susceptible to different solutions and operating within different but overlapping time-frames.

This is, however, only one of eight essays, each and everyone of which makes a significant contribution to landscape archaeology. The volume is well edited and attractively produced, particularly as regards the line drawings. The paper quality is sufficient to enable all but one half-tone to be reproduced effectively – the exception being figure 29, a near vertical aerial photograph of parch marks, and this might perhaps have been omitted. That, however, is nit-picking. This slim volume must be recommended to anyone interested in the archaeological dimensions of England's agricultural past as an essential part of the core reading of the subject. As tributes go, Chris Taylor must feel proud!

NICHOLAS J. HIGHAM

SARAH J. WAGER, *Woods, wolds and groves: the woodland of medieval Warwickshire* (British Archaeological Reports, British Series 269, 1998). vi + 280 pp. 90 figs. £30.

In Warwickshire the two broad types of lowland English landscape are both well represented. The south-eastern or 'Feldon' half is champion country, with a history of open fields (later reorganized by parliamentary enclosure), villages, and not much woodland. The north-western or 'Arden' half is a country of irregular fields, ancient hedges, a tangle of lanes, dispersed settlement, and a history of much heath and woodland but little open field. The distinction seems to be cultural, not environmental. In the middle ages it was even clearer than it is now. There is abundant evidence for it in the Anglo-Saxon charters. Place-name evidence may take the difference even further back in time.

This is the background to Dr Wager's woodland investigation. Woodland history is the sum of the individual histories of thousands of wood-lots, and she duly traces the documents mentioning each of about 1000 woods from Domesday Book onwards. She works backwards to the more speculative subject of woods in pre-Conquest landscapes, widening her inquiry to relate woodland to settlement patterns and the origins of open field. (The book suffers from having no index).

The author produces some commendable findings. She documents the diminution of the abundant woodland in the north-west, whereas records of woodland in the south-east become more abundant. She kills off the Forest of Arden, a phantom forest based on misinterpreting a twelfth-century charter. She offers new evidence on the meaning of *wold*, a place-name element which is ambiguous between woods and hills. Her book gives the impression that Warwickshire records are quite good on woodland topography but reveal little about management.

Non-documentary types of evidence – earthworks, coppice stools and other ancient trees, vegetation patterns, timbers in medieval buildings – are mentioned only briefly if at all. Although relatively few woods survive, such evidence exists in Warwickshire, and others such as David Morfitt have studied it. Documents are wonderful things, but have their limitations, such as that they leave out what was going on at times when people were not writing. The reader is left wondering how far the records are corroborated or contradicted by evidence on the ground. (I rarely go into a wood, even one better documented than any one of these, without learning something that the documents do not record).

Any discussion of early-medieval woodland must consider wood-pasture and the spread of coppicing. Dr Wager notes that Domesday Book omits about 40 woods recorded in later medieval documents. She supposes that the word 'grove', often applied to such woods, signifies coppice, and that these woods existed in 1086 but were not enumerated. Domesday would thus record only wood-pasture, in contrast to the theory of myself and others that in Warwickshire it includes wood-pasture and coppice but without distinguishing them. *Graf*, later 'grove', is one of many Old English woodland words whose exact meaning is lost. It is usually interpreted as a small wood; there is little direct evidence that it means a coppice-wood. Dr Wager proposes that Warwickshire Domesday records wood-pasture but omits woodland only, as well as pasture only. Since in this county woods are recorded by their dimensions, I find this unpersuasive: in some other counties Domesday records both types of woodland.

This book, like most others, has little to say on the paradox of wood-pasture. Cattle, sheep, pigs (except in autumn), and deer are not really woodland animals. Woodland plants are insubstantial, if not distasteful or poisonous. To sustain grazing implies a savanna-like ecosystem of grassland and scattered trees. Is this what much of medieval north-west Warwickshire looked like?

Reliance on written records means that various ambiguities remain untested. Is the author right in asserting that 'a wood recorded before 1350 ... was a wood in 1086'? Maybe so; but new woods did arise spontaneously even in times of general woodland destruction, notably between 1950 and 1975. Field evidence from woods whose first written record is late-medieval might settle the ques-

tion. Building timbers might throw some light on what wood-pasture trees were like.

An account of medieval churches, based on documents, would not be a complete history. The full story of how churches were built, used, and altered, and how their present differs from their medieval appearance, must depend on evidence embodied in the churches themselves. Written records, however, are essential in interpreting and dating such evidence. So it is with woods. This is a new and monumental study in the collection of documentary materials for ancient woodland, for which all woodland historians must be grateful. May others have the energy and courage to publish similar works for other counties; and may Dr Wager and others follow up many of the lines of inquiry suggested by this book.

OLIVER RACKHAM

CHRISTINE CARPENTER (ed), *The Armburgh papers: the Brokholes inheritance in Warwickshire, Hertfordshire and Essex c. 1417–c. 1453* (Boydell Press, 1998). viii + 214 pp. £35.

A quirk of fate preserved this exceptional document – edited and published here in its entirety – for posterity. The document was originally one of many acquired by the great seventeenth-century historian of Warwickshire, Sir William Dugdale. In 1660 it was 'borrowed' by his fellow antiquary, Dr Theophilus Howorth of Rochdale, never to be returned. It remained in the north-west, possibly because Howorth misread Mancetter in Warwickshire for Manchester in Lancashire, and was eventually donated to Chetham's Library, where it has remained ever since, by the nineteenth-century Lancashire antiquary F. R. Raines. But for Howorth's negligence or larceny the document would presumably have perished along with the rest of Dugdale's remarkable collection of original documents in the fire that destroyed the Birmingham Reference Library in 1879.

The document, a single roll written on both sides and containing copies of letters written between 1417 and the early 1450s, owes its modern 'rediscovery' to Dr Michael Powell, librarian at Chetham's. It has been transcribed and edited by Dr Christine Carpenter. As she points out, the Armburgh papers constitute the largest collection of private letters from the period to have been found since the letters of the Pastons, Stonors, Plumptons and Celys. Their significance is enhanced by the fact that they are mostly earlier in date than these other correspondences and derive from a family of more modest social standing, in the lower ranks of the gentry. This edition is therefore warmly to be welcomed. It will be of most value to the growing band of historians interested in the social and political aspirations and activities of the gentry in the shires. Historians of gender will also find much valuable material, for most of the papers revolve around a property dispute in which women are the key links in the chain of inheritance although it is men who mainly pursue their claims and adjudicate the outcomes. Nor are the women mute. The single most strongly worded letter of the collection is from the pen of Joan, wife of Robert Armburgh. The powerful invective of this letter, written to an enemy, stands in stark contrast to the language of a largely unknown sequence of love poems. And there is much else besides. Literary historians can be expected to seize upon these fresh examples of early English prose and poetry.

Unlike the Paston letters, the Armburgh papers have little to say about estate management, let alone more mundane agricultural matters. Much is made of the allegedly illegal despoliation of woods (a classic act of asset stripping) at Radwinter, in north-west Essex, and there is passing reference to the price of malt. More interestingly, there is a protracted correspondence with the farmers of Mancetter about rents (arising from Robert Armburgh's cash-flow problems), which they were understandably reluctant to pay when, if the dispute in progress over the title to the manor went the wrong way, they might find themselves having to pay twice. Nevertheless, the substantive agrarian interest of these papers lies less in this anecdotal information than in the direct light cast on the importance attached by the gentry to landed property (especially those who like Robert Armburgh – a younger son – had used marriage to enter the property-owning classes). Here is clear evidence of the difficulty of resolving disputed inheritances speedily and without great cost, of the potentially ruinous consequences of long-running litigation, and of the partiality of sheriffs, escheators, and the whole judicial process in this age of 'bastard feudalism'. As Dr Carpenter points out (p. 40), 'we can see, in both outline and detail, the truth of the accounts that emphasize the inseparability of private power and private influence from the official public processes and the fact that this was not seen normally as a form of "corruption" but accepted as part of the way the body politic functioned'. There is much here which therefore bears upon general issues. This is complemented by a wealth of detailed empirical information relating to specific places and a wide array of people, including some of the highest and most influential in the land.

Although the editor is quick to point out (p. 54) that 'the roll and its language will repay further careful scrutiny', she is well aware what a ripe plum Dr Powell has dropped on her plate and in her substantial and erudite introduction makes the most of the opportunity to have first bite at it. All future users of the Armburgh papers

will be indebted to her extended and meticulous discussion of the dispute that is the subject of the bulk of the papers. The broader lessons that she draws, in her consideration of the importance of the documents, will also set the agenda for future discussion, at least among social and political historians of the period. Regrets are few. Given the complex line of succession at the heart of the disputed inheritance, involving first and second marriages, legitimate and purportedly illegitimate offspring, and almost as many sudden deaths as in an E. M. Forster novel, a family tree would have been useful. So, too, would have been a separate listing of the senders and recipients of the letters. A glossary would also have helped to make the document more accessible to those less at home with the legal niceties of the early fifteenth century than the editor. These, however, are minor reservations. Chetham's Library has good reason to be grateful to Dr Carpenter, and she to be grateful to Chetham's, for this is clearly a case of the right document finding the right editor.

B. M. S. CAMPBELL

MARJORIE K. MCINTOSH, *Controlling misbehaviour in England, 1370–1600* (CUP, 1998). xviii + 289 pp. 23 tables; 22 graphs; 8 maps. £40.

This innovative study provides a major contribution to our understanding of fifteenth and sixteenth century society. McIntosh's source material is a sample of 267 public courts (manor, borough and hundred courts) from 255 villages, market towns and hundreds. The courts were chosen to ensure an even geographical spread, with most parts of England well represented. The court records were then searched for either presentments of people or the passing of a bye-law concerning 'misbehaviour', allowing the author to plot changing levels of concern between 1370 and 1600. To make this ambitious project manageable, generalizations and economies in method had to be made. Categories of misbehaviour are grouped into eleven main types, and these types are put into three clusters and a special case: the 'disharmony cluster' including scolding, eavesdropping, and night-walking; the 'disorder cluster' – sexual misconduct, badly governed or suspicious lifestyles, and disorderly alehouses; the 'poverty cluster' – hedge breaking, vagabondage or living idly, and receiving subtenants; and the special case of playing illegal games. Only the presence of concern for particular types of behaviour, not the depth of concern, is measured. The sheer quantity of records made sampling a necessity. Four to six consecutive leet courts for each duodecade were examined, representing two or three years' record. Thus the book can only claim to record minimum levels of concern about misbehaviour.

The research methods used are outlined in Part 1, along with the basic results: the incidence of the different types of offence, and the gender of offenders. The mechanisms of enforcement via local courts and other types of courts are discussed. This approach, with its long chronological range from the aftermath of the Black Death in the late fourteenth century to the late sixteenth century, its wide geographical spread, and its extensive use of local court records, provides some important findings. Heightened concern about social control first emerged in the late fifteenth century, but was highly localized, occurring most frequently in market towns. Concern became more general in the sixteenth century, peaking in the 1520s. As the century progressed, the role of local courts in enforcing control was eclipsed by other courts, church courts and quarter sessions, resulting in a decline in presentments relating to all of the issues surveyed except those in the 'poverty cluster' and gaming. So the level of concern about social control in the late sixteenth century, stressed in much of the existing literature, no longer appears 'special' or particularly high. The breakdown by gender also deflates the argument that the late sixteenth century saw a crisis in gender, with an increasing prosecution of women for scolding and sexual misconduct. McIntosh's figures suggest that scolding became *less* gendered over time. In the late fifteenth century scolds were predominantly female, but by the late sixteenth century this was no longer the case. Throughout the period, both men and women were presented for sexual misconduct. However, we should remember that this is a measure of the presence or absence of male or female prosecutions, not the number of individuals of either sex being prosecuted.

In Part 2 the book delves more deeply into the possible reasons for the patterns observed, the geographic, economic and social context of the different communities, and the ideological and religious influences on social control. It finds no marked contrast between arable and pastoral or moorland communities, although pastoral communities were slightly more likely to show concern. In the fifteenth century, the factors which correlated most strongly with controlling misbehaviour were whether the community was a market centre on an important trade route with a large population and higher level of wealth – all factors connected with increased commercialization. It is not surprising, therefore, that south-east England had the highest proportion of communities showing heightened concern. During the sixteenth century these contrasts disappeared as concern became more general. Surveying a selection of fifteenth century literature, McIntosh concludes that ideas about social order and harmony change little in this period, and that in both the fifteenth and sixteenth centuries the

elite literature discussing the problem of poverty lagged behind the practical actions being taken by more humble men in their role as jurors of local courts. Jurors were not acting as a result of changing directives from above, from church or government, but in reaction to the changing social and economic circumstances in which they found themselves. This carries the profound implication that concern for social control was an effect of commercialization rather than religious change. While Lollards and Puritans may have increased the intensity of social control in particular communities, they were not pioneers in bringing about social control.

Although packed with complicated arguments, methodology, and a heavy weight of evidence, the book is on the whole lucid, and the arguments clearly stated. If anything, McIntosh could have gone further with her conclusions. The implication that economic change, mediated through the changing social structure of communities, altered the way ordinary people interacted on a day to day level and ultimately affected elite ideologies is only hinted at. The extensive approach and sampling of courts may also be criticized, but here McIntosh is surely right to point out that the issue of social control has already been explored in many fine local studies; it is the wider understanding of change over time and geographical difference that has been lacking, and this is what she has provided. Perhaps the most serious criticism relates to the problem of using the records of only one type of jurisdiction, local courts. More could not be expected in a single study of this type, but future work might focus on how far the patterns observed are actually real changes in concern, and how far they are the result of shifting jurisdictions. Was the decline in concern in local courts the result of the expanding jurisdiction of quarter sessions in the late sixteenth century as McIntosh assumes? How do the changes observed relate to shifts in offences presented to church courts? These are minor reservations about the enormous value of this study. It is a book which needs to be taken seriously by all medieval and early modern historians interested in the interaction between economic, social and religious change, and in the development of government, poor relief and the legal system.

JANE WHITTLE

EILEEN SPRING, *Law, land, and family: aristocratic inheritance in England, 1300–1800* (University of North Carolina Press, 1993, pbk 1997). 199 pp. £13.50.

The paperback publication of *Law, land, and family* makes more widely available one of the two important but contrasting books on English landed society and upper class estate building published in the early 1990s. Sir John Habakkuk's monumental book *Marriage, debt and the estates system* covered a vast range of problems, and illustrated his points with thousands of examples in over 700 pages of text. Eileen Spring's approach in what is fundamentally an extended essay, is to look at key pressure points in the system as it developed to provide quite different perspectives on its workings and the motives behind it. Habakkuk's book was criticized by more than one reviewer for being relentlessly masculine in its approach. Spring begins with chapters on the position of the heiress-at-law, and the widow, before considering the fate of younger children, and then looking at inheritance patterns, re-appraising the strict settlement, and considering the impact of her findings on theories of the family. She sees landowners' legal history 'as a long multi-faceted struggle against the common law rules of inheritance' (p. 16).

The argument advanced is that the strict settlement was primarily developed to find ways of reducing the proportion of inherited estates that passed to heiresses, widows and younger children both under medieval entails, and default inheritance customs. The position of the heiress-at-law is innovatively discussed, and the whole question of gender conflict and 'postponing females' (p. 94) in family inheritance is a recurrent and fruitful theme of the whole book. The argument is made vigorously and refreshingly, usually with great clarity. It is lightly footnoted mainly from secondary sources and legal cases and authorities rather than individual case studies. This paperback edition will provide scholars and students with an accessible, and readable reappraisal of what has always appeared a difficult and arcane topic.

JOHN BROAD

ROBERT A. DODGSHON, *From chiefs to landlords: social and economic change in the Western Highlands and Islands c. 1493–1820* (Edinburgh UP, 1998). xi + 265 pp. 25 figs; 16 tables. £16.95.

Having explored the origins of infield-outfield, runrig and many other aspects of the pre-improvement landscape of lowland Scotland, Professor Dodgshon has turned his attention in recent years to the Highlands. A good deal of the material contained in this book has appeared in journal articles over the last decade but, collected together in the present volume, it forms an impressive achievement.

Many books have been written about the evolution of Highland society and economy from the sixteenth to the nineteenth century, including a good deal of romantic rubbish. In recent years, however, there has been an important burst of serious scholarship tackling the nature of change in the Highlands from a variety of angles, ranging from Bruce Lenman's focus on the Jacobites, and the politically-oriented approaches of

David Stevenson and Allan Macinnes, to the geographical perspective of Charles Withers. Professor Dodgshon's book differs markedly from these in that it eschews a narrative or strictly chronological treatment in favour of the type of closely-argued theoretical approach which is the hallmark of his work. There is certainly a mass of detail here, extracted from painstaking research among a range of central and private archives, but this detail is strictly marshalled in support of the theoretical arguments. The result is a book which is of major importance to our understanding of Highland clanship and its economic basis.

It is nothing new to emphasize that Highland society was far from being static and unchanging from the sixteenth century to the eve of Culloden, but rather in a state of constant change, flexible rather than conservative and certainly not an Iron Age tribal anachronism. However, the social and economic mechanisms of change and the constraints within which they operated are presented here with great clarity. While most recent writers have focused on the progressive political integration of the Highlands and Highland chiefs into British society, Professor Dodgshon structures his study around two major themes, closely inter-related but at contrasting scales: clanship and the changing role of chiefs on the one hand, and the structure and operation of the farming township on the other, stressing the tensions that existed between them.

The author's work on clanship has been influenced by anthropological theories regarding the nature and functioning of chiefdoms and represents a significant advance in our understanding of how clans actually worked. In the past, while it has been acknowledged that Highland society changed gradually, the Highland township has continued to be viewed as inefficient, anachronistic, an archaic survival with only limited capacity to adapt to change. Within the arable sector, for instance, there was a surprising variety of rotations, cultivation practices and systems of nutrient cycling. Here, however, the geographical diversity and flexibility of townships is emphasized. Township structure and development is illustrated by a wealth of documented examples. As the author says, there is no Pandora's box of undiscovered source material relating to the Highlands waiting to be opened, but much can be gleaned from detailed scrutiny of the surviving sources which have often in the past been interpreted in a superficial way. It is a pity that the tight structure which the author has adopted does not allow him to do more than mention the evidence for the late spread of nucleated settlement, open field systems and runrig in the Highlands with the advance of feudalism, replacing a system of dispersed settlement and enclosed fields, a process which was not complete even in the eighteenth century.

The final chapter unites the two themes of chief/landlord and ownership by analysing the condition of various estates on the eve of the clearances, emphasizing how estate owners faced problems, the limited options which were available to them, and the degree to which the interests of landlords and tenants were diverging as commercialization spread and clanship decayed. This is a book which deserves to be widely read not only for its insights about the Highlands but as a fascinating approach to the study of the pre-improvement world more generally.

IAN WHYTE

JOHN GWYNFOR JONES, *The Welsh gentry 1536–1640: images of status, honour and authority* (University of Wales Press, 1998). xxvi + 300 pp. £30.

Forty years ago Penry Williams bemoaned the fact that the Welsh gentry had received a discouragingly bad press from the Tudor period onwards. Thanks to the work of social historians like Richard Moore-Colyer, Philip Jenkins and David W. Howell, no such complaint could be voiced nowadays. As far as the Tudor and early Stuart period is concerned, no Welsh historian has done more to 'rehabilitate' the gentry than Professor John Gwynfor Jones, and he has an advantage not shared by the above-mentioned historians insofar as he is able to read, interpret and use to good effect valuable Welsh-language sources, notably the complex evidence of bardic verse. In a relatively short period of time he has produced a rich and impressive harvest of works which are now fundamental to our understanding of class, order and authority in the Tudor and early Stuart period. Major volumes such as *Concepts of order and gentility in Wales 1540–1640* (1992), *Early modern Wales c. 1525–1640* (1994), *The Wynn family of Gwydir: origins, growth and development c. 1490–1674* (1995) and *Law, order and government in Caernarfonshire 1558–1640* (1996), as well as a crop of well-regarded publications in the Welsh language, have established his reputation as a leading authority in matters relating to *uchelwriaeth*, local and regional government, and socio-cultural patterns during a period of significant change in community life and ideological values. It is no exaggeration to say that he has pioneered the method of analysing conceptual values and attitudes displayed by the Welsh ruling élite in Tudor times.

This current volume sets itself the goal of scrutinising the reaction of the landowning families to the new administrative authority established by the Union legislation of 1536–43, the influence exerted by the concept of the 'island empire' on their pursuit of public duties, and the degree to which loyalty to the Crown and to kindred groupings affected the public image which they cultivated in a period of social, religious and cultural

transformation. In six chapters replete with densely layered evidence, Professor Jones argues his case with characteristic attention to detail and a dispassionate air. At times, the discussion is excessively source-led, but one cannot fail to be impressed by the author's mastery of a wide range of contemporary writings, family correspondence, legal and administrative records, and in particular Welsh bardic and literary material. By eschewing idle speculation and rhetorical flourishes, Professor Jones displays many of his personal qualities as well as his devotion to his craft. The conclusion to the volume is a particularly fine examples of how to bring together, in a sensible and illuminating way, evidence of how the Welsh gentry struggled (not always successfully) to reconcile their much-vaunted public image with their hidden private agenda during a period when powerful socio-economic forces were tugging them in different directions. Even if the unflattering image of the gentry still holds sway in the popular mind, this admirable volume will help to set the record straight as far as Tudor and early Stuart Wales is concerned.

Scholars and especially undergraduates and postgraduates will be pleased to find an up-to-date bibliography in this volume, but it is a pity that the notes and references which so greatly help to enrich our understanding of the manner in which the argument has been constructed, have been consigned to the end of the work. Professor Jones and his readers deserve better.

GERAINT H. JENKINS

MALCOLM WANKLYN (ed), *Inventories of Worcestershire landed gentry, 1537–1786* (Worcestershire Historical Society, New Series 16, 1998). xxix + 475 pp. £29.95 incl p & p, from Robin Whittaker, Worcestershire County Record Office, County Hall, Worcester WR5 2NP.

Among editors of county record society publications a collection of probate inventories ranks high among the subjects to be covered, that is, if a volume on the source has not already been produced. I do not need to explain the value of such a book to agricultural historians but, of course, its usefulness does depend on decisions made on such matters as the period covered, sampling procedure and indexing. Dr Wanklyn has side-stepped some of the problems by focusing upon a particular group of county society, the gentry. As a result, he is able to include all surviving probate inventories of Worcestershire gentry over three and a half centuries. The introduction is brief but informative, succinctly summing up current debates over the use of probate inventories, but making no attempt to analyse the data in the documents themselves. The index refers to all the items covered but the most numerous categories, the ones that agricultural historians are going to be interested in, are recorded merely under their first entry.

This volume does not deal with the whole of the landed society of Worcestershire, omitting the peers at the top and the people deemed personally to be farming their land at the bottom. Dr Wanklyn's distinction between the landed gentleman and the gentleman farmer is an important one and this makes the group dealt with here a socially cohesive one. On the other hand, it does prevent the historian of rural society from examining a particularly interesting set of individuals, those operating at the edges of gentility, either striving to get in or struggling to remain there. Apart from looking at other sources, he uses the possession of specific goods as indicators of gentility. Ironically, this means that the rising freeholder with social aspirations and the money to buy status symbols will be netted in the collection.

Most of the individuals covered here were farming the demesne at the time of their death, though their role as agricultural innovators seems rather muted, judging from the lack of references to new crops. Hop production, a local specialization, is well-represented and there is an interesting example of commercial woad growing on William Baldwyn's estate at Longborough. Technological developments such as the switch from oxen to horses and the introduction of the heavy four-wheeled waggon can also be charted. Because the information relates to specific properties it is possible to pinpoint changes taking place over time. In general, the Worcestershire gentry seem to have farmed in much the same way (and often on the same scale) as the farmers around them. To appreciate fully what they were doing, the reader will have to analyse the material for himself or herself. They will be helped by the care with which Dr Wanklyn has put the volume together. It is well-produced and the information set out in an easily digestible way. This is a fine volume and useful source for agricultural and social historians of early modern England and perhaps the first of similar studies elsewhere.

PETER EDWARDS

CHARLES F. FOSTER, *Cheshire cheese and farming in the north west in the seventeenth and eighteenth centuries* (Arley Hall Press, Northwich, Cheshire CW9 6NA, 1998). xii + 116 pp. 21 illus; 4 maps. £8.95.

This book is the second volume in a series of publications based upon the archives of the Arley Hall estate in Cheshire, the aim of which is to examine aspects of the social and economic life of the area in the century or so after the Restoration. When reviewing the first book in this journal in 1993 I looked forward to the second volume and having now read it have found it as interesting and informative as the previous one. This is not to say

that the book is without faults. As the publication of what is essentially a local history project, it possesses the strengths and weaknesses of the genre. It has a good sense of place, an intimate knowledge of the inhabitants of the district and a wealth of local material. On the other hand, it is often rather parochial and at times fails to engage with current debates in rural history.

The book is divided into three sections, loosely unified by the theme of dairy farming. The first part deals with the development of dairy farming in Cheshire from the mid-seventeenth century, the second with the lay-out of a late-seventeenth century dairy farmhouse and the third with farming in the district in the mid-eighteenth century. Readers who have not read the initial volume will be at no great disadvantage but it would help them if they were to read it first. All three sections have valuable points to make but they are not really integrated with each other. Indeed, much of the third section is concerned with agricultural practices *c.* 1750 on the demesne of Arley Hall, which was a mixed farm rather than a dairy one. Nonetheless, because the account is based upon a very detailed set of estate accounts agricultural historians will find it very useful as an illustration of input costs as well as the value of various sources of income. Some assumptions are made when calculating the figures, but the reader is told what they are and he or she is given a good deal of valuable data.

The most important section is the first one, covering as it does a subject of national significance. The author pinpoints the mid-seventeenth century (21 October 1650, to be precise) as the time when the cheese trade with London was established. With this vast market opening up for them, Cheshire farmers responded by converting to dairy production, raising output by increasing the size of the herds and selling off all but dairy replacements. Farms grew bigger by enclosing the wastes and engrossing holdings. This was standard practice but it is useful to have the evidence. There is much of value here, particularly in the discussion of the ports, the trade routes and the people involved – the farmers, ships' captains and cheesemongers and factors. However, I question the timing of the development of the trade. According to this chronology, north Shropshire was in advance of Cheshire since it already had a thriving cheese trade by the middle of the seventeenth century. In both counties the years after the Restoration period were crucial ones, but I suspect that in Cheshire too there was a longer lead-in period than is suggested in this book.

Because this book deals with the development of Cheshire's most important agricultural produce, cheese, it will have wide appeal. Historians of early modern English agriculture and commerce will read it with profit. Other matters of general interest can be discerned too, as, for example, the development of specialist farming, the growth of the London food market, the modernization of tenures and the demise of the small farmer. The author provides a well-documented local study and at times tries to put the experience of the farmers of the district into a wider context. However, this tends to be rather generalized and unselective. Farming in north-western England was far more varied than the title or the contents of the book imply. He also misses one or two important issues. At least he does present material which others can use, and I hope in due course to read the third volume in the series.

PETER EDWARDS

EDWARD ROYLE (ed), *Issues of regional identity, in honour of John Marshall* (Manchester UP, 1998). xiv + 252 pp. 10 tables; 23 figs; 1 illus. £40.

These eleven essays are a fitting tribute to John Marshall's long and distinguished career as a regional historian. He above all others has advocated the study of 'total history' at the manageable level of the region. As Elizabeth Roberts and Oliver Westall make clear in the final chapter of this *festschrift*, he has been both earnest in his advocacy of this approach and immensely productive in his studies of north-western England. He is a very worthy recipient of this honour.

John Marshall has always insisted on the elusive nature of regions and their instability over time. This may be said to be the central theme of this book. As Edward Royle says in his Introduction, the historical concept of the 'region' is frequently used but difficult to define. It is a term of convenience for the historian, 'located specifically in time as well as space.' Norman McCord draws on his vast experience of studying the history of Northumberland and Durham to show how the concept of 'the north-east region' means different things at different times. The area dominated by the mining and export of coal in the nineteenth century did not form an obvious region in the Middle Ages. Moreover, 'the north-east' can be divided into smaller regions for particular purposes. Thus, Winifred Stokes identifies a distinctive financial and business community that controlled the mines and transport systems of south Durham. On the other hand, many regional cultural identities have deeper historical roots. Some of these roots are identified in John Langton's essay on south-Lancashire Catholicism from the sixteenth to the nineteenth centuries.

The physical setting is an obvious determinant of part of the nature of regions, but how far can we go in asserting its importance? Sidney Pollard looks at well-defined physical regions in many parts of Europe where the geographical environment has conditioned economic

activities and the whole culture of the inhabitants. He concludes that while we can learn from the broad comparisons between regions with similar physical settings, geographical conditions do not determine human economies and culture. Human activity, or lack of activity, shapes the nature of individual regions. Environmental determinism is also dismissed by John Walton and Luis Castells in their comparative study of the Basque Country and north-western England. The broad similarities between the two regions mask very different histories.

The editor likens the concept of a region to the physical property of the Cheshire cat. Image is all important. Robin Butlin contrasts the images of the Fens conjured up by outsiders, who thought in terms of monotonous waste, isolation and the need for 'improvement', with the introverted way of life and beliefs of the smallholders and cottagers – 'of brutish uncivilised tempers envious of all others' as Camden thought them. Edward Royle argues that the feeling that inhabitants have for a place, illogical, nostalgic, romantic though it may be, can become a historical 'fact'. David Neave shows that Yorkshire's boundaries were neither consistent nor logical, nor did they embrace a single region, yet Yorkshire as an idea has survived its abolition as an administrative unit. The East Riding has refused to die and Humberside has departed unmourned. The identity of Wales is as elusive as that of Yorkshire. Neil Evans looks at how north Wales was, and is, very different from south Wales in terms of physical structure, language and culture, and he identifies three separate units within the north.

The editor observes that regional identity in England has lacked a political dimension. The nineteenth century saw the growth not of regionalism but of provincialism. Instead, the administrative unit has served as a substitute. Will the new Scottish parliament and Welsh assembly cause the English to think more seriously about their own regional identities? Is so, then the politicians should listen to historians. These essays make it clear that regions considered from the bottom up exist first of all in the minds of local people. The boundaries and cultures of English regions change gradually over time, but many regions have deep roots in the past.

The regional approach to the study of history continues to stimulate enquiries. Even the vexed question of regional identity is productive, as these essays demonstrate so well. Michael Winstanley's piece on 'Women and the grocery trade in Britain, 1851–1911' takes regional analysis in a new direction. He analyses the remarkably varied pattern of female employment in shops in different parts of Britain and shows that these can be explained only by studies of regional economies and culture.

DAVID HEY

DAVID KERR CAMERON, *The English fair* (Sutton Publishing, 1998). viii + 240 pp. 122 illus. £25.

If Aberystwyth is a highly desirable place to be for much of the year, it is best avoided in the dank dark days of early winter when the Celtic gloom settles in with a vengeance. Yet, as if to anaesthetize the denizens of the town against the miseries of the rainswept months to come, the annual fair in all its tawdry splendour descends in late November to the delight of children and the unfathomable gloom of parents. Devoid of the primitive excitement of the past when, as David Kerr Cameron points out, the fair 'focused the wild spirits of the community' the modem fair, be it at Aberystwyth or elsewhere, is a travesty, a mere charade, an opportunity for children to have 'fun' and for fathers to grumble at the expense and ghastliness of it all.

With the growth of auction markets, improvements in communications and the shifting of periodic fairs to market centres close to the railway lines, the commercial significance of the fair had begun to decline by the mid-nineteenth century. Meanwhile, the baleful moanings of nonconformists and the hypocritical cant of Victorian moralists conspired to suppress the more salacious aspects of the old fairs so that with the passing of the Fairs Act of 1871 they became mere shadows of 'their former rollicking selves'. Rural fairs especially, with their opportunities for revelry, anarchy, and riot, began to fade from the country calendar so that landmarks which had punctuated the drudgery of the year for both farmer and labourer gradually disappeared.

In this beautifully illustrated volume Mr Cameron not only discusses the origins and commercial significance of fairs in medieval and early modern England, but offers a detailed and almost encyclopaedic account of the fair in all its guises. Cattle fairs, goose fairs, cloth fairs, onion fairs, sheep fairs, mop fairs; all played a major role in a society moving increasingly towards economic integration. Early chapters underline the important part played by the Church (which became greatly enriched by the profits of fairs) in the encouragement of the pursuit of Mammon, while the significance of the wool trade both to the Church and the burgeoning bourgeoisie is closely examined. It is difficult today to imagine the sheer scale of some of the great international fairs of eastern England during medieval times, typified by St Ives, Stourbridge (Cambs), Boston and Scarborough. Accessible by land and sea, these epic commercial occasions attracted Hanseatic merchants, cloth traders from Ghent and Amiens, Norwegian peddlers trading in amber and all manner of men selling Gascon wines, spices from the east and swords from Spain. Many of the horse and cattle fairs where 'a man took his life and his pocket-book in his hands' were of a similar scale and Horncastle, the

greatest horse fair in Europe by the nineteenth century, became the venue of cavalry officers continent-wide keen to restock their squadrons. Then, of course, there was the commerce in human stock; the undignified humiliating drama of the hiring fair to which 'milling market of rootless humanity' Cameron devotes a whole moving chapter.

But even here among the poor and dispossessed were the fiddlers, jugglers, cheapjacks, stalls and sideshows invariably associated with the fair. In describing these aspects of the fair with its boundless and sometime irresistible temptations for the innocent, Cameron is in his element. Here we have the fair as a safety valve; the world turned upside down when, for a brief period, men could forget the tears of things in an atmosphere of bacchanalian licentiousness. In a chapter devoted to the London fairs, which by the nineteenth century had degenerated from serious trading ventures to opportunities for the pursuit of frivolous pleasure, Cameron writes with relish of the 'Bards, Whores, Pickpockets, Jilts, and Cheats' who graced the occasion. What fun it must have been to drift from cockpit to whorehouse (taking in a little bear-baiting or a dog fight on the way), before rounding off the day with gin-and-water and a well-piled plate of roast ox!

On the whole a respectable body, readers of the *Agricultural History Review* will enjoy these highly-coloured descriptions of social behaviour for which most have no longer the taste nor inclination. They will find neither tables, statistics, footnotes, nor bibliography. They will, moreover, become irritated by some of the more heavy-handed descriptive writing and the over-reliance on Defoe and Cobbett. Yet few will deny that in its richness of anecdote and quality of illustration and production it comprises an admirable companion volume to William Addison's *English Fairs and Markets* of the 1950s.

R. J. MOORE-COLYER

ROBERT MALCOLMSON AND STEPHANOS MASTORIS, *The English pig: a history* (Hambledon Press, 1998). xvi + 160 pp. 47 illus; 17 plates. £14.95.

The preface of any book is an illuminating but often overlooked section. It is here that the author is allowed a modicum of space to justify what follows and, as such, represents a brief insight into what rationale was adopted, what approach was followed and, sometimes, why some areas were considered worthy of inclusion or omission.

We have here, once again it must be said, the pig in its social, allegorical and biological glory. But why the *English*? Surely the advice of Marshall, offered in the early years of the nineteenth century, should have pertained? He considered that 'natural, not fortuitous, lines are requisite to be traced; agricultural, not political, distinctions are to be regarded'. Although admittedly writing as someone passed over for a grand role, his position has much merit in suggesting that political boundaries are artificial and should not be the bases for matters rural. I commend Marshall to a wider readership and would suggest that Malcolmson and Mastoris would have been wise to have absorbed his counsel.

In the preface we learn that 'England rather than the British Isles is central. Pigs were less common in Scotland, and Ireland is its own world. Occasionally we do make use of a piece of evidence from Scotland or Wales'. In a few words, a glittering collection of analysis, data, anecdotes, opinion and intelligent discourse is summarily dismissed if its provenance is not south of Hadrian's Wall or east of Offa's Dyke (to say nothing of the role of the Irish Sea as a barrier). Such power at one's fingertips. But this decision carries with it a further problem: Ireland. If ever there was an example of the essentiality of the pig as a provider of food and living to an impoverished and dispossessed sub-stratum of society (the theme of the cottagers' pig is developed in the book, but only for the *English*), then this was it – and this was before the Famine. As Youatt remarked on the Irish pig in his seminal work, somewhat patronisingly but fairly accurately, 'on him the poor man reckons for the payment of his rent'. The Irish pig was also an important contributor to trade and commerce – large and increasing numbers were imported into Liverpool during the early decades of the nineteenth century. Ireland cannot be regarded 'as its own world'.

What of Wales's 'piece of evidence'? Surprisingly (if one limits one's reading on matters porcine to this book), the pig was also important here. Davies reported in 1813 that large numbers were sent from Anglesey (origin Ireland?) into the English markets and a thriving droving trade was established reminiscent of the probably more important cattle movements across Wales from Ireland into the fattening pastures of England. Store pigs were sent from the Principality to the dairying regions of Wiltshire and Gloucestershire and often made the difference between profit and loss for milk producers. The bacon, which was considered the finest in the country, was dispatched to London. In addition the cottagers' pig was now replaced by the miners' pig (but with the same purpose).

And so to Scotland where 'pigs were less common'. Why didn't the Scots like pork? Is there still an abhorrence of it? What are the origins of this? Nothing. A golden opportunity missed. An invaluable academic inquiry sacrificed on the altar of adherence to political boundaries (it is tempting to write 'political expedience'

but in these days of devolution, such language might be regarded as unduly intemperate).

What of matters artistic and allegorical? The pig has traditionally been employed to describe some of the basest of human characteristics (although, more recently, we have witnessed a rehabilitation – pigs as cuddly toys, no less), but the wider role of the animal in history, art, literature and general matters cultural is fascinating and has occupied the minds and pens of many. The theme is a well, and better, trod path than we find here. *The ubiquitous pig* (1992) and *Farm animal portraits* (1996), to which the authors do refer but in the briefest possible of footnotes, are in fact splendid and copiously illustrated accounts of the relationships between pigs and people, with the latter tome being a superb compilation of pig paintings complemented by a detailed text. The earlier, but equally well-prepared *Pigs – a troughful of treasures* (1981) does not appear, however, even to warrant a mention. Neither does *The symbolic pig* (1961), which really is a classic. Rather more obscure (as it is from the USA, although it should be noted that Malcolmson is from Ontario – perhaps anything south of the St Lawrence was not considered appropriate; we are back to political barriers again) is *The hog book* (1978). Any aspirant authors wishing to delve into the subject would do well to immerse themselves in these texts and reflect that, rather pessimistically, what has gone before is unlikely ever to be bettered. The book provided by Malcolmson and Mastoris is an eloquent proof of this dictum.

Whilst *The English pig* is comprehensive in its coverage, its thesis is not novel. Its value is in the copious number of citations included (a large proportion of which have, incidentally, appeared elsewhere in other anthologies), not in the originality of its theme – there has been much written on the development of pig breeds, the omnivorous habits of the animal, its invaluable role as a provider of meat for the general population and how this has impacted on the development of human society in general. Human:pig interactions in their widest possible context and interpretation have also been comprehensively addressed in many recent, more scholarly and more readable publications.

The pig is certainly a topical subject (witness the media coverage given in the UK to the 'Tamworth Two' and the popularity of the overly-sentimental *Babe*) and the book will undoubtedly 'do well'. But this probably says more for the short term memory together with the very modest breadth and depth of reading of 'coffee table' browsers and 'popular' reviewers to whom, wittingly or unwittingly, it will undoubtedly appeal.

JULIAN WISEMAN

CHRISTINE CLARK, *The British malting industry since 1830* (Hambledon Press, 1998). xx + 300 pp. 40 illus; 24 figs; 21 tables. £35.

Malting, with its distinctive buildings and traditional working practices, is a fascinating industry. It ranks along with milling as one of the principal processing industries for the produce of arable farming. Yet malting has attracted little detailed historical study, especially in comparison with brewing, the main customer for the maltster. The balance has been largely redressed with the appearance of this detailed study.

The book started out as a history of one firm, R. & W. Paul of Ipswich, but, as the expansion of Pauls in recent decades has encompassed much of the British malting industry, the extension of the study to cover the whole industry was a natural and justified step. Pauls' absorption of other firms has also had the happy result for the historian of bringing together many of the surviving records of the industry. The survival of records has been extremely patchy, and few have been deposited in record offices. The maltsters have now been able to make more of their own records available for study, it seems.

As a major processor of agricultural produce, malting has traditionally been a rural industry, located more for its raw materials than for its markets. To a considerable extent that continues to hold good, with maltings to be found in such market towns as Grantham and Wallingford. There has been a steady regional shift over the decades towards the best barley lands of the east and south, and this in turn reflects the needs of the brewers for quality malt. The close links between brewing and malting form one of the main themes of Christine Clark's book. Indeed, she would argue that at many points the maltster's dependence upon the brewer's demands has produced a relationship amounting to dominance on the part of the brewer. Dominance took many forms. Brewers might own their own maltings. There were links of various types and degrees of formality with the independent maltsters through contracts, loans, shareholdings, family connections. The relationship was not entirely one-sided. Many maltsters made a very comfortable. living, and there were times when it was the maltster's capital that might keep a brewery afloat rather than the other way about. However, the long-term trend was for the brewer to become more influential. Periods of over-capacity in the trade, such as the inter-war years, led to rationalization that was more at the expense of the maltster than the brewer. The cycle was broken only from the 1960s onwards, when restructuring in brewing began to change the position of brewery-owned malting in the industry, and the growth of malt whisky distilling and of export markets

began to reduce malting's dependence on the brewers of the United Kingdom.

A second main theme running through this study is that of concentration within the industry. In common with most businesses, the course of malting's history has seen an enormous decline in the number of firms. The scattered rural industry of the mid-nineteenth century with many thousand separate businesses has given way to an industry dominated by a few major companies investing heavily in large-scale, technology-driven processing. The independent maltsters have had their share of large mergers. At the same time, many of the established malting families, such as the Fisons, the Pauls and the Cherry-Downses, remained centrally active even in the large publicly-quoted companies. This was a feature in the early history of Associated British Maltsters, formed as the result of a multiple merger in 1928. In common with many industrial mergers of that period this firm failed to integrate its constituent parts into one strong body. Malting's story thus has parallels with some other areas of business history. The large-scale involvement of international capital has been missing until recently. The observation that Pauls have recently been sold to Greencore, an Irish-based multinational, closes the book in a manner that sets the scene for a sequel.

There are copious appendices giving statistical detail. A glossary might usefully have been added, for there are a number of occasions when technical terms peculiar to this industry are introduced with less explanation than the uninitiated might prefer. Details can go awry sometimes, especially in the minefield of corporate names.

The traditional working practices of malting have all but gone, and with them the most distinctive buildings, but this trade retains its fascination, and has repaid a full study.

JONATHAN BROWN

HARRIET RITVO, *The platypus and the mermaid and other figments of the classifying imagination* (Harvard UP, 1997, pbk 1998). xiv + 288 pp. Illus. £9.95.

Anyone who has come across the gloriously convoluted structures of Jeremy Bentham's chrestomathic system of education, particularly his 'tabular diagram of the principal and most extensive branches of Art and Science (Eudaemonics) framed in the exhaustively bifurcate mode' (yielding at the fourth level of subdivision eight categories including the alegomorphic, morphoscopic, physiurgoscopic and anthropurgoscopic), can only rejoice that some figments of the classifying imagination have failed to exert an enduring influence on educational practice. But occasional instances of a taxonomy ill-conceived or still-born only serve to underline the central and generally triumphant role of taxonomy in the production, dissemination and communication of knowledge, and the organization of its associated institutional structures. Noting with approval the anthropologist's dictum that classifications of animals are apt to tell us as much about the classifiers as the classified, Harriet Ritvo explores the nineteenth century's taxonomically-challenging encounter with an ever-widening sample of the world's fauna. The book therefore begins where her previous volume (*The animal estate: the English and other creatures in the Victorian age*, Harvard UP 1987) left off, focusing explicitly on issues of classification in human-animal interactions. Like its predecessor, the book is based on evidence relating to Britain and to British encounters overseas.

The argument is developed in five pithily titled chapters, each divided into attractively labelled subsections. 'The Point of Order' explores the discovery and classification of the Australian fauna, and the developing challenge to the Linnean system of taxonomy, a process resulting in an emergent ethnocentric, at times even localized approach to classification. A section 'Earth, Sea and Sky' at the end of the chapter discusses the enduring uncertainty, evident even among zoologists, about the true taxonomic status of such creatures as bats and whales. 'Flesh Made Word' traces the evolution of naming practices, touching on such issues as the changing connotations of the term 'nondescript' and the developing but contentious practice of discoverers' parenthetically appending their own names or those of their patrons to the Latinate binomials of new discoveries, a process which led to excessive splitting and ultimately to calls for a return to simple vernacular nomenclatures. The chapter also surveys the use of taxonomic subdivision by breeders of farm and other domesticated animals. In 'Barring the Cross', the author turns her attention to problems of identity, and the fascination exerted by real and imagined hybrids. These could be a source of pain as well as pleasure. Innocuous intra-specific crosses entirely acceptable to those unconcerned with the purity of their bloodlines became a feared source of contamination to pedigree breeders. Pedigreed elites and favoured breeds or animals were themselves held to possess prepotency or the heightened power to shape progeny. The chapter ends by discussing reactions to human difference. Monsters or freaks, human and animal, are the subject of 'Out of Bounds'. Classification depended heavily on supposed causation, resulting in taxonomies which mixed description and explanation, the latter often revealing a moral dimension. Finally, 'Matters of Taste' ranges over taxonomic practice as applied to different species of game, meat-eating and vegetarianism, proscribed and permitted meats, and in reaction to cannibalism.

One can only admire the extraordinarily wide compass of the author's research and the intellectual skills which have turned her disparate material into a coherent and stimulating argument. But where it touches on the interests of agricultural historians, the book is not beyond criticism. Although it is not too surprising that a historian of science and ideas should show some reluctance to engage in economic analysis, the discussion of livestock breeding would have been more persuasive had economic issues been granted greater attention. Pedigree cattle breeders founded 'tribes' or 'families' less in imitation of the practices of zoological taxonomy than as a means of raising the unit cost of their cattle through the simultaneous creation of brand identity and scarcity. Within their world, cows became more valuable than bulls and published pedigrees were structured accordingly, in subtle but significant contrast to the male-oriented emphases of human genealogies.

JOHN R. WALTON

LIAM BRUNT, *Turning water into wine: new methods of calculating farm output and new insights into rising crop yields during the agricultural revolution* (Discussion Papers in Economic and Social History, University of Oxford, 2, 1995); LIAM BRUNT, *Nature or nurture? Explaining English wheat yields in the agricultural revolution* (Discussion Papers 19, 1997); DAVID STEAD, *An arduous and unprofitable undertaking: the enclosure of Stanton Harcourt, Oxfordshire* (Discussion Papers 26, 1998); OLIVER GRANT, *The diffusion of the herringbone parlour: a case study in the history of agricultural technology* (Discussion Papers 27, 1998).

From its inception in November 1995 until December 1998, there have been 27 contributions to the University of Oxford series of Discussion Papers in Economic and Social History. Four of these have been on agricultural history. Copies are available on personal request to Dr Avner Offer at Nuffield College.

In *Turning water into wine*, Liam Brunt collates and then presents new ways of calculating likely farm output from the farm data in Arthur Young. He compares a traditional method of calculating output in wheat equivalent terms by using wheat and other crop price relativities, with a new method which does not depend on the availability of price data. Instead this uses wheat yields and the acreage distributions of other crops to estimate wheat equivalent output. The conclusions which emerge have particular relevance for the mix of crops, or the crop rotations. The fact that there were mixes of crops in crop rotations is not surprising, but the estimated magnitude of the effect of each crop on a subsequent wheat yield is. The other cereal crops compete with wheat – that is they reduce what might have been the yield of wheat in their absence – but the presence of pulse and root crops in rotations aided the ultimate yield of wheat. In *Nature or nurture*, Liam Blunt reinterprets the level of English wheat yields *c.* 1770 by developing a model which looks at God-given environmental factors – climate and soil characteristics – relative to man-made technological factors such as drainage, new crops (turnips) and new implements (seed drills). The proving ground for the model is Arthur Young's data for yields, technological attributes, land use and others factors, married to twentieth-century land classification data and regional weather data. Nature was important in explaining differences across countries, but the explanation for improving yields within England was that nurture (acquired advantage) was more important than nature (natural endowment). This is not necessarily surprising, but within it there is another more startling conclusion. It was not due to some of the traditional reasons listed by agricultural historians – not due to a move to mixed farming, which surely knocks additional manure on the head, not due to the production of clover, and not due to more frequent ploughing. Instead it hinged on the turnip (also a champion of good old-fashioned agricultural history), the seed drill, liming and marling, and improved drainage. In both of Blunt's papers there is food for thought, but the many sensitivities involved in the econometric modelling should not yet encourage us to rewrite the textbooks.

David Stead's contribution to this series is an in-depth investigation of one Oxfordshire enclosure, the village of Stanton Harcourt. Ostensibly it is set up as a contribution to the debate over rent adjustments as a motive for enclosure, or as an outcome from enclosure (cf. Allen, Clark, McCloskey and others). In practice this paper is more than this because apart from the survival of rental series that span the passage of the enclosure, there is also a cache of correspondence relating to the opposition and horse trading that preceded the passing of the act (in 1773), and this is explored in great detail. On both counts this is an interesting paper, but to suggest that any major conclusions emerge that agricultural historians might find defining in terms of current debates will be to place too much weight on a sample of one, and therefore I am not inclined to report the major conclusions. However, an important aspect of this example is the exploration of tenures other than rack rents.

The final paper in this series is Oliver Grant's analysis of the diffusion of a specific piece of agricultural technology, the herringbone milking parlour. It was a means of mechanically milking a large number of cows by one person. It was invented in Australia in 1908–9, but by about 1960 only two per cent of British cows were milked this way, though 70 per cent were by the early 1980s. The

seemingly simple brief of this study is to ask why was there a seventy-year delay between invention and adoption. The essential explanation is the amalgamation of a number of factors which can best be described as 'learning by doing'. And because the original technology required adaptation there was no obvious advantage in early adoption. Indeed, later adoption, which avoided investment in intermediate systems allowed advantages to accrue by the process of technological leap frogging.

MICHAEL TURNER

NOEL G. EDWARDS, *Ploughboy's progress: the life of Sir George Edwards* (Centre of East Anglian Studies, University of East Anglia, 1998). 156 pp. 9 illus. £10 incl p & p.

Agricultural trade unionism has, with good reason, been historically linked to the few heroic figures who dedicated a lifetime to championing the cause. Rarely could an undertaking have offered so little promise. Apathy and acquiescence characterized the majority of farm labourers; failure and disappointment awaited those who attempted the Sisyphean task of organizing the rural working class. Whereas most activists have faded into relative obscurity, George Edwards, like Joseph Arch before him, proved to be a notable exception. As a natural leader he rose from the humblest beginnings to win popular accolade as a Member of Parliament. Previously recounted in a volume of autobiography entitled *From crow scaring to Westminster*, published in 1922, this epic journey now forms the kernel of a full life story by his adopted son, Noel Edwards, in what is, understandably, very much a work of piety.

Why George Edwards turned to social and political action is immediately clear. As a baby boy he was placed in a workhouse, separated from his mother, when his father received imprisonment for stealing turnips to feed the family. From the age of six, arduous agricultural work robbed him of his childhood and youth. Poverty, tyranny, exploitation and victimization were to be commonplace experiences. Fortunately in his case, a religious conversion kept him on the straight and narrow. Supported by a steadfast wife, who laid the foundations for his self-education, he was to serve the Primitive Methodists as a lay preacher for sixty years. Moreover, this deep faith underpinned a single-minded crusade to improve the lives of those at the bottom of the rural hierarchy: he became a 'union man' in close association with Joseph Arch.

The vicissitudes of agricultural trade unionism are all-too-familiar. After initial success, internal divisions contributed to the demise of Arch's union in the 1890s. By this time George Edwards was a well-known and trusted figure whom the farm labourers could turn to for leadership. Despite falling foul of employers, and being badly let down by the very people he sought to serve, he gave crucial support to a Norfolk-based union in 1889, to be followed by the Eastern Counties Agricultural Labourers' and Small Holders' Union in 1906. Now in his late 50s, he acted as general secretary and organizer, travelling hundreds of miles to build up membership. No other person did more to lay the foundation of what soon became known as the National Union of Agricultural Workers, with branches in almost every county of England and Wales. Given past failures, this was a remarkable achievement.

Extending his involvement to embrace local issues and political campaigning, George Edwards served as a local councillor, later becoming the first direct Labour representative on Norfolk County Council. Such was his standing that he was nominated as Labour Party candidate in the 1918 general election, although it was not until the South Norfolk by-election two years later that the rural workers could claim a worthy successor to Joseph Arch in the Commons to represent their interests. Time and again, as during confrontational strikes (which he strove to avoid) and official wage negotiations, he was always at hand to provide counsel. Still braving opposition from various quarters, to say nothing of rival unions, he soldiered on, remaining deeply involved in public life until his last days.

One cannot fail to be impressed by his personal qualities and level of commitment. Here was an able, courageous and principled man, showing little regard for his own physical well-being, suffering tragedies in private life, yet never giving up the fight even following those dark days when he 'lost all faith' in his fellow workers. Few could have doubted his sincerity or fail to show respect. It is a measure of George Edwards's integrity that he sought no material reward (upon settling his estate a balance of £10 remained), but at least his public role received due recognition when he was knighted in 1930.

George Edwards's life presents a compelling reminder of the harsh world of ordinary farm workers and the nature of the struggle to overcome the disadvantages and injustices that blighted rural communities. If the 'horny handed' are indeed to become objects of scorn within New Labour circles, then his example can claim some value if only as an inspiration to others. The author, benefiting from access to family records, has crafted an honest tribute replete with evocative memories. Whilst it eschews a concluding evaluation, misspells Tillett (p. 142), and provides but scant acknowledgement to the source material, we are nonetheless mercifully spared the sociological jargon so beloved by academia. For both his enterprise and devotion, Noel Edwards deserves commendation.

DAVID A. PRETTY

DAVID MATLESS, *Landscape and Englishness* (Reaktion Books, 1998). 367 pp. 80 illus. £25.

The question of how people's environment and cultural identity shape each other is an important one for agricultural and rural historians. It must be said at once that *Landscape and Englishness* is concerned principally with the period from 1918 to the early 1950s, with some attention given to more recent decades but virtually none to the time preceding it. Perhaps the readers of this journal in particular should also be informed that, although David Matless lectures in Geography at the University of Nottingham, his methodology combines documentary research with textual deconstruction. Considering a wide range of publications, such as topographical guides, official reports, political tracts, documents from conservation bodies, architectural treatises and nature guides, as well as posters, photographs and cartoons (the illustrations are integrally part of the book's content rather than ornaments among its text), he shows how the English landscape has been the prime subject of rival visions of national identity, informing people's ideals of the past and, through selected features of its contemporary character, suggesting future developments in society and culture. Demonstrating the depth as well as the breadth of his research and gladly engaging with the issues raised, Matless presents this material clearly and cogently, with an alertness to thematic relationships, sub-textual messages and unintended ironies, making his book as thought-provoking as it is informative. It is also, for a work of scholarship, remarkably entertaining: I smiled often and actually laughed out loud on two occasions as I read it.

Unfortunately, I have to qualify my praise with one serious criticism. Matless argues that the equation of landscape and Englishness, often flavoured by nostalgia, is a recent cultural formation, but it is unclear from what date he sees it to have originated. This equation certainly exists in H. V. Morton's *In search of England* (1927) and S. P. B. Mais's topographical books published during the 1930s, and both of these authors are briefly discussed by Matless. As he barely glimpses further back than 1918, Matless is able to suggest that this equation gradually emerges after that date; yet it would be more accurate to suggest that it was already well established, taking on different forms of expression in response to changing aspirations and anxieties. In *England and Englishness: ideas of nationhood in English poetry 1688–1900* (1990), John Lucas has shown how earlier poets were very concerned with tradition as a factor in English cultural identity, whether they decided to adhere to or rebel against the values they perceived within it, and that predominantly they expressed their positions through rural subjects or imagery. William Morris (1834–1896) is mentioned twice in Lucas's book, on the second occasion to assert that 'Morris's poems promote a vision of England whose vitality is inseparable from its rurality'. Across the whole range of his concerns, Morris was inspired partly by an idealized vision of life and culture in the Middle Ages and this helped to determine his Utopian socialism along with his work as a designer and his campaigns to preserve ancient architecture and the countryside. Another poet (one not mentioned in Lucas's study) was Edward Thomas (1878–1917), aptly described by Walter de la Mare as 'a mirror of England', who once explained to a friend his decision to fight in the First World War by scooping up a handful of English soil and holding it out, saying, 'Literally, for this'. These examples are merely the two pre-1918 poets who, for other reasons, come most readily to my mind: dozens of other writers could be cited. In its title of *Back to the land* (1982), Jan Marsh's study of the pastoral impulse in England from 1880 to 1914, the first two words have a weight equal to the latter two. Ruralism and nostalgia are easy to find in the writings of purportedly progressive figures of the inter-war period. Here there is a link back to William Morris whose ideas had considerable influence upon early twentieth-century architects and the planners behind garden city movement. Indeed, Clough Williams-Ellis, author of *England and the octopus* (1928), a book discussed by Matless as an important 'planner-preservationist' text, was both of these and in some respects a disciple of Morris. Urging that new developments should be carefully *planned* and *appropriate* to their settings, it soon emerges that Williams-Ellis's vision is essentially both ruralist and nostalgic. If his advice is ignored, he warns, 'Little enough will be left for our own latter days: already we begin to tell each other guardedly and secretly of remote places where things are still as they used to be, where brutal exploitation is not yet, and where there is no new building, or where such buildings as there may be are well-mannered and harmonious'. Matless does not quote this significant passage. His apparent unfamiliarity with the broader scheme of English cultural history has led him to over-simplify this phenomenon in his chosen period of study and it is curious that he omits material which suggests the need to explore beyond it. This is a sad shortcoming in an otherwise impressive book.

Landscape and Englishness has three main sections. The first of these looks at the 1920s and '30s, when many people came to regard preservation and progress as complementary aims in the management of their physical and cultural environment and Englishness became identified as orderly and modern. This 'planner-preservationist' notion of Englishness gained dominance during World War II, when it not only supported but

appeared to ennoble the drive to maximize agricultural and industrial production, necessary in the war effort, as desirable objects in their own right, whilst also offering to the English people an attractive image of themselves as progressive and adventurous, yet rooted in an illustrious past and appreciative of its rich heritage. The third section of this book deals with how the effects of the war on the rural landscape, changing attitudes towards agricultural production, the experiences of land workers and child refugees from the cities, and a universally heightened consciousness of national identity, were reflected in publications during those years, and it proceeds to show how ideas embraced in wartime determined the policies of reconstruction afterwards.

The middle section of *Landscape and Englishness* is devoted to the 'organicists', who upheld traditional authority against progressive enterprise and eschewed planning policy in favour of local responsiveness to changing circumstances. Anticipating the concerns of recent ecologists, whilst also reviving a conservatism older than the industrial revolution, organicists sought – quite literally – a closeness to the soil, an organic social order and the practice of good husbandry. Despite articulate advocates such as H. J. Massingham and Rolf Gardiner, whose frequently polemical books were widely read, and the *New English Weekly* (1939–49) as a respectable periodical serving the cause, organicism failed to win many converts, appearing Spartan and reactionary when set against the promises attending technological progress. Rightly giving special attention to Massingham's writings, Matless offers a detailed and perceptive account of organicist thinking and practice in the 1930s and World War II, making this section of the book especially useful for anyone interested in this counter-cultural movement and its anticipation of present-day Green concerns.

In a very short fourth section, Matless discusses the unravelling of the landscapes of modern Englishness. He correctly emphasizes the importance of the broken association of productive land use and cultural value which has occurred in people's minds: agriculture is now widely seen as harmful to landscape and nature. With growing public concern about environmental damage and the safety of food, organicism now has a much higher profile than it did sixty years ago. On the other hand, whilst few people today have faith in the capacity of the state to generate a landscape that is both modern and beautiful, the legacy of planner-preservationism continues to influence many government policies on farming and the environment. Beyond these and similar observations, and some vignettes of notable post-war commentators on rural heritage such as John Betjeman, W. G. Hoskins and Richard Mabey, Matless does not attempt to assess the current relationship between landscape and Englishness; his study effectively stops at 1951 with the Festival of Britain.

As a wide-ranging and perceptive account of competing visions of England during a period of tremendous social change, out of which a distinctly new yet supposedly familiar landscape emerged, this book reminds us that landscape in itself and through its representations is a manifestation of culture and that by studying it we are participants in its continuous and often contentious re-evaluation. *Landscape and Englishness* deserves attention from anyone engaging with this issue.

MARTIN HAGGERTY

HENRY CLARKE AND HILARY BINDING, *The history of Lloyd Maunder, 1898–1998; a West Country family business* (Tiverton: Halsgrove, 1998). 95 pp. Illus. £8 from Lloyd Maunder Ltd, Willand, Cullompton, Devon EX15 2PJ.

This handsome folio commemoration volume follows the progress of a meat firm in the south west of England. In the early nineteenth century the Maunders were a yeoman farming family from Witheridge in Devon who diversified to become meat traders as a way of protecting themselves during the agricultural price fall of the 1870s and 1880s. In 1879 Lloyd Maunder's father, Frederick, started as a meat wholesaler and later opened retail butchers' shops in Devon and London, expanding further in the 1890s into milk processing. The real growth of the firm came after 1898 when his fifth son Lloyd started to supply the London grocery chain of J. J. Sainsbury with poultry, rabbits, eggs and possibly butter. Since then, Lloyd Maunder's fortunes were closely linked with those of the Sainsbury empire, built on, among other things, the supply of high quality home-produced food in which Lloyd Maunder specialised. The authors provide clear and convincing reasons for the firm's survival and steady expansion into meat processing, and how it became an important local employer in the south west. Besides providing a useful addition to twentieth century food history, they also explain the general impact of depression on a pastoral farming community and the reaction of one enterprising family.

RICHARD PERREN

Elsewhere and general

CATO, *On farming / De agricultura* (A modern translation with commentary by Andrew Dalby, Prospect Books, 1998). 243 pp. 11 illus. £12.50.

This is a splendid edition of an agricultural text by the earliest surviving Roman prose author. Andrew Dalby, the editor, has published widely on ancient texts concerned

with food and eating and brings a fresh eye to this valuable work: not every book on Cato has a contents page with 'a note on money' and 'a note on sex', the two aspects of culture which, if not held in check, Cato considered among the most threatening to his own ideology. Dalby writes elegantly and with exemplary clarity in his introduction, translation and explanatory footnotes. The Latin text used is the Budé edition of 1975, with small changes.

The introduction covers the development of Italy in the third and second centuries BC, in particular the relationship between Rome and the Italic and Greek communities of the southern part of the peninsula. Cato (who was born in Latium or Lazio) became the severe Roman Censor of Republican political mythology and wrote damningly of Hellenic influence. Yet there are traces of Greek influence in *De agricultura* (pp. 19–21), including adaptations of medical treatises which ignore such vital considerations as season and individual constitution and may have been a hazard to health. Dalby notes (p. 22) a conflict in the work between 'the farm as a way of life and the farm as a mere investment'. Attention is given to the religious year and to magical practices but the main thrust of the work is advice on agricultural investment to a speculator. Dalby is at pains to point out (p. 23) that the focus is on cost and savings rather than maximizing income. But this is no subsistence farm. Olives, wine, vegetables, lambs and pigs and perhaps even cakes (p. 21) are produced for sale and attention is given to contractual detail.

The imagined farm appears to be located in the inland region of Campania or Latium close to the town of Venafrum which was an olive-growing region. It would have been helpful had Dalby given some idea of the typical farm of 60 acres in the area at this period (early second century BC) or later. He comments (pp. 55–6) on the problem of Cato's order of priorities, which was discussed in antiquity: 'first the vineyard (or an abundance of wine), second an irrigated kitchen garden, third a willow wood, fourth an olive field, fifth a meadow, sixth a grain-field, seventh a plantation of trees, eighth an orchard, ninth an acorn wood'. According to Dalby these are 'added-value features whose presence – independently of whatever is the main produce – helps to promote self-sufficiency, to reduce marginal expenditure and to provide added sources of profit'. But we still need to know why Cato puts cereals sixth: why is the 'main produce' not the main concern? Later authors identified viticulture in particular as dangerous and speculative farming (see N. Purcell, *Journal of Roman Studies* 75 (1986) pp. 1–19).

Dalby's notes are particularly helpful in directing readers to other agricultural authors such as Varro and Columella, and to the secondary works of Joan Frayn on subsistence farming and the late K. D. White who wrote extensively on practical aspects of Roman farming.

Readers of this journal know better than I the influence of Cato on agricultural authors after the classical period, whether in the UK or in Mediterranean countries. Dalby does not address the matter of reception. The text has many fascinating features ranging from the construction of presses and a lime kiln, to grafting, pitching containers, force-feeding geese and cutting wood when the moon is not full. Veterinary details are remarkable (pp. 151–3, 168–71), as is the section on cakes (pp. 154–61) and the manufacture of Greek-style wine (pp. 174–5). These appear to be luxury items against which we might have expected a diatribe from the Censor. Similarly, the presence of a fishpond is notable (p. 181), given its censure in later Roman authors. The only named fish to appear (p. 221) are in a rambling recipe for a laxative. Dalby draws the line at section 157 with its 'cabbage eater's urine' and its use of cabbage to cure breast cancer: this is the work of an inferior author.

For the modern reader, this treatise is a source of endless fascination, in its details of husbandry, in its moral and ideological setting, in its prose form (in a culture where poets were quite happy to describe the construction of a plough), in its treatment of topics of scientific and medical interest and much more. The reader can also speculate on the apparent contradictions of its totemic author. Andrew Dalby is to be warmly praised for bringing the work to the modern reader in an edition that is helpful and attractive, with maps and diagrams to illustrate the area under review and ancient constructions of buildings, presses and kilns.

JOHN WILKINS

PETER GARNSEY, *Food and society in classical antiquity* (CUP, 1999). xiv + 175 pp. 9 illus. £35 (hbk); £12.99 (pbk).

For those who imagine food in antiquity to be a series of imperial banquets with such delicacies as dormice in fermented fish sauce and roasted parrot, Garnsey may come as something of a disappointment. There are no recipes to try, though there is a menu card which includes horse-meat from Padua (p. 85). He *is* interested in how food choices are made, such as spices and imported foods for the elite, and wild and semi-wild plants for all, and the extent to which choice is culturally determined. This contribution to the *Key themes in ancient history* series aims both to review research undertaken in an enormous field, not least by Garnsey himself in his *Famine and food supply in the Graeco-Roman world: responses to risk and crisis* (Cambridge 1988) and in *Cities*,

peasants and food in classical antiquity: essays in social and economic history (Cambridge 1998), and to propose new approaches. There are nine chapters and an introduction covering substance and symbol, diet, food and the economy, crisis, malnutrition, 'otherness', forbidden foods, food and the family, 'haves and have-nots' and commensality. A valuable bibliographical essay follows.

Two major concerns are the mechanisms by which the elites of ancient cities used banqueting and their control of the food supply to consolidate their social and economic power, and the conflicting interests of small farmers and others who comprised 90 to 95 per cent of the population. Garnsey has much to say on agricultural production, distribution of surplus and access to that surplus by different sectors of society. Garnsey assesses the ancient Mediterranean diet (a good diet that should not be glamorized nor assumed to be accessible to the full population) and reviews optimistic and pessimistic estimates of production. Certain groups were at risk of malnutrition, in particular women and children. A number of arresting suggestions and approaches are made. Notable are medical and demographic studies of populations in the developing world and Fogel's study of English and French populations in the eighteenth to twentieth centuries. These may be tested against skeletal analysis from ancient cemeteries, a vast resource 'if only archaeologists were interested' (p. 54). Stature, iron-deficiency and damage to teeth supply interesting evidence. Texts are not neglected. Garnsey (unlike some historians) allows some contribution from comic texts (in which food is prominent) and from Athenaeus of Naucratis (not Naupactus, p. 169) who is also suspect (though Garnsey underestimates Athenaeus' interest in the Roman world). He reviews the cultural constructions of texts, in particular their definitions of 'barbarians', mountain-dwellers and other groups marginal to the classical city. Particularly important for Garnsey is the vast corpus of Galen who was acquainted with the Greek and Roman parts of the empire and was familiar both with the elite of the imperial court and those whom ancient texts normally ignore. Galen had encountered peasant communities in Asia Minor, he knew the urban diet in Alexandria (he testifies to the remarkable range of plants and animals consumed) and he was acquainted with the choices available to small farmers in northern Greece when main crops failed (he provides an informal hierarchy of grains and pulses). He also synthesized the Hippocratic tradition of nutrition and the understanding of the effects of food on the body, a system which Garnsey finds theoretically misguided but not without substance based on empirical observation and modern comparisons.

Garnsey is subtle and sophisticated. He suggests, for example, that women had a shorter life expectancy than men (based on data from the developing world) and that the children of the rich suffered in particular from a lack of colostrum when put out to wet nurses. Morbidity rates in these groups Garnsey puts down less to the cultural prejudices of the political and intellectual elites than to ignorance. Ancient peoples, he claims, normally followed rational principles, such as feeding slaves involved in heavy work a better diet. Hence we should not assume that women necessarily had a worse diet than men, particularly if large numbers of them worked in the fields at busy times of year.

In sum, this book is a delight. Though brief, it is wide-ranging and intellectually challenging. There is praise for Amartya Sen on poverty and power; there are swipes at the followers of Levi-Strauss who have been influential in the analysis of Greek culture; there is space to discuss taboos and small religious groups (Garnsey draws on a number of anthropological approaches here and elsewhere). Above all Garnsey challenges the assumptions of his reader, particularly in regard to the power of the elite in antiquity and the limits of that power. He also writes well. Chapters are elegantly summarized, often with an epigrammatic coda.

JOHN WILKINS

TOM SCOTT (ed.), *The peasantries of Europe from the fourteenth to the eighteenth centuries* (Longman, 1998). xi + 416 pp. 12 maps. £44 (hbk); £19.99 (pbk).

This book offers a rich feast of information on peasant life across Europe between 1300 and 1800. Ten essays span different territories: Iberia (effectively Spain only); France; Italy; West Germany; East Elbian Germany and Poland; Russia extending as far as Archangel, eastward beyond the Volga and south to the Ukraine; the Austrian Empire through Hungary to Galicia and Transylvania; Ottoman lands in Greece and the Balkans, to Syria; Scandinavia including Finland; and England. At a time when historians obtain significant insights into peasant life from the study of one single estate, these essays surveying vast territories over five hundred years carry the reader on an adventure that is exhilarating, and yet at moments, because of the large generalities, suspends belief.

But at the end of it all, the book is extremely helpful in bringing the reader up-to-date with the most recent European literature in many different languages, and it is reassuring in showing a significant shift in the current interpretation of peasant strategies. Historians begin to see the logic and practical good sense in some of the choices made, moderating the old assumptions that peasants were passive sufferers, stupid and doggedly conservative. A more nuanced interpretation of peasant regimes is emerging, coupled with a more wide-ranging

enquiry into the innumerable influential elements shaping their fate. S. R. Epstein on Italy, Jonathan Dewald and Liana Vardi on France, and William Hagen on East Elbian Germany have highly pertinent remarks in this vein. Plainly, stern lordship did not govern everything; as John Langton puts it, peasants were active historical agents, and we need to adopt a humbler posture when judging their actions, for innumerable considerations entered into their decisions of which we have not yet perceived or fully understood all. Some of the influential factors recur in these essays and the repeated references are insistent and thought-provoking, though space in this book does not allow for any detailed analysis. Yet they herald a time when closer attention will be paid to the full practical consequences of some ingredients that are already acknowledged in this volume to have influenced the scene: local inheritance customs, labour services that call to be more precisely weighed and measured, the burden of several different kinds of taxation, and the distinctive, local geographical constraints which feature in endless variety. Some other factors, such as self- regulation by peasant communities, for example, hardly receive mention except in the article on Russia, but plainly that essay by Edgar Melton raises issues which all the others need at some time to accommodate.

Tom Scott introduces the book with a rehearsal of the debate on definitions of 'the peasant'. He sees the group consolidating its status locally between 1200 and 1400, contending with, and exploiting to varying degrees, the emerging market between 1400 and 1700, and disappearing between 1700 and 1900. He prefers the term 'peasant' to be reserved for someone who only occasionally engaged in the market; those who regularly served the market he deems to have been different and calls them 'commercial family farmers'. But is such a dividing line realistic when English and some other evidence suggests rather that everyone saw and responded to the main chance if and when it arose in their vicinity? It seems to be circumstances not people which determine engagement in the market. Peasants were always ready, though also shrewdly cautious. Robisheaux seems to agree with this verdict, identifying the opportune moment in West Germany after the Black Death. In England, the remarkably rapid spread of tobacco growing in the seventeenth century suggests that peasant society there might have survived much longer if a batch of thoroughly successful labour-intensive crops had been found at the right moment in the early modern period. Woad looked like being one other excellent small man's crop when it first appeared as a commercial possibility, but it turned out to be more congenial to gentlemen farmers. Yet half a dozen such innovations might have staved off 'the disappearance of the small landowner' at that time. S. R. Epstein's account of the more successful experience of smallholders in southern Italy cultivating diversified new crops offers comparisons that shed light on this theme.

As editor, Tom Scott plainly gave considerable freedom to his essayists for their themes and styles are very different. Some show themselves in much closer contact and sympathy with the daily routines and expectations of peasant life, notably Teófilo Ruiz on Iberia, while others stand at a distance, detached from the practicalities, and direct their remarks, at a high level of generalization, at state policies, administrative systems, and taxation. It is disappointing in a book planned in England to find no essay on the Netherlands (though the work of Jan de Vries is summarized in the editor's introduction), while the essay on the English peasantry is confined to a discussion of changing terms of land tenure mainly in the Middle Ages, and ends in 1650. The legal aspect is plainly significant in the English case, and this highly original essay, by Richard Smith, will be much cited in future for its cogency and clarity in explaining some of the advantageous consequences for yeomen flowing from legal (and economic) changes in the fifteenth and sixteenth centuries. But it does not match the scope of the other essays, and it treats southern and eastern England as though it stood for the whole kingdom. One wishes that the authors had been able to work together for a month and coordinate their writing so that the same themes featured in all essays.

John Langton offers a thoughtful conclusion by a historical geographer, attempting to put the many varied experiences of European peasants into one, more unified framework. He analyses the way the simple but severe discipline of a peasant economy required self-sufficiency, first and foremost, but that was softened in course of time when a food surplus was achieved. All essays show how the geographical constraints, the patchy growth of markets, and lordship, weighing heavily on some estates, lightly on others, circumscribed peasants' opportunities when new chances offered. Such chances did arise at different periods in the different territories, however, and peasants could be markedly observant and resourceful.

What is noticeable to the historian, having a somewhat different standpoint from John Langton in his conclusion, are the similarities in peasant strategies when a surplus of basic foods did appear, and released cultivators from constant anxiety about the grain harvest. At moments when grain was relatively plentiful, labour-rich peasant families had a positive advantage over their lords. If labour services were not a heavy burden (some essayists judge them tolerable during this period), an opportunity could open up for peasants to diversify. A mature local market was, of course, essential. But the moves into industrial crops like silk, cotton, hemp and

flax, vegetables, fruit and nuts, and part-time industrial occupations did occur in many places.

It may be that decades rather than centuries or half-centuries of the early modern period will have to be examined for these chances to be brought into high relief, for wars and failed harvests intermittently restored the demand for cereals to the top of the agenda, and advantages then fell to the large cereal farms, including those of lords. So the nature and chronology of diversification varied across Europe, and it was never a choice for those peasants from whom ever heavier labour services were demanded.

All essayists emphasize great local variation, but all at some point appreciate the shrewd decisions of peasants. In eastern Europe. new lands awaiting cultivation drew them strongly when the terms of tenure were right. So did lands in the Balkans, when they seemed to offer under Ottoman rule 'freedom from servitude'; in 1556, writes Fikret Adanir, some 70,000 peasants took themselves into Ottoman Bosnia rather than remain in Hapsburg lands under Christian rule. In other places peasants turned to the labour-intensive cultivation of special crops which exploited their special skill. Other alternatives involved the more deliberate marketing of rich local resources like timber, legally or illegally, or part-time crafts. Peasants in Italy and Sicily seem to show the first moves to produce industrial crops, along with more varied and sometimes luxury foods like rice, fruit, nuts, vegetables and wines; Epstein is a percipient commentator on these activities. Peasants in the Netherlands are thought to have been among the first to have relied on imported grains so that they could specialize and concentrate on production for the market. But it remains for all these varied alternative pursuits to be better examined, to discover their demands on peasant labour and the profit they yielded. Historians regularly examine them nowadays from the viewpoint of industrial growth and to illustrate the consumer revolution, but do not yet consider them from the farmer's angle.

A stimulus to all this interest in diversification clearly came from the enhanced mobility of people in the early modern period, carrying innovative ideas from one country to another. Mobility is stressed by several essayists, but not the innovative ideas which they carried with them. A recent writer, not cited here, has described the achievements of the Bulgarian gardeners who carried Turkish vegetable-growing into Hungary. On these lines, the reader may be prompted to wonder how much of the early development of fruit, vegetable and silk production in Sicily, Italy, and southern Spain was owed to Moorish influences from across the Mediterranean. No one asks who was responsible for carrying woad growing across Europe from east to west between 1300 and 1800, though our documents reveal the wealth that it created for woad merchants, and in France we can see some of their fine houses that survive. More questions could flow about the spread of buckwheat, rapeseed, madder, safflower, and more. They were all regionally successful, all new ventures in the early modern period, and in some cases played a crucial role in their development.

Plainly, Tom Scott has edited an ambitious survey of European peasantries, and the result is a most stimulating collection of profiles. Every single one offers insights to widen narrow perspectives.

JOAN THIRSK

PETER PRIESTER, *Geschiedenis van de Zeeuwse landbouw circa 1600–1910* (A. A. G. Bijdragen 37, 1998). 880 pp. 101 tables; 45 illus; 58 figs. No price given.

With his study of agriculture in Zeeland, a province in the far south west of the Netherlands, Peter Priester has added a large brick to the already impressive edifice of the A. A. G. Bijdragen, the historical series of the Agricultural University at Wageningen. In the best traditions of the A. A. G. Bijdragen, Priester offers a plethora of data on demographic developments, land use, yields, land rents, agricultural prices, taxes and wages, as well as an analysis of the changes of agriculture in Zeeland between about 1600 and 1910.

The book starts with a description of the natural circumstances of Zeeland (literally: Sealand). Zeeland consisted of a number of islands as well as some coastal plains. All this territory was characterized by quite marshy and salty clay soils, which were continually threatened by flooding. In the lower parts of Zeeland, the wetness of the soils prevented arable production. Throughout Zeeland, a shortage of sweet water during the summer limited the possibilities for livestock farming, thus also limiting the availability of manure. Maintenance of dykes required large sums and caused a high level of taxes, and during the winter large parts of Zeeland were flooded by the winter rains. These dismal natural circumstances caused quite an unhealthy environment: nineteenth- (and probably also seventeenth- and eighteenth-) century death rates were very high and agricultural labourers from outside the province in particular were almost sure to be caught by fevers – in hot summers the environment was almost ideal for malaria. An English invasion of 40,000 soldiers in 1809 failed, as 13,000 soldiers fell ill and had to be sent back to England, while another 4000 died.

Surprisingly, these rather dismal circumstances did not prevent the existence of a productive agricultural sector and dynamic developments. Already around 1600, wheat yields in Zeeland seem to have been as high as in

Norfolk around 1800, and they stayed at this level until about 1830 when a secular rise began which continues until the present day. Also, the farmers of Zeeland managed to increase the production of specialized commercial crops like oilseeds and, most notably, madder. Madder, which took two to three years to grow, was used to produce dyes for the Dutch and English clothing industry. Though wheat stayed the most important crop in Zeeland, the labour- and capital-intensive culture of madder, already dating back to medieval times, continued to expand until well into the nineteenth century. After 1870, artificial dyes caused the demise of the culture of madder, but this crop was quickly replaced by sugar-beet. Also, between 1600 and 1660, new polders almost doubled the agricultural area of Zealand, while another increase of about 25 per cent occurred between 1660 and 1850.

Priester covers much new ground. One of the weak spots of agricultural history in the Netherlands is the lack of yields series in the coastal provinces before about 1820. By making use of tithe data, Priester manages to establish a yield series from about 1600 onwards, thereby filling at least part of this gap. His data on rents and wages add to the already existing stock of data on rents and wages in other provinces, implicitly underscoring the rather exceptional development (read: rise) of wages as well as rents in Holland and Utrecht between especially 1580 and 1620. His demographic data show that urbanization in Zeeland before about 1700 has been strongly overstated, which means that the eighteenth century decline of the urban population and economy of the Netherlands must have been a little less severe than depicted by, for instance, Jonathan Israel. Indeed, rising agricultural wages in Zeeland around 1800, and in other coastal agricultural areas like Groningen and Friesland compare favourably with wage trends in the cities of Holland and Utrecht, indicating that the Dutch economy did show a somewhat two-sided development during the latter half of the eighteenth century. The city economies showed a clear decline, but agriculture prospered.

Priester falls a bit short when he tries to explain the high productivity of agriculture in Zeeland. Of course, clay soils are relatively fertile. Also, crop rotation systems did not show any extensive use of clover, but pulses were extensively grown. In fact, around 1800 the area under pulses was about two to three times higher than in other clay soils areas with more favourable natural circumstances (especially more sweet water during the summer). Pulses might explain why yields in Zeeland could stay so high for so long, but this is not systematically analysed.

But these are minor criticisms. The book is a massive addition to our knowledge of the agricultural history of the Netherlands and of north–west Europe generally. For readers outside the Netherlands and Belgium, the lack of summaries in any of the major European languages and of bilingual heads for tables and graphs may cause problems.

MERIJN KNIBBE

PAUL BRUSSE, *Overleven door ondernemen: de agrarische geschiedenis van de Over-Betuwe 1650–1850* (A. A. G. Bijdragen 38, 1999). 566 pp. 66 tables; 20 figs; 4 maps. No price given.

This book is the history over two centuries of a very small place. The Over-Betuwe is a piece of marshy land in the east of the Netherlands, bounded to the north and south by the Rhine and Waal rivers, below Arnhem and above Nijmegen: it measures about 10 x 20 km. Its population in 1650 was some 8000, and by the mid-nineteenth century it had risen to 24,000: no more than a small town. The book appears in the almost legendary series, A. A. G. Bijdragen, which has given us over the last few decades the products of the Wageningen School of Agrarian History, famous for its long-term quantitative studies of quite large areas such as a province, much in the manner of the Annales School in France. This, then, is a much smaller affair. Some 70 to 80 per cent of the population were involved in agriculture, and Brusse's concern is to explain their fortunes over 200 years within the framework of the rise and fall of agricultural fortunes, which he links closely to the Kondratieff cycle. His aim is to examine the structure of agriculture and of the farming business in the Over-Betuwe, and to look for changes over time in material culture, by which he means such consumer items as carriages, cupboards, clocks, carpets, and even buildings, as specified in probate records and other property inventories.

The Over-Betuwe posed its farmers a number of problems, due to the hydraulic conditions. The water which seeped through the river dikes made many kinds of farming extremely difficult, and was apparently particularly helpful for the growth of weeds. As a result of this and other factors, the area has enjoyed the dubious reputation of being a backward place, where farmers were conservative primitives in the peasant mould, refusing to take on new technology and resisting all attempts to lift them out of their relative misery. Certainly in terms of productivity, this part of the river district in the Netherlands was well behind the rest of the country in the period before 1930.

Brusse is concerned to rehabilitate the farmers of the Over-Betuwe. By a detailed analysis of many local sources, he is able to show that the farmers were integrated to a high degree into the local and regional markets, and were by no means auto-consumptive peasants.

Furthermore, he shows (and uses as a major explanatory factor) that they were highly flexible in their approach to economic circumstances. Many of them had interests in more than one economic sector, and while practising as an artisan for much of the time, would also run a tobacco or potato patch for the market. There was also a high degree of flexibility between various kinds of farming, according to the pertaining conditions of the market. They introduced many technological changes, such as clovers and new rotation patterns. Nevertheless, it has to be said that productivity increases were smaller than elsewhere, and that farmers persisted in using the device of fallow (in order to combat weeds) far longer than in much of the rest of the country.

In his analysis of the material culture of the people of the Over-Betuwe, Brusse is able to demonstrate that a certain embourgeoisement was taking place at most levels of this society long before the civilization offensives which are usually associated with the nineteenth century (though many studies have actually noted their origins in the eighteenth century). The methodology of dealing with the inventories and other legal records is difficult, but Brusse is aided by his numerically small subject, and Chapter 7 on these matters is one of the best in the book. He also shows that after 1740, when farming fortunes began to improve, considerable social differentiation occurred. The rich became richer, but there is little evidence found here of proletarianization; social polarization occurred, but not at the cost of the deprivation and alienation of the poor in society.

The book is well written and clear to follow, and the summary in English makes it partially accessible to an international audience. There is a welter of statistical appendices, though the quantity of this material is less in evidence than in many of the other Wageningen studies. It is a well-documented story of a small population surviving in sometimes difficult circumstances by flexibility and ingenuity. These qualities found in the eastern Netherlands were familiar to us from the work of other scholars (e.g. H. K. Roessingh on the cultivation of tobacco, also a Wageningen study), and although there is little contribution to theory or methodology here, as an empirical study it will be of use to historians seeking to make sense of the wider picture.

MICHAEL WINTLE

JUDITH A. MILLER, *Mastering the market: the state and the grain trade in northern France, 1700–1860* (CUP, 1999). xviii + 334 pp. 6 tables; 16 figs. £30.

The history of state intervention in grain markets has conventionally focussed on its high politics and the responses of market participants to real and presumed food shortages. The originality of this excellent monograph on government regulation of grain and flour markets in eighteenth- and nineteenth-century France is to view it from the perspective of the local officials charged with ensuring urban consumers a steady flow of their principal foodstuff at reasonably steady prices. Their task was not a simple one, since any intervention undertaken in response to the demands of the urban poor for cheap food had to be reconciled with the economic requirement that effort and capital supplied by growers and merchants earn an adequate return. It took administrators several generations and several severe market failures, one of which came close to provoking a famine, to learn this lesson. This book tells the tale of that learning.

The problem of food supply in northern France in the eighteenth century was not so much one of supply as of distribution. The rapid expansion of Paris between 1550 and 1700, which was succeeded by the growth of smaller cities and the spread of rural industry, gave a strong impetus to market integration in a region with a long tradition of municipal regulation of the grain trade. It was thus inevitable that the development of commercial practices that pooled regional supplies for redistribution throughout the region should come into conflict with municipal rules that reserved the first claim on local produce to local consumers. By the eighteenth century, much of the municipal apparatus had been absorbed by the central government, and with it political responsibility for maintaining order in food markets. This 'nationalization' of provisioning policy, however, did not immediately produce policies tailored to the needs of a regionally integrated market. Instead, royal officials maintained the traditional particularistic regulations with which they were familiar. The debate over 'free trade' in grain pitted those who mistrusted the ability of a regionally integrated market adequately to protect local consumers against those who believed it was the best way in the long run to pool inevitable subsistence risks. What complicated the debate was that regulations were usually enforced in times of shortage, which in limiting the returns to speculative holdings by professionals impeded the accumulation of stocks that could have mitigated expected shortages by smoothing the flow of grain onto the market. In their absence minor interruptions in supply provoked sharp increases in speculative holdings of grain by the public, which were attended by correspondingly sharp increases in the spot price of grain and flour. Government regulation was directed at moderating these increases.

Professor Miller analyses a rich archive from the Seine Inférieure to document how local officials in Rouen tried to influence market behaviour by restricting sales to public markets and by secretly selling stocks of government grain to create an illusion of local plenty. These

measures met with variable success. Price controls imposed on public markets predictably caused growers and merchants to withhold their stocks or to divert them to other markets; surreptitious sales of state-owned grain stabilized price expectations, but discouraged merchants from bringing in private grain; when officials built up public reserves, their competition with private buyers for scarce supplies drove up prices, defeating their purpose. State intervention thus disrupted the commercial networks which handled the bulk of the trade, often intensifying rather than palliating crises. During the Terror, private commerce in grain collapsed, and the ensuing famine taught administrators and the public a hard lesson in practical economics, which had to be repeated in 1812 when Napoleon re-instituted price ceilings on bread in Paris. By this point, most officials had lost confidence in the efficacy of administrative control of the grain and flour trade.

Professor Miller traces this learning process through well-constructed narratives based on the experience of officials in Rouen and Paris. She follows the story in the nineteenth century through the history of the *Caisse syndicale des boulangers*, which inherited the Paris grain reserve ordered by Napoleon in 1812. The story ends with the decrees in 1863 liberalizing the grain trade. This is first and foremost an administrative history. As a result it pays relatively little attention to the parallel construction of commercial institutions which eventually made it possible for the state to forego intervention in urban food markets. The administrative perspective also downplays the connection between military provisioning and the growth of large-scale wholesale trade. These developments, which were central to the emergence of a regionally integrated grain market in northern France, await their historian. As a first step, we have in this book a first-rate study of the governmental side of the equation.

GEORGE GRANTHAM

TOMAS A. MANTECON NOVELLAN, *La muerte de Antonia Isabel Sánchez: tiranía y escándalo en una sociedad rural del norte español en el antiquo régimen* (Alcalá de Henares: Centro de Estudios Cervantinos, 1997). 187 pp. No price given.

The semi-naked body of Antonia Isabel Sánchez was discovered on 1 July 1799 in the small Cantabrian village of Udías. The woman, who had been married to Domingo García for nineteen years, was brutally murdered, probably by the family's maid. The crime provoked a scandal in this rural community and resulted in a lengthy judicial process. The husband, a prosperous farmer who owned land and livestock in Udías and the surrounding valley, had a long history of marital violence and had threatened to kill Antonia on numerous occasions. Yet at the time someone plunged a knife into his wife's body thirty seven times, Domingo was away from the family home in Andalusia. There are a number of other details of the plot which merit attention. The maid, Manuela Sánchez, had previously been engaged to Domingo's brother-in-law, Antonio Bajuelo, who happened to be the local political boss (*cacique*). Antonio, meanwhile, was a notorious womaniser who stood accused of raping another female servant from the village at knife point, not to mention a number of other offences. It seems that the jealous husband, Domingo, was fed up of his wife spending so much time with Antonio that he got the maid to bump her off.

Yet, in the hands of a writer like Tomás Mantecón, the story of Antonia Isabel Sánchez's frenzied killing is more than a historical whodunit. Subtitled *Tyranny and scandal in a village in northern Spain during the ancien regime*, this nicely written account is a fine piece of micro-history, a genre first popularized by scholars such as Carlo Ginzburg in *Il formaggio e i vermi* (Turin, 1976). Based on this exceptional case, which generated a mass of detailed documentation, Mantecón cleverly constructs a world where men are forced to emigrate in search of a better livelihood, where their wives are left to conduct everyday economic affairs, where rivalry builds up between local bigwigs (*poderosos*) and sexual aggression is tolerated within certain limits. Mantecón's work is divided into three sections: the crime and its resonance in the local village community; victim, aggressor and the limits of marital violence; and the power of the local *caciques*.

Not all of this story has equal relevance to the agrarian history of late-eighteenth century Spain. What interested me most of all was the author's description of how this tiny village in the Lloredo valley was linked to the rest of the national economy. Apart from visiting woodcutters from the nearby Basque Country in search of firewood for the region's forges, a fair number of local peasants emigrated to Castile, Andalusia and Spain's American empire. The contemporary *Catastro de Ensenada* showed that, out of a total of 249 inhabitants in the valley, seven per cent were absent from their dwellings at the time of the survey. Half of these migrants were said to be in Andalusia. Thus the probable instigator of the murder, Domingo Garcia, was not alone in his exile while the tensions of everyday rural life as demonstrated by this case may not have been untypical. What stands out however in the murder of Antonia Isabel Sánchez is that patriarchal values in this part of La Montaña were found wanting. The usual social controls which would normally have prevented the appearance of a scandal failed completely. Mantecón's study vividly coveys the

impact of this horrible crime in rural Cantabria at the end of the eighteenth century which, according to local custom, had a greater resonance within the region than the events of the Napoleonic invasion.

JOSEPH HARRISON

ANNE K. KNOWLES, *Calvinists incorporated: Welsh immigrants on Ohio's industrial frontier* (University of Chicago Press, 1997). xxiii + 330 pp. 21 tables; 34 illus; 18 maps. £19.95.

I began reading this absorbing, well-argued and meticulously-researched monograph on a first visit to Australia. There, I was inevitably struck by the extraordinary uprooting which nineteenth-century transoceanic migration involved: the sheer scale of the journey and the social, economic and cultural dislocation which resulted makes for fascinating research. Though Dr Knowles's example of the Welsh in Ohio is rather different, the fascination is no less. She reminds us that there is a general dearth of local studies of emigration in the nineteenth century. More precisely, perhaps, there is a dearth of studies that provide an integrated view of local origins, stages of intermediate movement, and destinations.

The theoretical and empirical background to this volume is provided by the earlier more general work of other authors, notably Dudley Baines (*Migration in a mature economy*, CUP, 1985) who saw such detailed research as a necessary prerequisite to a firmer understanding of the links between industrialization, internal migration and overseas emigration. Central to the process of migration was chain movement, which ensured strong regional identity in both urban and rural destinations: 'residential clusterings of immigrants from the same county, parish, village, and street were the geographical manifestation of chain migration, the process by which communication back and forth across the Atlantic guided emigrants to particular destinations in the United States' (p. 28). Studies of identity and cultural assimilation or separation abound, and are well reviewed by Dr Knowles, but what makes this book particularly welcome is its insistence on the importance of the economic context and effects of migration and thus its contribution to the wider debates on the nature of nascent capitalism in the United States in the nineteenth century. So the central question here is 'how did immigrant culture respond, whether creatively or defensively, to American capitalism?' (p. xvii).

The heart of this work is migration from selected communities in Wales to Ohio in the first half of the nineteenth century. It concentrates in particular on Gallia and Jackson counties where perhaps three-quarters of the Welsh immigrants came from Cardiganshire, such that the area became known as 'little Cardiganshire' amongst the Welsh American community (p. 27). The sources used are varied and in many respects innovative. A key problem was not only the general shortage of records of emigration but also the specific one that the Welsh were not generally identified separately from the English: not until 1908, for example, did the Board of Trade distinguish Welsh from English passengers aboard emigrant ships. The study of migrant biographies derived from obituary notices (recorded in a vibrant press of Welsh religious magazines) forms the core of the study of individual migration paths and proves an excellent source of detailed longitudinal information: some 1,772 cases are recorded for the period 1838 to 1853, though the migration experience so generated covers over sixty years and two generations of emigration.

The findings of the study lead towards a better understanding of the ways in which migrants responded to and shaped the economies of the destination areas. There is much helpful discussion about the choices that were open to potential migrants between the attractions of the south Wales industrial areas, of England (with an excellent discussion of the London Welsh) and of America. As far as the last is concerned, Welsh migrants 'could be characterized as both family-oriented yeoman farmers and competitive entrepreneurs whose investments (in charcoal iron furnace companies) hastened the development of industrial capitalism in their rural Ohio community' (p. xxi). A key ingredient here was the influence of religion. Stephen Innes (*Creating the Commonwealth: the economic culture of Puritan New England*, W. W. Norton, 1995) remarked with respect to the English Puritans in Massachusetts that 'industriousness and frugality brought wealth, which in turn brought temptation and worldliness' and Knowles shows the ways in which this tension manifested itself for the deeply conservative Calvinistic Welsh. As a character in a fictional account of emigration to New York remarks: 'we could have lived at home all right were it not for the lust for cheap lands and the splendid life in America' (p. 225). What such 'exemplary elders' of the church as Isaac T. Jones and John H. Jones thought of such lusts can readily be imagined from their memorable portraits reproduced on page 153. Dr Knowles traces the confrontation between religious values and change through three major points of transition – through the decision to emigrate, the decision to become involved in industrial production and the 'prolonged negotiation with the meaning and consequences of prosperity' (p. 256). The analysis is very adept at showing both similarities with other European emigrant groups and the distinctiveness of the Welsh; and at insisting on the multiplicity of migrant experiences in the face of burgeoning American capitalism.

In summary, this is a fine book: well-planned, elegantly written, original, thoughtful and provocative. In her introduction, Dr Knowles expresses the hope that her book will indicate how the close study of localized culture through individual life histories and geographies can further enrich our understanding of economic change. It does.

PHILIP E. OGDEN

HUGH PRINCE, *Wetlands of the American Midwest: a historical geography of changing attitudes* (University of Chicago Press, 1998). xiii + 395 pp. 30 tables; 42 figs. £16.75.

While reading Hugh Prince's historical geography of changing attitudes towards wetlands, I was unable to shake boggy metaphors from my mind. Themes get lost in swamps of detail. Slow-moving passages mire a truly fascinating environmental history. Like the travels of early surveyors and farmers on the wet prairies of the Midwest, my progress through the book was often arduous and irritable. Early chapters are chopped up into short sections that too often repeat information. Only near the end of the book does the narrative develop a compelling flow.

Yet this book is an extremely good work of historical geography that no student of wetlands, Midwestern settlement, or environmental history can afford to miss. It is indispensable because it compiles the essence of wetlands scholarship from many fields and because it places the environment at the heart of agricultural history, filling blanks we did not realize existed in classic studies by Paul Wallace Gates, Allan G. and Margaret Beattie Bogue, even Frederick Jackson Turner. Prince meticulously culls contemporary observations of wetlands to lay out the full range and trends of environmental attitudes as they changed over almost two centuries. Along the way he examines how those attitudes were manifest in the actions and inaction of federal and state governments, railroads, speculators, and individual farmers. If the writing sometimes too nearly mimics its subject, the measured pace does help make the point that wetland environments were remarkably difficult for Euro-Americans to bring into fruitful agricultural production. Ohio's Dismal Swamp and the prairie plateaux, potholes, and bogs of states further west resisted farming for over fifty years, leaving blank spots on the map, causing illness and bankruptcy for decades because they were so costly to drain.

The first two chapters define terms. As Prince makes clear, the historical distinctions between different kinds of wetlands are crucial because their physical characteristics posed particular problems for intensive farming. Legal definitions of land categories also directly influenced the price and marketability of land. Wet prairies in Ohio, Michigan, Indiana, Illinois, and Iowa had rich soils that repaid farmers' efforts once they were well drained, but ditching and tiling required expensive machines that even some large farmers could not afford until 1870 or later. Bogs and swamps, typical of boreal wetlands throughout Wisconsin, Minnesota, and Michigan, yielded good crops initially when drained but soon became troublesome as desiccated topsoils lost nutrients, caught fire, or blew away. Both kinds of environments were feared and abhorred as breeding grounds of swarming mosquitoes and vicious biting flies. Prince relates many delightful quotations from white people's first incredulous encounters with these beasts, including one unforgettable description of what makes the greenhead fly particularly nasty. One wonders how native Americans put up with them while harvesting the bounty of grains, fruits, and wild game that wetlands provided.

Some of Prince's most careful and original documentation comes in his explanation of the various circumstances that thwarted the agricultural development of wet prairies. The most interesting is wet prairies' exceptionally high rates of tenancy. Tenants comprised up to 45 percent of farmers for some time because speculators, banking on the region's long-term growth, had bought up swaths of cheap prairie – land that they rarely improved. Prince finds that the risks wetlands speculators took rarely paid off; cyclical slumps ruined their investments before land scarcity drove up prices. Experience reinforced negative attitudes towards wetlands throughout the nineteenth century. Farmers working the black peat soils of the cutover district suffered the greatest heartache. The misery lay in the details, such as the fact that peat conducts heat poorly. Wisconsin farmers really did lose crops to killing frosts in July on such soils. At the same time, draining, 'because of its long deferred rewards, underscored the covenant that tied a family to the land' (p. 311). This covenant proved terribly costly for family farmers during the debt crisis of the 1980s, when carefully drained farms carried extra burdens.

From 1925 onward, the obdurate nature of boreal wetlands finally registered in the minds of government officials and farmers. Thousands of acres reverted to public ownership, leading gradually to the reconsideration of how wetlands should be managed for non-agricultural uses. Southern wetlands meanwhile became increasingly rare, as economic incentives to intensify the draining of fertile soils overwhelmed concerns about erosion and the loss of nesting habitat for birds. Only when bankrupt farms turned to subdivision did resident public opinion favour wetlands conservation and restoration.

Wetlands of the American Midwest puts the lie to the notion of a seamlessly advancing agricultural frontier. Land sales, settlement, farm-making, and the development of intensive agriculture all happened in fits and starts unevenly over the Midwestern landscape. Despite the region's gentle topography, wetlands impeded Euro-American settlement in some places as effectively as the Appalachian Mountains had in the eighteenth century. The message Hugh Prince delivers, modestly but emphatically, is that environment matters. He is one of the first scholars to tackle environmental history with all the tools of historical geography. One hopes many more will follow his example.

ANNE KELLY KNOWLES

BRIAN MCGINTY, *Strong wine: the life and legend of Agoston Haraszthy* (Stanford UP, 1998). xii + 579 pp. Illus. £40 (hbk); £14.95 (pbk).

Agoston Haraszthy (1812–1869) is a larger-than-life figure in the history of American wine-growing, whose legendary stature as the 'father of Californian viticulture' and early adopter of the Zinfandel wine grape provides a running counterpoint throughout McGinty's book. The author admits to a more than casual interest in the subject as he is Haraszthy's great-great-grandson, and positions himself to write a family history that is objectively tolerant and subjectively critical of his nineteenth-century ancestor. He succeeds admirably in both respects, and that is the strength and weakness of *Strong wine*. This meticulously researched and documented work is a definitive historical biography of an enigmatic agricultural pioneer. Yet the history is wrapped inside a substantive genealogical narrative that delivers more than most readers interested in the subject may be looking for.

McGinty sets out to separate the man from the myth and to place Haraszthy in the context of his times, somewhere along a continuum between eccentric innovator and adherent to the status quo. Contrary to popular notions at the time, Haraszthy was neither a member of Hungarian royalty nor a political refugee who escaped to America, as he held himself out to be. Nor was he the first wine-grower to cultivate the Zinfandel grape in California, though he was highly active in disseminating this unique European variety and the expertise to grow it there. He was most of all an opportunistic booster of, among many things, agricultural improvement and the profitable application of Old World grape varieties to New World growing conditions and markets.

The primary sources used are extensive and well documented, clearly indicative of the many years of research and travel undertaken by the author to produce the book. Family correspondence, business ledgers and account books, and land and church records are used to detail Haraszthy's roots in Hungary and the family's immigration to the United States and eventual settlement in California. Transactions and proceedings of the state horticultural societies and agricultural agencies are an especially rich source, as are the travel accounts and treatises on viniculture written by Haraszthy himself. These sources are brought together well as readable scholarly prose, with a few distracting exceptions when the author turns to fictional re-enactment of conversations involving Haraszthy and others.

One quibble with the book's presentation is the lack of illustrative maps. Towns and regions in Hungary, Wisconsin, and California are frequently mentioned in the narrative, as are other places Haraszthy visited during his many domestic and foreign journeys. Since much of the book concerns Haraszthy's role in the agricultural history of California and his grape growing and winemaking activities both there and earlier in Wisconsin, reference maps would be helpful in illustrating the far-reaching nature of his experimentation. The omission is significant because wine-quality grape cultivation, like many horticultural endeavors, is bounded by the limits and opportunities of location, specifically the soil, topography, and microclimate necessary for successful viticulture using finicky varietals. Referencing this activity in maps would add significantly to the text and complement the photographs, engravings, and other illustrations already provided.

In the end, though, *Strong wine* is a fine contribution to the literature of wine-growing history in America and adds a summative chapter to the story of one of its more complex and colourful protagonists. While details of the Haraszthy legend continue to be revealed in this work and others sure to come, the man distinct from the myth is still a remarkable example of nineteenth-century entrepreneurial spirit and enthusiastic participation in the agricultural experimentation of the day.

CHARLES W. DEAN

STEPHEN BELL, *Campanha gaúcha: a Brazilian ranching system, 1850–1920* (Stanford UP, 1998). xvi + 292 pp. 12 tables; 33 figs. £40.

The cattle economies of Latin America were already initiated half-a-century before the foundation of Jamestown, yet while the American West has spawned a vast academic and popular literature and innumerable 'Westerns', its counterparts south of the Rio Grande have no popular image and have at best limited academic coverage.

Stephen Bell's *Campanha gaúcha* is therefore much to be welcomed, as a valuable and thorough analysis of the cattle economy of southern Brazil. The fundamental

sections of the book detail the economic and social structure of cattle ranching on the interior grasslands of Rio Grande do Sul, the nature of hide and meat processing in the coastal *charqueadas*, and the switch to *frigorificos* to produce refrigerated meat late in the study period.

However, if these discussions provide the substantive base of the work, it is in other observations that the author provides invaluable and original insights. For example, Rio Grande do Sul is not usually thought of as a 'slave state' in Brazil, yet, using wills and other sources, Dr Bell demonstrates the use of slaves in the fields and *charqueadas* until abolition in 1888, and explores the role of slave rather than wage labour as a factor in inhibiting modernization. Similarly, he makes very effective use of the records of landowners' associations, agricultural journals, and cattle exhibitions to trace the desire for innovation in the late nineteenth century. This is counterposed against a detailed discussion of the actuality of improvements in stock breeding, the introduction of wire fencing, improved pasture and veterinary assistance, and the establishment of *frigorificos* to supply more palatable meat to expanding European markets.

This modernization proved at best halting, and Dr Bell sets the conventional view that this was due to the innate conservatism of the gaúcho ranchers against other factors, such as the persistence of slavery, insecurity of property rights, civil unrest, inadequate infrastructure of railways and ports, and the lack of an urban elite and merchant class comparable to that of Buenos Aires and Montevideo. Indeed, one of the most stimulating facets of the book is that it places a comprehensive case study firmly in a wider context. The author compares the process of innovation in Rio Grande do Sul with that in Argentina and Uruguay, and in fact suggests that the province was essentially the lagging periphery of a circum-Plata regional economy. This, he argues, was compounded by its geographical and political marginality in the Empire and Old Republic of Brazil, in which the province and its pastoral economy received limited consideration from central government until the advent of President Getalio Vargas, scion of a gaúcho ranching family, in 1930.

The study is based on meticulous research using a wide range of archives, official publications, newspapers, and secondary literature from Brazil and abroad. It is framed in the best traditions of the historical geography of Sauer, Darby and others, and combines thoughtful scholarship with elegant prose. There are some finely nuanced observations and telling phrases, which are supported by copious and informative footnotes, and an impressive bibliography. Effective use is made of contemporary photographs of gaúchos, livestock and equipment, and of numerous relevant maps.

This is a book not merely for the Latin American specialist, as the author provides an excellent scene-setting of location, natural environment, and the historical context prior to his study period. Though it is in essence a scholarly monograph, *Campanha gaúcha* offers much more than a case study of a small part of South America over a brief span of time because, in addition to the new insights it provides into the Rio Grandense cattle economy of the late nineteenth century, its detail is carefully set into the encompassing regional context of the pastoral economy of the Plate estuary, and tied to the evolving Atlantic trade in livestock products. This book will be read with great profit not merely by Brazilianists and other Latin Americanists, but by anyone interested in the history, geography and economics of pastoralism, or in links between the local and the global in late-nineteenth century economic history. It also provides a role model for other studies of the historical geography of Latin American pastoralism, with Dr Bell modestly suggesting a number of areas for 'further research'.

JOHN DICKENSON

SHAWN EVERETT KANTOR, *Politics and property rights: the closing of the open range in the postbellum South* (University of Chicago Press, 1998). x + 187 pp. 30 tables; 2 figs. £35.95 (hbk); £14.50 (pbk).

Building on the author's 1991 doctoral dissertation at the California Institute of Technology, this compact study addresses the circumstances leading to institutional change. It does this using the specific lens of fencing reform, namely the drive to enclose livestock through the 'stock law' in postbellum Georgia. Although Georgia's General Assembly provided the opportunity for counties to adopt the stock law through referendums in 1872, there was no response before 1881. Why was something promising a net benefit slow to appear?

Assuming that individuals act from economic self-interest, Shawn Kantor's study argues that at least in this part of the world economics rather than class or ideology motivated the enclosure debates. Kantor uses both qualitative and quantitative research methods but it is his multivariate regression analyses that constitute his major contributions. Estimating the economic impact at the county level in 1880 of adopting the stock law in that year – a truly complex exercise – Kantor finds that only a minority of counties with expected net gains had adopted the innovation by 1882. Picking up on the contemporary idea that fence reform needed to mesh with meaningful geographical units, the author narrows his focus on slow innovation still further, providing case studies of the fence debates in two upcountry counties, both of which have been a focus of earlier work on the topic. Analysing census data and voting records, he

identifies how various groups sided in the fence debates and shows that distributional conflicts hampered reform. Further legal reforms in the early 1880s made it easier to build a winning coalition in some district referendums, not least through the provision of pasturing to tenants set to lose access to the open range.

Within its own terms of reference, the research in this study is impressively thorough. For all of its rigour, however, the book glosses over important matters. In the push to tell the reader how we should decompose the dynamics of institutional change, the author understandably begins with much on theory but he gives very little by way of vital regional background. Although Kantor treats regional issues from beginning to end, it is strange to find no maps, not even for 'the six conventional regions of Georgia' (p. 29). Behind the tort reforms at issue lay a series of varied and changing agrarian systems. The importance of their diversity is glimpsed at times in the quoted material from contemporary sources but we are never given a clear sense of the farming systems present. For example, improved breeding as a motive to push for the stock law is raised at various points in the text (pp. 22, 33 and 46) but there is no sustained discussion of the topic. Some of the quoted contemporary comment brings up important factors, such as the vital presence of a water supply on fenced range, which receive no further consideration in the analysis. Although the author argues the need to examine institutional development at the level of specific societies (p. 9) and concludes that we cannot separate the economic from the political and the social (p. 145), there is little explicit attention to society in his account of fence reform.

Overall, I find this book of mixed value. The succinct epilogue will probably give agricultural historians most of what they need from it. Kantor succeeds unequivocally in showing us that some of the earlier categorizations in the fence debates need refinement; we can no longer view landowners, tenants or labourers as taking their stands *en bloc*. He succeeds also in making the case for more local case studies that probe the regional support bases for Populism in the 1890s. Yet, while Kantor criticizes earlier historians of fence reform issues for providing insufficient historical context, the historical focus in his own study is extremely narrow; there is little broader context here on the enclosure of open range. Kantor's criticisms of earlier authors, especially the historian Steven Hahn, have a hectoring quality; in my view they do not compel. The author succeeds in making the basic argument that economic concerns drove much of the debate for adoption of the stock law but his insistence on playing down cultural components jars. How, for example, can he deny the importance of class, then write of 'yeomen farmers' stifling the enclosure process in certain districts, or of 'large planters' seeking redress at the state legislature (p. 84)? Much of the evidence drawn from contemporary sources to support the economistic argument developed in this study is open to broader interpretation. To approximate more closely the reality surrounding the fencing issue in postbellum Georgia, we still need research open to synthesizing the findings of both 'traditional' historical researchers and the 'sophisticated' world of the cliometricians.

STEPHEN BELL

DAVID GODDEN, *Agricultural and resource policy: principles and practice* (OUP Australia and New Zealand, 1997). xv + 408 pp. 35 tables; 92 figs; 22 boxes. £40.

Discussions of public policy towards agriculture and natural resources tend to be dominated by the north Atlantic perspective. Thus a textbook explicitly written from the opposite compass point appears refreshing at first sight. After all, Australia has produced an agrarian political party (formerly the Country Party, now the National Party) displaying a curious mélange of conservatism and radicalism, and this should be sufficient to rouse a scintillating debate. However, Godden's approach is to set down fundamental principles for policy analysis, hoping that their illustration with local, contemporary applications will not cause them to become too swiftly dated. To achieve this, he uses the theoretical framework of public choice theory – effectively, the application of neoclassical economic principles to political processes. Whilst it yields some useful insights, such an all-embracing, ahistorical outlook frequently neglects the contingent factors influencing policy processes and may disappoint readers familiar with the broader narrative scope of economic history.

The book is divided into four parts. The first establishes Godden's overall outlook, beginning with a mildly critical review of Pareto's model of welfare. This dismantles some key assumptions, using modish perspectives from institutional economics with respect to transactions costs, externalities, public goods and moral hazard. The naïve view of policy processes, wherein disinterested, altruistic actors struggle to achieve socially optimal outcomes, is discarded for the more realistic 'market for votes' approach, in which sophisticated lobbyists shuffle options with pork-barrelling politicians. Whilst explaining more, unhappily public choice theory still doesn't explain enough. For instance, it neglects the curious twist, increasingly evident in the US and Europe, of lobbying in pursuit of altruistic ends, on behalf of the environment and alleviation of global poverty but also (more recently) the improvement of animal welfare. One might almost argue (in line with some conclusions of experimental economics) that participants in the policy

making process, educated with such textbooks, are more likely to behave in the way the perspective suggests: public choice theory could well become a self-fulfilling prophecy.

The book proceeds to an exploration of policy issues in the remaining three parts. Two sections deal with the agriculture and natural resource sector itself (looking initially at input and product markets, and then at structural change); and the concluding section examines the relative balance of policy emphasis on this and all other sectors of the economy. A substantial core of the text relies on equations, graphs and other kinds of formal reasoning, thoroughly familiar to anyone who has a neoclassical schooling and thoroughly unpalatable to anyone who has not. However, a couple of chapters stand out, as they grapple with exciting and more generally relevant issues.

The discussion of water resources in Chapter Four is a good example of the insights that can be gleaned, although my own came in reaction to, rather than as a consequence of, the arguments Godden provides. He starts by noting that water restrictions affecting urban consumers in Australia are often imposed, even when supplies are abundant, as the government 'apparently wanted to demonstrate to its rural constituency that metropolitan residents were sharing the pain' (p. 125). Unfavourably dissecting the complex web of special-interest exchanges made in water pricing and allocation, he concludes that prices should more accurately reflect the opportunities provided and alternatives foregone. This unfortunately overlooks the earlier critique of standard economic analysis, the intelligent conclusion from which is that large corporate utilities and governments influence 'free' market prices to the extent that they bear little relation at all to underlying costs and benefits.

Chapter 10 discusses the aborigine issue, a source of increasing angst and controversy in Australia, and provides further distinctiveness to this textbook. The discussion is, effectively, in three sections. The first is a case-study of the effects of extremely unequal resource distribution on a single aboriginal village community. The second, an analysis of the deficiency of the legal decision to grant common law land title to aborigines, leaving open the possibility of statutory extinction of title by the state or federal legislatures. The third is most remarkable, since despite the preceding sections, it embarks upon a standard social welfare analysis of the effects of white settlement on output, distribution and productive efficiency. This cultural insensitivity, treating all actors in the policy process as if they share the neoclassical vision of discrete, utility-maximising individuals, is breathtaking in its neglect of the magnitude of historical context. Presumably, if aboriginal people had already had, or at least acquired, the mind-set of Anglo-American capitalism, there would not have been a problem in the first place. For a more enlightened approach, yet still within the domain of economic thinking, see Clive Hamilton's discussion of the same question in *The mystic economist.*

Soundly and efficiently produced, this is nevertheless a rather dull book. Its market is assured, not by popular appeal, but by desiccated adherents to the conventional wisdom who will undoubtedly recommend it to their students.

PETER MIDMORE

SUSAN J. BUCK, *The global commons: an introduction* (Earthscan, 1998). xiv + 225 pp. £14.95

The commons have long been central to agricultural history – from the management of herds by pastoralists to the enduring open-field system, from the co-management of forests and fisheries to twentieth-century machinery rings. Get the rules right and trust right, and natural resources can be managed and used sustainably to the wider benefit of rural people. Get them wrong, or see them undermined by external stresses and shocks, and both social structures and the resources themselves can be rapidly diminished.

Recent years have seen a rapid growth in interest amongst political scientists in how different configurations and stocks of social capital can affect the natural environment. Social capital is taken to be the relations of trust, reciprocal exchanges, and common rules and norms embedded in institutions. Social capital is an asset that gives value when used. It can also be run down when ignored or when people fail to invest in it. Social capital is a vital part of any attempt to seek more sustainable solutions to resource, and particularly common resource management.

This book, *The global commons*, addresses local, national and international interactions with four global commons, namely Antarctica, the oceans and seabeds, the atmosphere, and space. Until recently, these commons have been sustained largely because we did not have the technologies to extract value from them. That has now changed. All four commons are being steadily overused through resource removal, waste assimilation and various forms of pollution. The core problem, of course, is that the appropriate legal and institutional mechanisms for establishing fair and sustainable property rights over these commons lag far behind our capacity to exploit them. As a result, private stakeholders, whether individuals or companies, tend to overuse them and underinvest in them.

The four cases themselves will interest agricultural

historians less than the analytical framework, which is relevant to many wider contexts. It draws on the history of the development of western law, the property rights paradigm, national sovereignty and bundles of property rights held in the international arena, and the ideas underpinning the common heritage of mankind. The framework itself incorporates regime theory and institutional analysis to come up with a set of eight clearly defined design principles for sustainable regimes for the commons.

As Elinor Ostrom says in the foreword 'our future is dependent on our joint use of the global commons'. This book is a welcome, albeit relatively short contribution to the complexities of these challenges, and provides useful pointers to further analysis.

JULES PRETTY

Society Notes and Queries

Annual report to members, 1998–1999

At the Annual General Meeting on 8 April 1998, Dr Joan Thirsk retired as president after a distinguished incumbency, and was succeeded by Prof. E. J. T. Collins. Dr A. D. M. Phillips stepped down as editor of *Agricultural History Review*, being replaced by Professor R. W. Hoyle, with Dr J. R. Walton as book review editor in place of Prof. D. Hey. Dr P. E. Dewey was elected as secretary: Professor M. Overton as Treasurer. There were some organisational changes: the Treasurer's office moved from Reading to Exeter and the membership roll was computerised. The printing of the *Review* was transferred (from volume 47 part one) to Carnegie Publishing of Lancaster.

The Society held three successful conferences during 1998. The Spring Conference was held at Walford College near Shrewsbury. A total of nine papers were presented. The Society is grateful to Dr Paul Stamper for acting as conference secretary. The Autumn Conference was held at the University of Central Lancashire on the subject of 'Land, Family and Estates'. The Winter Conference, 1998 was held, as usual, on the first Saturday in December. Its theme was 'Religion in the countryside'.

At the AGM held at the society's Spring Conference held at Caythorpe College near Grantham, Lincolnshire. Professor Mark Overton was able to report that over the previous year, individual membership had risen slightly from 495 at 1 February 1998 to 509 at 1 February 1999. Sales of the *Review* to libraries and institutions had fallen slightly over the year. Overall the society's position on membership was very satisfactory, and the indications were that we were continuing to attract new members at the same rate as in previous years. Professor Overton reported that the overall financial position of the society remained healthy, with a surplus over the year of 5.8k and assets of over 64k. The income and expenditure account showed a substantial rise in income from sales, reflecting the rise in the price of the *Review* to institutions. On the expenditure side, the printing costs of the *Review* had risen considerably reflecting both an increase in printing charges and larger issues of the *Review*. In view of the balance of income over expenditure and of the reserves, there would be no need to raise subscriptions in the near future.

The society's full accounts can be obtained from the Treasurer's office at Exeter.

Postgraduate bursaries

It has always been the intention of the society to encourage postgraduates to attend the society's conferences and has made bursaries available to assist with their travelling and other expenses. Postgraduate students who wish to take advantage of this should write to the Secretary of the Society, enclosing a brief letter of support from their supervisor.

Work in progress

From time to time the society has published a directory of researchers into the history of agriculture and the history of rural society either working in the British Isles or researchers based abroad concerned with the rural history of the British Isles. No one is excluded from these lists: we hope to make them as comprehensive as possible. Dr Bethanie Afton has agreed to collate a new list of work in progress for the society. Forms are included with this issue of the *Review*, but anyone wishing to be included in the next work in progress is invited to send her their names, contact address (including e. mail address), institutional affiliation and up to 25 words describing their current areas of research before 1 June 2000. Dr Afton can be reached c/o the School of History, University of Nottingham, University Park, Nottingham, NG7 2RD, e.mail bethanie.afton@Nottingham.ac.uk.

British Agricultural History Society Forthcoming Conferences, 1999–2000

Winter Conference 1999

Saturday 4 December 1999
at the Institute of Historical Research, London

Prof. Christopher Dyer (Birmingham)
'Conflict over Commons in the Later Middle Ages'

Dr Steve Hindle (Warwick)
'Rights, Regulation and Residence: continuity and change in the English manor, *c.* 1550–1650'

Dr Leigh Shaw-Taylor (Jesus College Cambridge)
'Did Agricultural Labourers Have Common Rights? The evidence of contemporary comment'

Prof. Alan Everitt (Leicester)
'Commons and Communities: some themes in their later History'

The Society's Spring Conference, 2000

will be held at Bretton Hall College, near Wakefield,
Monday 10 April – Wednesday 12 April.

The provisional programme includes
Prof. Richard Britnell, 'Fields and moorlands in County Durham before the Black Death' * Dr Jane Whittle, 'Bread, cheese and ale: women's work in the production and marketing of basic foodstuffs in rural England, 1300–1750' * John Letts, 'The analysis of cereals from medieval thatched roofs' * David Stead, 'The business of farming, *c.* 1700–1850' * Dr David Brown, on the motives for parliamentary enclosure * Dr Nicola Verdon, 'A concealed presence? New perspectives on women's employment in the nineteenth century countryside' * Anne Meredith, 'Middle-class women in agriculture and horticulture, 1890–1939'

Full details will be circulated in January or may be obtained from the society's website, WWW.BAHS.org.uk.

Roots of Change
Farming and the Landscape in East Anglia, *c.*1700–1870
Susanna Wade Martins and Tom Williamson

East Anglia has long been regarded as the cradle of the eighteenth-century 'Agricultural Revolution'. This well written and attractively illustrated volume presents a comprehensive reassessment of agricultural change in Norfolk and Suffolk in the period 1700–1870, drawing on a wide range of evidence, including that provided by landscape archaeology, farm building studies and previously neglected archive sources. The revolution is examined from the ground up, with a great sympathy on the part of the authors for the practicality of farming and the plight of farmers and labourers trying to make a living from the soil. The authors come to question many traditional assumptions, including the role of 'great estates' in agricultural change. This is a necessary book for all interested in the history of farming, in man's use and exploitation of the countryside, and in the history of East Anglia.

Roots of Change is published by the British Agricultural History Society, the pre-eminent society for all interested in the history of agriculture, rural society and landscape. The society is the publisher of *Agricultural History Review* which is issued twice annually, and it holds several conferences each year. Individual membership of the society is open to all who supports its aims and costs £15.00. Members of the society for the year 1999–2000 will receive *Roots of Change* gratis.

Roots of Change is available from booksellers for £17.50 ($35.00), or direct from the society for personal purchasers for £12.50 (post free) until 31 January 2000, thereafter £17.50. The price for institutional purchasers is £17.50. All prices are post free.

Bibliographical details: 'Roots of Change' is *Agricultural History Review* Supplement Series 2, x + 214pp, 19 maps and photographs. ISBN 0-9536668-0-8. Also available, Adrian Hall, 'Fenland worker-peasants. The economy of small-holders at Rippingale, Lincolnshire, 1791–1871' (*Agricultural History Review* Supplement Series 1, 1992, £10.00).

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