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*

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Social Protest and Public Order

T L RICHARDSON

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The Agricultural Labourers' Standard of Living in Lincolnshire, 1790–1840: Social Protest and Public Order

By T L RICHARDSON

Abstract

In trying to establish what happened to the standard of living of the rural labouring classes in Lincolnshire two statistical variables, the cost of living and the earnings of adult male labourers, have been constructed to determine the long-run trend of real wages. The analysis shows that the cost of living was the dynamic variable in the real wage equation and that in the short-run, as during the French wars, volatile price movements had a devastating effect upon the purchasing power of wages. The level of employment and incomes after 1815, though varying between upland and clayland areas, was a potent cause of distress and class conflict. In analysing the shift in emphasis from overt to covert expressions of anger, attention is paid to the collective response of the county's ruling order to the threat from below and the mechanisms of control that were used to restore law and order.

IN RECENT years an increasing amount of systematic research has been directed towards quantifying changes in rural living standards and identifying the principal causal factors behind the rise in social unrest during the later eighteenth and early nineteenth centuries. As a result of this interest, historians have a much clearer understanding of the underlying causes of class conflict, the character of social protest, and the incidence of popular disturbances in the eastern and south-eastern counties.¹ Despite this advance in knowledge, however, more area studies need to be undertaken before the areas of contention which have arisen out of this work

can be satisfactorily resolved.² In order to understand the precipitating factors behind the upsurge in overt and covert forms of rural protest, for example, much more statistical information is required on the relationship between wages and the cost of living. Similarly, although historians know much more than hitherto about the timing and scale of the labourers' protest movement, very little detailed information is available on the mechanisms that were created to suppress public displays of anger towards private property and the established landed order. In acknowledging the need for more specific information on these issues, this essay will examine the case of the Lincolnshire agricultural labourers. In order to obtain a quantitative measure of the standard of living, the same methodological approach

¹ T L Richardson, 'The Agricultural Labourers' Standard of Living in Kent, 1790–1840', in D Oddy and D Miller, eds, *The Making of the Modern British Diet*, 1976, pp 103–16; T L Richardson, 'Agricultural Labourers' Wages and the Cost of Living in Essex, 1790–1840: A Contribution to the Standard of Living Debate', in B A Holderness and M Turner, eds, *Land, Labour and Agriculture, 1700–1920: Essays for Gordon Mingay*, 1991, pp 69–90; R A E Wells, 'Social Conflict and Protest in the English Countryside in the early Nineteenth Century: A Rejoinder', in M Reed and R Wells, eds, *Class, Conflict and Protest in the English Countryside 1700–1800*, 1990, pp 65–81. This article was first published in 1981; J E Archer, *By a Flash and a Scare. Incendiarism, Animal Maiming, and Poaching in East Anglia 1815–1870*, Oxford, 1990.

² R A E Wells, 'The Development of the English Rural Proletariat and Social Protest, 1700–1850', A Charlesworth, 'The Development of the English Rural Proletariat and Social Protest, 1700–1850: A Comment', and J E Archer, 'The Wells–Charlesworth Debate: A Personal Comment on Arson in Norfolk and Suffolk' in Reed and Wells, eds, *op cit*, pp 29–53, 54–64, 82–9. These articles were first published in 1979, 1980, and 1982 respectively.

to that used in studies of Kent and Essex is employed.³ In particular, the interaction of two statistical variables, the wage earnings of agricultural labourers and the prices of foodstuffs, is examined in order to determine the long-run trend of real wages. Short-run fluctuations in the purchasing power of wages are then considered in order to throw more light upon the nature of socio-economic relationships in the Lincolnshire countryside.

As most studies of Lincolnshire's agricultural revolution place the landowning and farming classes at the centre of their analysis, the rural labouring classes have long remained neglected figures in the Arcadian landscape.⁴ Indeed, most of our knowledge about the agricultural labourers' standard of living is limited to a small number of contemporary printed sources which invariably depict the labourer in a somewhat flattering light. The reclamation and enclosure of the county's 'wild and trackless' wastelands, and the laying down of the fens, heath, and wolds to high-yielding labour-intensive tillage crops, it is emphasized, made exceptional demands upon an indigenous labour force whose short-run supply curve was relatively inelastic. At times, the shortage of labour on the newly drained fens, and the recently enclosed chalk and limestone uplands was so acute that many arable farmers were obliged to recruit gangs of female and juvenile workers from the populous 'open' parishes, and engage sizeable numbers of itinerant Irish labourers to perform the more pressing tasks on the land.⁵ Long-term and short-term seasonal imbalances between the demand and supply of labour, it is frequently stressed,

enhanced the labourers' bargaining power with their employers. According to one authority, agricultural wages were 'not fixed by any precise rules', but rather by what the market would bear, and therefore 'the labourer exacts the utmost he can get'.⁶ The prevalence of this practice, especially in areas of low population density such as the fens, wolds, and heath, tended to exert an upward pressure on wage rates and piece work earnings. As Arthur Young noted, the 'scarcity of hands' invariably raised the price of labour, thus making agricultural wages in Lincolnshire 'higher than in any other county in the kingdom'.⁷ Furthermore, the landed classes were celebrated for the paternalism they showed towards their work-force. The provision of cow-garths and allotments, it is emphasized, forged a strong bond between farmers and their men, and this made for stability and harmony in the countryside.⁸

In the light of what is known about the incidence of social conflict in the eastern and southern counties, it is evident that the conventional portrayal of Lincolnshire rural life can no longer be accepted uncritically and is therefore in need of revision. Indeed, this essay, in challenging the traditional view, will argue that over a large number of years the labouring classes experienced, and protested angrily against, a deterioration in their material standard of living. During this period the Lincolnshire countryside, far from being a place of peace, stability, and communal harmony, was characterized by violence, discord, and class antagonism.

I

The statistical evidence used to construct a price index has been derived from a

³ Richardson (1976), *op cit*, pp 103-16. Richardson (1991), *op cit*, pp 69-90.

⁴ J Thirsk, *English Peasant Farming. The Agrarian History of Lincolnshire from Tudor to Recent Times*, reprinted 1981; D Grigg, *The Agricultural Revolution in South Lincolnshire*, Cambridge, 1966; T W Beastall, *The Agricultural Revolution in Lincolnshire*, Lincoln, 1978.

⁵ Thirsk, *op cit*, pp 217, 260, 268, 271, 308-9. Grigg, *op cit*, pp 3-4, 48, 192.

⁶ T Stone, *General View of the Agriculture of the County of Lincoln*, 1794, p 24.

⁷ A Young, *General View of the Agricultural of Lincolnshire*, 1813, p 451.

⁸ *Ibid*, pp 459-69.

TABLE I
Distribution of Household Expenditure on
Food and Drink

	%
Bread	66.1
Meat	14.6
Cheese	5.9
Butter	6.8
Sugar	4.3
Tea	2.3
Total	100.0

number of household and market accounts in nine areas of the county: Belton, Stretton, Gedney, Doddington, Lindsey, Horncastle, New Bolingbroke, Boston, and Grantham. These data embrace the prices of bread (the quartern loaf), meat (beef), cheese, and butter. The prices are annual average weekly prices, and have been weighted according to the amount of expenditure laid-out on these items in agricultural labourers' household budgets.⁹ According to David Davies, two-thirds of total household expenditure was allocated to food and drink, and about ninety-three per cent of this outlay was spent on bread, meat, cheese, and butter:¹⁰

The weights derived from this pattern of expenditure have been applied to the price data to produce a simple base (1790) weighted index of food prices.¹¹ The data used to construct an index of agricultural earnings, based upon 1790, have been

derived from the wage labour accounts of the Ancaster and Monson estates at Stamford, Normanton, and Burton.¹² In order to obtain a measure of the purchasing power of wages, the wage earnings index has been deflated by the price index to obtain a real wage index.¹³

It is evident from Figure 1 that agricultural wages were relatively 'sticky' in the short-run and, as in the case of Kent and Essex, generally failed to keep pace with the more volatile movements in the cost of living. Prices in Lincolnshire moved in phase with those in Kent and Essex, with major peaks being experienced in 1795-6, 1800-1, 1805, 1812, and 1817, and a deep trough in 1822.¹⁴

The differential movement of prices and wages during the Napoleonic wars had a devastating effect upon the purchasing power of wages in many areas of the county. Although the costly agricultural improvements carried out on the limestone uplands and fens made exceptional demands upon the indigenous labour force, thus precipitating, at Stamford, a rise in agricultural wages from 9s to 12s a week between 1790 and 1810, real wages fell as faster rising prices outstripped agricultural earnings.¹⁵

In the country at large, as Wells has demonstrated, acute food storages during the Napoleonic wars gave rise to a number of subsistence crises.¹⁶ A bout of severe weather in 1794-5, which reduced Lincolnshire's wheat crop by a quarter of its normal size,¹⁷ resulted in a 37 per cent

⁹ Lincolnshire Record Office (LRO), Monson 12 Household Bills and Vouchers. Ancaster VII/d/4-5, Miscellaneous Deposits. 150/1-2, Farm and Household Account Book of J Hutchinson of Gedney. Harris, III/A/4/3, Lindsey Insolvent Debtors Account Books 1-5. *The Lincoln, Rutland and Stamford Mercury*. The households made regular weekly purchases of small quantities of foodstuffs. The remaining prices are market, or retail, prices quoted at length each week in the local press. Insolvent Debtor's Books include the accounts of local food dealers, especially retailers, and thereby contain information on local prices. J Blackman, 'The Development of the Retail Grocery Trade in the Nineteenth Century', *Business History*, IX, 2, July 1967, pp 112-13.

¹⁰ D Davies, *The Case of Labourers in Husbandry Stated and Considered*, 1795, p 176. Sugar and tea have been omitted from the index owing to a lack of data.

¹¹ In constructing the index, the proportionate change in the price of each commodity each year, relative to its price in 1790, is multiplied by its weight to provide a base weighted index of price relatives.

¹² LRO. 2 Anc, 9/15/165-7. 3 Anc, 6/24-5, Labour Accounts at Stamford and Normanton. Monson 12, Wage Accounts at Burton, 2/2/4/1-7, 1/2/10/2-3, 10/4B/12-13. 23/8/1. Brace Estate Accounts at Crowle.

¹³ The index of agricultural labourers' wages is an unweighted index based, as in the case of the price index, upon the year 1790.

¹⁴ Richardson (1976), *op cit*, p 109. Richardson (1991), *op cit*, p 75.

¹⁵ Appendix I. Complaints about the 'scarcity of hands' were commonplace. *Annals of Agriculture*, XIX, 1792, pp 57, 188. *The Farmer's Magazine*, XVII, 1804, p 119. Young, *op cit*, pp 444-5.

¹⁶ R Wells, *Wretched Faces, Famine in Wartime England 1793-1801*, Gloucester, 1988.

¹⁷ Sir F Hill, *Georgian Lincoln*, Cambridge, 1966, p 171. A similar shortage was experienced in Essex. Richardson (1991), *op cit*, p 78.

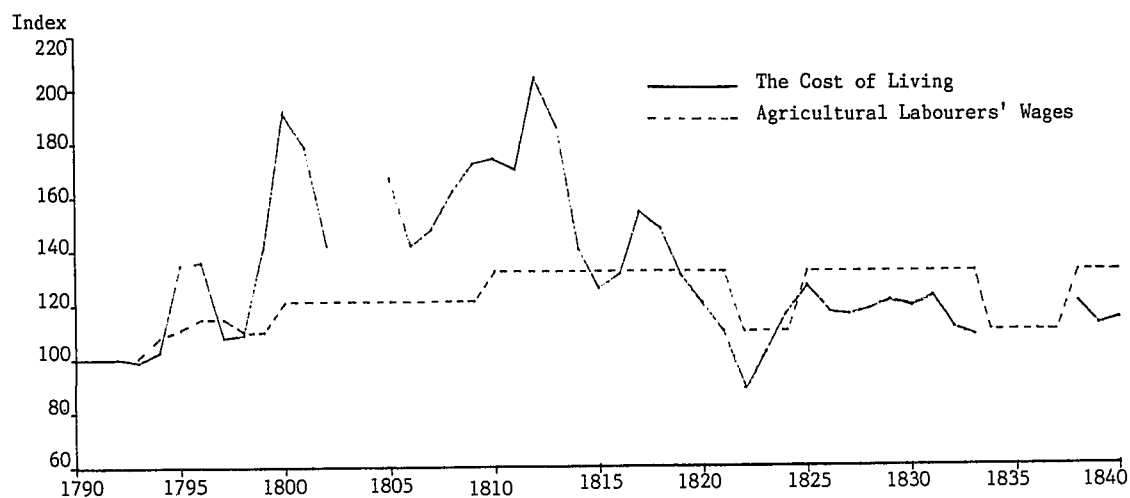


FIGURE 1

Agricultural Labourers' Wages at Stamford and The Cost of Living, 1790 = 1840 (1790 = 100).

TABLE 2
Comparative Changes in the Prices of
Foodstuffs and Agricultural Labourers'
Wages in Lincolnshire 1790-1812
(1790 = 100)

	1795	1800	1812
Quartern Loaf (Wheaten)	+ 37	+ 97	+ 109
Beef (lb)	+ 29	+ 77	+ 82
Cheese (lb)	+ 36	+ 55	+ 120
Butter (lb)	+ 29	+ 24	+ 88
Agricultural Wages	+ 11	+ 22	+ 33
Real Wages	82	63	65

increase in the price of bread – the staple of the labourers' diet. As prices out-ran wages the index of real wages fell to 82, thus prompting the comment that 'fluctuations in the prices of the necessities of life makes what a good day's wage twenty years ago, a starving one now'.¹⁸ In the circumstances, labouring families were obliged to substitute cheaper foodstuffs for the more expensive ones in their dietary. At Stainby, Asgarby, and South Ormsby, for example, bread made from a mixture of potato, barley, and rye flour replaced the much preferred wheaten

bread. As one correspondent to the *Annals of Agriculture* noted,

People like to eat wheaten bread of the finest sort; though a great many, of all descriptions, use rye and barley bread: but potatoes are much grown, and used as an excellent substitute, every where in this county.¹⁹

The dietary evidence of the time indicates that, as a result of the necessary reordering of household expenditure, many families had to subsist on modest amounts of tea, potatoes, and oatmeal, supplemented by small quantities of butter, beef, and mutton 'whenever they can possibly be obtained'. Bacon also disappeared from their tables. As Arthur Young and Eden observed, the rural labouring classes 'consume very little meat' and eat 'a good many potatoes'.²⁰

Various efforts were made, at the national and local level, to alleviate the food shortage and offset the severity of inflation upon low-income groups.²¹

¹⁸ A Native of the County, *Essays on Agriculture Occasioned by Reading Mr Stone's Report on the Present State of that Science in the County of Lincoln*, 1796, p 35.

¹⁹ *Annals of Agriculture*, XXIV, 1795, pp 122, 127, 280. In south Lincolnshire, rice, potatoes, barley, and oats were substituted for wheaten flour. Grigg, *op cit*, pp 38, 77. Indeed, 'The Home Office seized every opportunity to recommend wheat substitutes ...' Wells (1988), *op cit*, p 206.

²⁰ F M Eden, *The State of the Poor*, ed, A G L Rogers, 1928, pp 233-6. Young, *op cit*, p 460. Wells (1988), *op cit*, p 62.

²¹ Wells (1988), *op cit*, pp 202-18.

Bakers were urged to make brown bread instead of white, whilst county magistrates sitting at the Midsummer Quarter Sessions, on the receipt of a circular letter from Pitt, agreed to implement the recommendations of the Privy Council and reduce their consumption of the best wheaten flour 'so as to leave a larger supply of the necessary Article of Food for the People ... and relieve them from their present Difficulties'.²² Elsewhere in the county the magistrates pursued the government's policy of weaning consumers away from fine wheaten bread in order to encourage the consumption of bread made from mixed grains.²³ At the Lindsey Quarter Sessions, for example, the magistrates, on two occasions, resolved to consume 'only mixed Bread, of which no more than two-thirds shall be made of wheat ... and prohibit in our families the use of wheaten flour in pastry'.²⁴ In addition to public spirited declarations such as these, a number of well-intentioned steps were taken to retail rice, potatoes, and herrings to distressed families at subsidized prices. Public subscription funds were established in many parts of the county in order to provide cheap bread and flour to the poor. In this way, rice could be had for 3d a pound at Stamford, whilst the labouring classes of South Ormsby, 'relieved by subscriptions from the opulent', were sold bread 'much under its value according to the price of corn'.²⁵

Despite these attempts to temper the worst effects of the food scarcity, soaring prices and falling real wages in Lincolnshire resulted, as in other parts of the country, in a souring of social relationships and sporadic outbreaks of unrest.²⁶ To a

large extent the anger shown by the rural populace was conditioned by the large scale movement of farm produce out of the county. Indeed, by the time of the French wars Lincolnshire was linked, via a well-developed network of road and water communications, to a vast market area which reached from London to Yorkshire. Each year prodigious quantities of cereals, potatoes, poultry, and butchers' meat were sent to this market.²⁷ This 'export' trade had two main effects upon the standard of living. First, food prices in Lincolnshire moved into line with those in the wider London-dominated market. As Thomas Stone noted, mutton, pork, beef, and bread in Lincolnshire were 'nearly as dear as in London'.²⁸ Secondly, the large scale movement of foodstuffs out of the county seriously diminished local food supplies at a time when they were already at a low level. This intelligence was the cause of considerable resentment amongst the local community. As one critic pointed out, such was the profitability of the corn trade that Lincolnshire farmers were unwilling to retail corn to their labourers, 'even for ready money', because they could get more by selling their crop in bulk to the wholesale trade.²⁹

As Thompson and Wells have shown, in the belief that scarcity was the product of human artifice, the popular response to those who were perceived to be violating the traditional values of the 'moral economy' often took an uncompromising form.³⁰ In many parts of Lincolnshire, at a time when violent demonstrations were breaking out in many counties, butchers,

²² *The Stamford Mercury*, 24-31 July 1795, pp 2-3.

²³ Wells (1988), *op cit*, p 210.

²⁴ LRO, Lindsey Quarter Sessions, Kirton, 18 July 1795 and Spilsby, 14 January 1796, *The Stamford Mercury*, 5 February 1796, p 1.

²⁵ *Annals of Agriculture*, XXIV, 1795, p 280. *The Stamford Mercury*, 14 August 1795, p 2; 27 May 1796, p 3. Hill, *op cit*, p 171.

²⁶ Wells (1988), *op cit*, *passim*.

²⁷ C W J Grainger and C M Elliott, 'A Fresh Look at Wheat Prices and Markets in the Eighteenth Century', *Econ Hist Rev*, 2nd series, XX, 2, 1967, pp 257-65. Grigg, *op cit*, pp 46, 71, 162. Stone, *op cit*, pp 30, 44-5, 61, 95. J A Clarke, 'On the Farming of Lincolnshire', *JRASE*, XII, 1851, pp 334-67.

²⁸ Stone, *op cit*, pp 25, 44-5.

²⁹ A Native of the County, *op cit*, pp 33-4.

³⁰ E P Thompson, 'The Moral Economy of the English Crowd in the Eighteenth Century', *Past and Present*, 50, February 1971, pp 76-136. Wells (1988), *op cit*, p 80.

millers, bakers, butter dealers, and the carriers and shippers of farm produce were frequently the victims of the crowd's hostility.³¹ At Grantham, for example, a crowd of angry women attempted to prevent the corn waggons from leaving the area, whilst at Stamford the corn dealers were verbally abused and pelted by an outraged mob. Similarly, following the circulation of a number of 'inflammatory handbills' in Gainsborough, a crowd of women, led by a drummer, assembled to hold-up the corn barges on the Trent. The actions of forestallers and regraters were also the cause of some resentment. A riot broke out at Folkingham fair, for example, when a regrater was observed buying large quantities of butter; and butter dealers were also attacked, and had their wares confiscated, by an incensed crowd at Gainsborough. In view of these public displays of violence, the county magistrates waged a campaign against anyone who interfered with the free working of the market economy. In the case of Stamford, where millers had been assaulted by an angry crowd, the mayor and magistrates threatened to imprison 'any person or persons [who] shall obstruct the sale of any corn, or any other commodity, raise any manner of disturbance, or take any one step to hinder the business and dealings of people'. The authorities were also concerned over intimidatory acts aimed at lowering food prices. An anonymous letter, sent to a miller in Market Deeping, for example, threatened the destruction of his mill if the price of flour was not lowered. At Holbeach a large crowd assembled to demand a reduction in the price of bread and meat. The gathering so alarmed the authorities that the Long Sutton and Spalding Troops of Yeomanry Cavalry were hastily called out to restore order. Similarly, in the

Wainfleet area high food prices provoked an attempt to raise agricultural wages.³² As far as the farming and commercial classes were concerned, such attempts to interfere with the free working of the market were abhorrent because, as a correspondent to the *Stamford Mercury* put it, 'The Law of God forbids it, The Law of Man punishes it, and the Devil takes delight in it'.³³

In many parts of the country a fresh wave of rioting broke out in 1800, even though the national food supply was better placed than in 1795.³⁴ In Lincolnshire the prices of meat, cheese, and bread, as shown in Table 2, soared to new heights, thereby reducing the real wage index, at sixty-three, to its lowest point of the war. The authorities, with memories of 1795 in mind, reaffirmed their adherence to traditional trading practices. Magistrates meeting at Holland, Bourne, and Sleaford Quarter Sessions in January 1800, for example, prohibited the making and sale of any bread that was superior in quality or higher in price than the standard wheaten loaf. Public subscription funds were established to provide cheap corn and soup to the poor, and various Associations for the Prosecution of Forestallers were set up to monitor trading standards. Despite these efforts, sporadic outbursts of violence were reported in a number of areas. A threatening situation developed at Stamford, for example, when a mob assembled to protest against the 'extravagant price of provisions' and the small size of the loaf. Shop windows were smashed during the disturbance and the local Volunteer Infantry were called out to help the civil authorities restore order. Three days later, anticipating more trouble, 100 special constables were sworn-in by the

³¹ Wells (1988), *op cit*, p 113. Richardson (1991), *op cit*, pp 79-80. *The Stamford Mercury*, 24 July 1795, p 3.

³² *The Stamford Mercury*, 15 May 1795, p 4; 24-31 July 1795, pp 1-3; 7 August 1795, p 3; 26 February 1796, p 3; 18 March 1796, p 3. Grigg, *op cit*, p 38.

³³ *The Stamford Mercury*, 7 August 1795, p 3.

³⁴ Wells (1988), *op cit*, pp 99, 119. Richardson (1991), *op cit*, pp 81-2.

magistrate to supplement the existing forces of law and order. Similarly, a 'violent demonstration' took place against the shopkeepers of Brank Broughton, and other protest meetings took place in and around Tattershall, Boston, Lincoln, Sleaford, and elsewhere.³⁵

If the period between 1795 and 1800 was characterized by an upsurge in collective acts of overt protest, it was also accompanied by a determined effort by the authorities to establish an effective system of social control.³⁶ This control was achieved in two main ways. In order to strengthen the existing forces of law and order, volunteer cavalry units were established over a large part of the county; units such as the South Holland Troop of Yeomanry Cavalry – a 'formidable body of men, ready to act in the defence of their vicinity'. Other Cavalry Troops were raised at Louth, Lincoln, Bourne, Grantham, Spilsby, Horncastle, Folkingham, Stamford, Sutton, and Holbeach. On numerous occasions this 'massive force of armed amateurs', along with large numbers of hastily sworn-in special constables, were called upon by the Justices to disperse rioting crowds and restore order.³⁷ Secondly, in order to curb the widespread prevalence of non-protest rural crime, such as poaching, arson, and theft, a large number of Associations for the Protection of Property and the Prosecution of Felons was established in the county.³⁸ Rewards to attract informers were published in the local press.³⁹

Sheep stealing	Twenty guineas
Firing stacks and stealing livestock	Five guineas
Stealing poultry or grain	Two guineas
Damaging farm implements	One guinea
Robbing gardens and breaking hedges	One guinea

Over the latter years of the French war the number of collective forms of social protest declined dramatically. From that point until at least the 1840s, covert forms of protest, as Wells has argued in a wider context, became the 'most enduring mode of protest' in Lincolnshire.⁴⁰

II

If the war years were a period of falling living standards and rising social tension, the first two decades of the peace were equally distressing.⁴¹ Farm prices, after reaching their war-time peak in 1812, fell continually (except for a brief rise in 1817) to reach a trough in 1822; a year which came to be known in Lincolnshire as 'the most disastrous year in living memory'.⁴² By the end of the hostilities wheat prices were half their war-time peak and it was widely believed that the landed interest faced ruination. Arable farmers in many areas – Louth, Horncastle, Spalding, Market Rasen, Thorney, Spilsby, Long Sutton, and elsewhere – complained bitterly over the 'depressed state of the price of grain' and began to cut back on their labour force and reduce wages. As one observer noted,

Agricultural labourers have yet felt nothing of the pressure; let them also, as well as the Landlords, live rather worse ... It is now the labourers' turn: let the wages be reduced in nearly an exact proportion to the corn; and if families cannot be supported, let the parishes do the rest.⁴³

³⁵ *The Stamford Mercury*, 5-12 September 1800, p 3; 19 September 1800, p 3. *The Farmer's Magazine*, IV, 1800, p 478. Wells (1988), *op cit*, p 162.

³⁶ Wells (1988), *op cit*, p 134.

³⁷ *Ibid*, *The Stamford Mercury*, 7 August 1795, p 3; 7 July 1795, p 3; 5-12 September 1800, p 3.

³⁸ *Ibid*, 17 January 1800, p 1. Associations were formed at Horncastle, Kirton, Grantham, Folkingham, Bourne, Sleaford, Louth, Spalding, Caistor, Long Bennington, Heckington, Boston, Spilsby, Market Rasen, Alford, Grimsby, Barton, Hogsthorpe, Holland Fen, Wainfleet, Tattershall, South Cliff, Coninsby, and elsewhere.

³⁹ *Ibid*, The Deeping St James Association for the Prosecution of Felons advertised a similar scale of rewards in 1795. *The Stamford Mercury*, 3 April 1795, p 4.

⁴⁰ Wells (1979), *op cit*, p 29.

⁴¹ A J Peacock, *Bread or Blood. A Study of the Agrarian Riots in East Anglia in 1816*, 1965. E J Hobsbawm and G Rudé, *Captain Swing*, 1973. Richardson (1976), *op cit*, Archer (1990), *op cit*, Richardson (1991), *op cit*.

⁴² Grigg, *op cit*, pp 117-18, 122.

⁴³ *Ibid*, *The Stamford Mercury*, 27 January 1815, p 2; 3 February 1815, p 3; 17 February 1815, p 4.

The demand for farm servants at the statute fairs fell away, as indeed did the level of their wages, whilst the day labourers were said to be 'starving for the want of employment'.⁴⁴ In the circumstances, wage cuts were difficult to resist as magistrates in many parts of the county resolved 'not to sanctions any [poor] relief being given to the sons or daughters of husbandmen who have refused to take such wages as the present depressed state of the times will allow the farmers to give'.⁴⁵

In considering the agricultural labourers' socio-economic position after 1815, it is important to note that the impact of the post-war agricultural depression varied from one part of the county to another. On the whole, the dramatic fall in prices was much less serious for farmers on the lighter upland soils than on the heavy undrained clays. According to one authority, in the former case low prices 'seem to have acted as a stimulus to improvement', and therefore most of the agricultural progress which took place up to the middle of the century, such as the widespread adoption of an 'elegantly interlocking system' of crop and stock husbandry, tended to be confined to the heath, cliff, and wolds rather than the inhospitable cold clays. In view of this differential pattern of advance, agricultural employment and incomes on the chalk and limestone uplands fared better than on the relatively unprofitable claylands.⁴⁶

As the post-war fall in farm prices brought the cost of living down with a run, agricultural labourers in full employment were well placed to see an improvement in the purchasing power of their wages. Apart from the years 1822-4 and

1834-7, agricultural earnings at Stamford and Normanton were maintained at 12s a week throughout the post-war period and therefore real wages rose (Appendix 1). However, whilst estate labourers in regular employment experienced a rise in living standards, field labourers in the disadvantaged farming areas, such as the central clay vale, were said to be 'without the means of independently and profitably earning their bread'.⁴⁷ In addition to long-run cyclical factors, short-run seasonal changes also exerted a profound influence upon the labourers' position. A run of bad weather, especially during the 'three deplorable years' between 1826 and 1829, badly damaged the corn harvest and seriously reduced the demand for labour. The 1826 corn harvest, which was described as 'the most oppressive and the most appalling ... within the recollection of the oldest man', was accompanied by a rise in unemployment and a fall in wages as farmers sought to cut their costs and minimize their losses. According to a local report, 'The demand for labourers declines: many men are getting on the roads as many farmers who still have the power to pay them are determined to lay out as little as possible in temporary or permanent improvements'.⁴⁸ The cold spring of 1828, and the heavy rains which followed, devastated corn crops once more, as indeed did the wet, cold weather of 1829. Inevitably, these adverse conditions brought considerable distress to the low-lying claylands and marshlands and led to the 'almost total stagnation' of markets. The demand for farm servants at the hiring fairs fell away and large numbers of field labourers were 'thrown out of regular employ' and on to the roads. At times a third of the labour force, or about half the number of day labourers, were out of work in some clayland par-

⁴⁴ *Ibid.*, 12 May 1815, p. 3. Board of Agriculture, *The Agricultural State of the Kingdom*, 1816, reprinted 1970, pp. 150-2, 156-7.

⁴⁵ *The Stamford Mercury*, 1 December 1815, p. 4. Labourers who suffered from low incomes were reduced to a diet of bread, potatoes and a small amount of mutton fat. *Ibid.*, 3 November 1815, p. 1.

⁴⁶ Thirsk, *op cit.*, pp. 198, 217, 257-60, 268, 307-8. Grigg, *op cit.*, pp. 117, 126-8, 137, 144-5, 152-3, 178-9, 191-2.

⁴⁷ *The Stamford Mercury*, 7 June 1822, p. 2.

⁴⁸ *Ibid.*, 16 June 1826, p. 4.

ishes – thus raising the poor rate there to a level that was, at times, twice that found on the fens, heath, and wolds. Indeed, the agricultural sector was so depressed by the autumn of 1829 that it was said that 'all is doubt, anxiety and alarm ... there was never recalled any harvest time like the present – the farmers impoverished and alarmed, the labourers dissatisfied and grumbling'. According to the *Stamford Mercury*, 'those who cannot procure farmers' employment are increasing in number every day', whilst those who were in work had their wages reduced to 9s and 10s a week. In many areas of the county agricultural wages were said to be 'very indifferent' and it was widely believed that work would be 'difficult to procure, even at low wages' during the winter of 1829-30.⁴⁹ In the circumstances it is perhaps not surprising that when the agricultural labourers' protest movement began some twelve months later a disproportionately large number of the disturbances took place on the lowland clays.⁵⁰

The rise in social distress amongst the rural working classes during the 1820s was accompanied by a 'frightful contagion of pauperism and crime' throughout the eastern counties. In Lincolnshire, as in nearby Norfolk and Suffolk, covert forms of poverty-induced crime, such as the theft of foodstuffs from fields, barns, and game reserves, was endemic – and had been since at least the time of the Napoleonic wars.⁵¹ In many areas, such as Claxby and Alford, the poaching of rabbits, hares, and game birds was rife, as was sheep stealing on Sutton Marshes. Around Tattershall and Coningsby, and in and around the 'open' village of Binbrook, 'immense'

numbers of poultry were stolen from farms during the winter months, whilst the theft of foodstuffs – corn, potatoes, eggs, meat, and dairy produce – from hen roosts, larders, and outhouses took place 'almost nightly' in the villages.⁵²

In addition to the ubiquitous prevalence of petty subsistence crime, a disturbing number of overt forms of protest, such as sporadic attacks upon property and persons, were also being reported in the local press. Indeed, throughout the 1820s the rural labouring classes reacted vehemently against anything which appeared to threaten their livelihood or reduce their standard of living. Factors such as a rise in the cost of living, or a fall in wages due to unemployment or underemployment, were bitterly denounced and responded to with violence. At times, as during the 1790s and 1800s, the price of bread was the cause of some public outrage. When the bakers of Spalding refused to retail bread at the price stipulated by the magistrates, an angry crowd assembled and smashed their shop windows.⁵³

The annual influx of alien workers into Lincolnshire, who were extensively engaged by farmers on the clays and the fens, was another source of contention. The fact that the earnings of the indigenous labour force were 'remarkably precarious, depending on the arrival and assistance of many or few Irish labourers', invariably led to a rise in social tension in the years when the local take-home pay was low. After the poor harvest of 1829, for example, it was noted in the *Stamford Mercury* that owing to the presence of large numbers of Irish harvesters in the county 'the price of reaping wheat has been lower than for some years, and this has caused great dissatisfaction amongst

⁴⁹ *The Stamford Mercury*, 7 June 1822, p 2; 19 May-8 December 1826, p 4; 25 January 1828, p 4; 30 January-23 October 1829, p 4; 22 January 1830, p 4. Beastall, *op cit*, pp 117-18. Thirsk, *op cit*, pp 271, 308.

⁵⁰ See Figure 2.

⁵¹ *The Stamford Mercury*, 3 April 1795; 17 January 1800; September-October 1806; 7 August 1807; 15 April 1808; August-September 1809, *passim*. Archer, *op cit*, pp 12-16, 87.

⁵² *The Stamford Mercury* 4 January 1827, p 4; 8 February 1828, p 4; 2-30 January 1829, p 3. Beastall, *op cit*, pp 126-7. R J Olney, ed, *Labouring Life on the Lincolnshire Wolds. A Study of Binbrook in the Mid-Nineteenth Century*, Occasional Papers in Lincolnshire History and Archaeology, Sleaford, 1975, p 26.

⁵³ *The Stamford Mercury*, 6 February 1829, p 3.

the labouring classes ... and in some cases has produced ill-treatment of the Irish by them'. 'Murderous attacks' were made upon the Irish, and continued to be made upon them throughout most of the 1830s, in many parts of the county. According to the local press, a certain amount of 'mischief' was also committed against the property of farmers who employed them.⁵⁴

Other types of violence also indicated how antagonistic social relationships had become in the Lincolnshire countryside. Sporadic outbreaks of incendiarism, although not as serious as those experienced in Norfolk, Cambridgeshire, Suffolk, and Essex during the 1820s, revealed the lengths the labouring classes were prepared to go to in order to punish their perceived oppressors.⁵⁵ Indeed, so serious was the number of criminal offences against private property and persons that the commander of the Louth Troop of Yeomanry Cavalry, in an address to the gentry and magistrates of Lindsey in 1827, was moved to denounce the 'race of riotous and evil disposed people' who 'exercise the most disorderly and brutish conduct amongst us' and 'take every possible opportunity of committing depredations'. The commander, Captain Chaplin, a wealthy landowner with an estate of some 23,000 acres, emphasized the Yeomanry Cavalry's long established role in the county in maintaining law and order and keeping 'such dispositions in proper subjection'. In view of the crescendo of civil unrest that was to unfold in the winter of 1830, the captain's observation that 'a domestic foe is more to be dreaded by us than a foreign enemy' was indeed prophetic.⁵⁶

III

Social distress appeared to be on the increase in Lincolnshire towards the end of 1829 owing to the partial failure of the corn harvest; a harvest which was described in one local report as 'the most unpleasant one this country has had since 1799, which it has greatly resembled, wet, cold and windy'.⁵⁷ From that point until the onset of the Swing disturbances the number of labourers out of work multiplied. 'Farmers seem disposed to dispense with the labours of domestic servants as much as they possibly can', noted one observer, 'Wages have fallen to 9s and 10s ... for regular labourers; and those who cannot procure farmers' employment are increasing in number every day'. The lack of work in the Sleaford area was the cause of much hardship, whilst at Horncastle an 'alarming rise' in poverty forced the poor law authorities into considering building a larger workhouse. It is perhaps significant that both these localities were subjected to incendiary attacks some months later.⁵⁸

During the early summer of 1830 the agricultural sector experienced another setback when a bout of wet weather damaged the corn crop and raised fears that the harvest would be worse than that of 1829. These fears were realized during September when it was discovered that the wheat, barley, oat, and bean crops were 'backward and deficient' and the turnip crop was 'almost a total failure'. As on previous occasions, some farming areas fared better than others. While the harvest on the heath and cliff was 'unusually productive', the wolds suffered a late and deficient harvest, the fens a 'defective crop', whilst the harvest on the cold claylands was 'the worst that has

⁵⁴ *Ibid.*, 14 August–25 September 1829, pp 3–4. Beasall, *op cit*, p 118. Thirsk, *op cit*, pp 217, 271.

⁵⁵ Archer, *op cit*, *passim*. Richardson (1991), *op cit*, p 86. Beasall, *op cit* p 126.

⁵⁶ *The Stamford Mercury*, 15 June 1827, p 4.

⁵⁷ *Ibid.*, 23 October 1829, p 4.

⁵⁸ *Ibid.*, 9 October 1829, p 4; 15–22 January 1830, p 4; 19 February 1830, p 3.

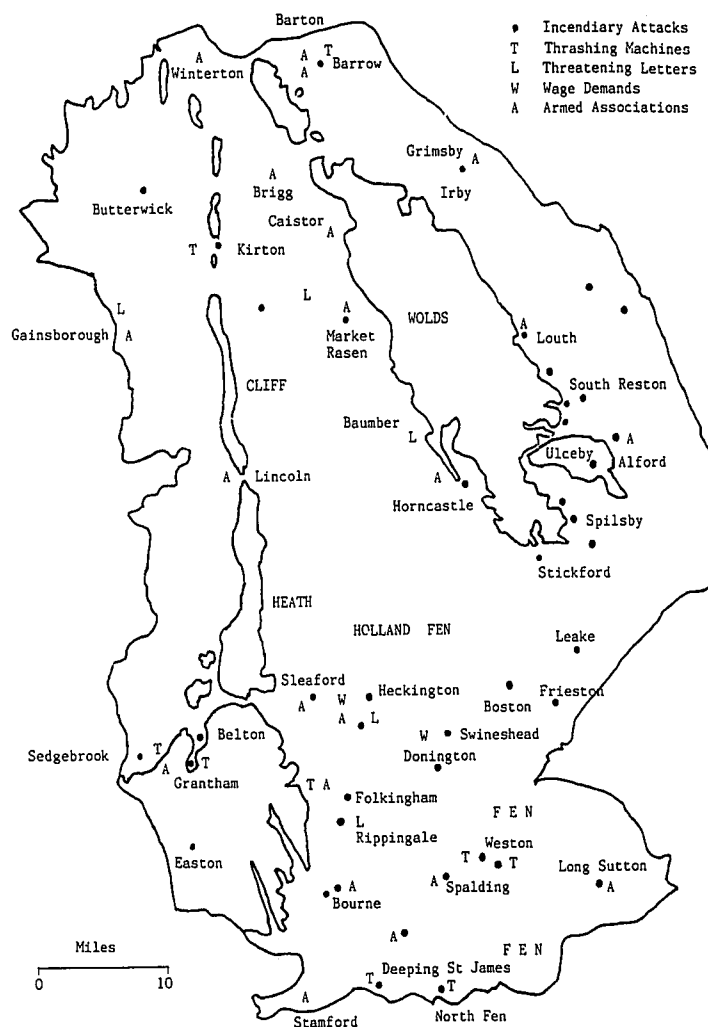


FIGURE 2
Distribution of Labourers' Disturbances and Armed Associations in Lincolnshire 1830-1.

been known for many years'.⁵⁹ It is evident from Figure 2, which shows the spatial distribution of the labourers' disturbances and the armed associations that were formed to suppress them, that the worst-affected areas lay on the clays of the Central Vale, especially along the western margins of the Wolds; the Middle Marsh and the outer marshlands along the eastern margins of the Wolds; the clays and miscellaneous soils lying to the south-

east of the Limestone Heath between Sleaford and Bourne; and the Holland and Kesteven fenlands. Within these disadvantaged areas, according to a local agricultural report, there was no 'anxious desire to thrash out as has been the prevailing practice' and 'the enormous wages that have been usually demanded upon a pressure of rapid ripening of the corn have this season been unknown'.⁶⁰

Unemployment and low wages lay at

⁵⁹ *Ibid.*, 18 June 1830, p 4; 17 September 1830, p 4; 19 November 1830, p 4.

⁶⁰ *Ibid.*, 17 September 1830, p 4.

the heart of the labourers' disturbances of 1830. In the Spilsby area, where some of the worst incidents were to take place, it was said that 'the most industrious man can seldom find employment without claiming it of his parish, nor in many cases will his wages alone suffice for the maintenance of a numerous family'. Evidence of social deprivation in the adjacent marshlands, owing to the lack of work, was 'not wanting' as the condition of the labouring classes in that deprived area was regarded as 'still more degrading'.⁶¹ Similar conditions to these prevailed in the more populous 'open' parishes of the claylands: especially in the larger townships and villages such as Louth, Horncastle, Caistor, Market Rasen, and Brigg. The agricultural labourers at Heckington were so dissatisfied with the inadequacy of their earnings that a crier was sent around the parish to announce that a wage meeting would be held on the village green. About fifty labourers attended the meeting and agreed that they would not work 'at any lower or less rate than two shillings and sixpence for the day for any master or employer whatsoever'. Similar wage meetings took place at Swineshead and in the villages around Boston.⁶²

It is evident from the violent language used in threatening letters sent to farmers, clergymen, and overseers of the poor what the labourers' grievances were and what their response would be if there was no improvement in their socio-economic condition. 'Mossop you are damd baden', stated one letter, aggrieved over the fact that the farmer used machinery rather than hand-labour to thresh his corn, 'blast and buger your eyes ... we will burn you in your bed'. Similarly, an anonymous

letter sent to another farmer carried a grim warning: 'Stevens, you may think it a great favour that we write before we fire ... and if fire will not do we will dredge poison on your turnip shells'. In a letter signed 'Bread or Blood or Fire and Smoke', William Green, a farmer and overseer of the poor, was advised that if his attitude towards the poor did not improve he would have to 'sleep with one eye open' as he could 'expect a visit some night' and 'a bullet'. John Thorp of South Owersby was accused of 'pulling down wages' and 'ruining the low class', whilst another letter, addressed to 'the grinder of the poor', pointedly asked 'Who is it that holds you up, is it the poor or is it the rich?' The labourers' concern over the decline in their standard of living, and the indifference shown towards their condition by their social superiors, was stated with some clarity in a threatening letter sent to the Rev William Waters of Rippingale, near Bourne:

We have suffered so much poverty and distress that we ... will not put up with it any longer for you have been A hard task Master laying more poverty upon us that we are Able to bear ... when the Poor has come to you for Justice it has not been done ... we find charity very cold and I would remind you concerning the Poor Men that is Obliged to work at Parish Work for A Man and his Wife cannot live under 9s per Week and those that have families accordingly ... and so if there is Nothing considered for the poor you may Expect Fire and the Farmers likewise.⁶³

Many distressed labourers believed that winter unemployment and low wages were caused by labour-saving machinery. 'Thrashing mills', which had been introduced into Lincolnshire during the French war to offset the labour shortage, were in regular use throughout the 1820s and by the eve of the Swing riots they were said

⁶¹ *Ibid.*, 31 December 1830, p. 2.

⁶² *Ibid.*, 10 December 1830, p. 3. LRO, Bourne Quarter Sessions, 4 January 1831. Sleaford Quarter Sessions, 6 January 1831, B A Holderness, ' "Open" and "Closed" Parishes in England in the Eighteenth and Nineteenth Centuries', *Ag Hist Rev*, XX, 1972, pp. 130. Beastall, *op cit*, p. 113.

⁶³ *The Stamford Mercury*, 3-17 December 1830, p. 3; 7 January-18 February 1831, pp. 3-4. LRO, Bourne Quarter Sessions, 5 April 1831. Kirton Quarter Sessions, 8 April 1831. Sleaford Quarter Sessions, 6 January 1831.

to be 'busily employed in all directions'.⁶⁴ The labouring classes, however, regarded the use of these machines as being morally indefensible, as it deprived them of work during the winter quarter of the year, and they therefore reacted to the machines, and the farmers who used them, with some violence. Threshing machines were attacked and destroyed, invariably by fire, in a number of areas: Sedgebrook, Folkingham, Barrow-on-Humber, Grantham, North Fen, Weston, Moulton, Kirton Meers, and Deeping St James.⁶⁵ A farmer at Barrow-on-Humber who continued to use his threshing machine despite being warned not to do so, and who used 'strong language' on his labourers, had three of his corn stacks set on fire. The local populace, who turned out to watch the blaze, 'looked on with the most perfect indifference'. Similarly, a letter sent to a farmer at Baumber, near Horncastle, warned 'If you have a machine in your yard, we will set fire to the stacks the first opportunity ... you and all the farmers must give better wages to the labourers, or we will fire'.⁶⁶ Indeed, the nocturnal destruction of threshing machines, corn stacks, and farm buildings by fire was regarded as a particularly vindictive form of protest and was the cause of considerable alarm amongst the ranks of the landowning and farming classes:

The panic among the Lincolnshire farmers is universal, particularly such as have threshing machines on their premises. Many have received threatening letters and the breaking of machines, and the conflagration of property form the unvarying theme of conversation amongst all ranks of society.⁶⁷

It is clear from Figure 2 that the number of incendiary attacks upon farm property greatly exceeded the number of disturbances aimed at raising wages or destroying agricultural machinery. Indeed, the number of acts of collective overt protest during the Swing disturbances was negligible. Compared with the eastern counties, the number of threshing machines destroyed in Lincolnshire (9) was much lower than the number destroyed in Norfolk (29), Kent (37), and Essex (15), but higher than the number destroyed in Yorkshire (2) and Cambridgeshire (1).⁶⁸ Furthermore, the machines in Lincolnshire were destroyed by fire rather than by physical attacks carried out by marauding bands of labourers. Most acts of rural protest in the county, as Wells has argued in a wider context, were essentially covert in character. Incendiarism, in particular, far from being peripheral to the labourers' movement, was a central and 'enduring mode of protest' in the Lincolnshire countryside.⁶⁹ As Hobsbawm and Rudé have noted, apart from a few threatening letters, 'the emphasis was all on arson'.⁷⁰ Compared with the eastern counties, the number of incendiary attacks in Lincolnshire (c. 50) greatly exceeded the number recorded for Norfolk (28), Suffolk (19), Cambridgeshire (7), and Essex (8). Only Kent (61) exceeded Lincolnshire. As Archer has emphasized, in his analysis of East Anglia, arson was 'the prime weapon in the rural war'.⁷¹

Although a small number of fires broke out in Lincolnshire during September and October 1830, the majority of the incendiary attacks, which amounted to about fifty, took place between mid-November and the following March. During Nov-

⁶⁴ Young, *op cit*, pp 93-7. *The Stamford Mercury*, 13 September 1822, p 3; 15 April 1824, p 3; 5 January 1827, p 4; 10 October 1828, p 4; 12 June 1829, p 3.

⁶⁵ *Ibid.*, 1 October-24 December 1830, pp 2-3; 7 January 1831, p 4. LRO, Bourne Quarter Sessions, Easter 1831. See also R C Russell's review of E J Hobsbawm and G Rudé, *Captain Swing*, in *Ag Hist Rev*, XVIII, 1970, p 175.

⁶⁶ *The Stamford Mercury*, 10 December 1830, p 2. R C Russell, *Stack Burning and Discontent in Lincolnshire—the 1830's. Notes for Discussion*. Unpublished private communication from the author.

⁶⁷ *The Stamford Mercury*, 10 December 1830, p 2.

⁶⁸ Hobsbawm and Rudé, *op cit*, p 262-3. Somewhat different figures are given on p 167.

⁶⁹ Wells (1979), *op cit*, p 29.

⁷⁰ Hobsbawm and Rudé, *op cit*, p 136. See also Russell (1970), *op cit*, p 174.

⁷¹ Hobsbawm and Rudé, *op cit*, pp 170, 262-3. Archer, *op cit*, pp 69-70.

ember, for example, a number of corn stacks were fired at Easton, Stickford, Swaby, Muckton, Burwell, Irby, South Reston, and Spalding. As one alarmed observer noted, in a letter to the Kesteven magistrates, 'the feelings of the lower classes in general is not favourable, and when this will end it is not easy to foresee ... it is a dreadful state of things'.⁷² By the first week in December the *Stamford Mercury* could report that 'the incendiary proceedings which have agitated other counties' have begun to spread to a 'considerable extent' into the hitherto unaffected areas of the county. Arson attacks took place at Grantham, Spilsby, Spalding, Moulton, Deeping, Market Rasen, Horncastle, Sutton, Leake, Frieston, and Butterwick. County magistrates, in the hope that they might bring an end to the 'conflagration of property', offered substantial rewards for information that would lead to the arrest of the 'diabolical incendiaries'. Despite this initiative, the fires of discontent continued to burn, as at Ulceby, Deeping Fen, Moulton Marsh, Stickford, Harbling, Swineshead, Leake, Ropsley, Spilsby, and Folkingham, throughout the winter of 1830-1 and beyond. Low and inadequate wages lay behind most of these burnings. The incendiary fire at Folkingham, for example, was the direct result of a wage dispute, whilst the firing of three corn stacks at Swineshead took place because the labourers were 'very dissatisfied with the wages offered by the farmers'.⁷³

IV

The unrest which swept over the Lincolnshire countryside during the winter of 1830, by posing a threat to the sanctity of private property, provoked a swift and effective response from the judiciary and

the landed order. Attitudes towards the labouring classes hardened, and the magistracy and gentry, aided and abetted by the farming classes, moved together in order to present a united front against, what was sometimes perceived to be, an insurrection from below. To a large extent the closing of ranks, and the policies adopted to suppress the labourers' movement, was prompted by a stream of directives from Lord Grey's Whig government to the county authorities. On the 25 November Lord Melbourne, in a letter to Lord Brownlow, the Lord Lieutenant, expressed his alarm over the recent upsurge of 'outrage and violence' in the county and urged him to adopt 'with the least possible delay ... such measures as may be effectual for the repression of tumult, the preservation of the public peace and the protection of property'.⁷⁴ Within a few days of its arrival the Home Secretary's letter had precipitated an energetic response. At numerous public meetings held up and down the county the landed classes agreed to 'stand by each other in defence of themselves and their neighbours, to protect property of every kind from either secret injury or open violence, and to resist every demand made upon them by persons illegally combined'.⁷⁵

The farming classes, for example, opposed the labourers' demand for higher wages, whilst in the law courts the magistrates dealt firmly with those who were found guilty of 'conspiring and combining unjustly to increase and augment the wages of themselves and other labourers'. Lord Melbourne, in a letter to the county's judiciary, emphasized with some force the fact that magistrates 'are invested with no general legal Authority to settle the Amount of wages of Labour' and that 'any

⁷² LRO, General Proceedings and Correspondence, Kesteven, 1830. Letter from W Thompson to W Forbes, 29 November 1830.

⁷³ *The Stamford Mercury*, 3 September 1830-18 March 1831, pp 3-4.

⁷⁴ LRO, General Proceedings and Correspondence, Kesteven, 1830. Letter from Lord Melbourne to Lord Brownlow, 25 November 1830.

⁷⁵ *The Stamford Mercury*, 3 December 1830, p 2.

Interference in such a Matter can only have the Effect of exciting Expectations which must be disappointed and of ultimately producing, in an aggravated Degree, a renewed Spirit of Discontent and Insubordination'. The county's landowners, farmers, and magistrates readily put the Home Secretary's advice into practice. Sir Robert Sheffield, for example, a wealthy landowner with a 9000-acre estate in Lindsey, opposed the labourers' attempts to raise their wages. 'The Wages in this Part are 2s a day', he informed Lord Brownlow, the Lord Lieutenant, 'and if any refractory spirit should show itself here among the Labourers it will be for an increase of Wages ... but a stand will be made at present at two shillings'. The magistrates were equally opposed to any form of 'collective bargaining by riot'. The labourers of Heckington who dared to organize a wage meeting, and demand 2s 6d a day, were found guilty of 'not being content to work and labour at the usual rates for which they and other labourers were accustomed to' and were sentenced to three months hard labour in the Folkingham House of Correction. The women of Heckington, who also assembled to protest over the high price of flour, received the same sentence as their menfolk for their riotous behaviour.⁷⁶ Richard Tomlin, who threatened to fire the stacks of farmers who did not pay their labourers 'wages whereby they could maintain their families', was given six months hard labour by the magistrate.⁷⁷

In order to bring a stop to the destruction of stacks, barns, and farm machinery by fire, the county authorities, building upon the experience gained during the subsistence crises of 1795-1800, built up a

highly organized network of control across the length and breadth of the county. Perhaps the most important manifestation of this policy was the mobilization of a number of Yeomanry cavalry units and the establishment of various armed associations, such as the Association for the Preservation of Public Peace and the Protection of Property and the Association of Gentlemen Farmers and Graziers on Horseback, to assist the civil authorities in the suppression of the 'tumultuous assemblies'. The membership of these associations consisted of the 'most respectable Yeomanry', especially those 'who could furnish themselves with horses', and various 'graziers, tradesmen, and their confidential servants'. Public subscription funds were launched in order to finance their operations and reimburse the more ordinary members for participating in the day and night patrols. Once the 200 or so members of each association were assembled together, they were divided into mounted and unmounted sections with the task of arresting 'all suspicious characters and persons who may be found assembled for the breach of the peace'.⁷⁸ Large rewards were offered in the hope they would attract informers. The Stamford Association for the Prosecution of Felons, for example, in an advertisement in the *Stamford Mercury*, drew the reader's attention to the £500 reward offered by Royal Proclamation and the fact that,

Any person discovering the authors, abettors or perpetrators of outrages in riots or tumultuous assemblies, dictating to employers the giving of certain wages by force or violence, and compelling destruction of agricultural property, is entitled to a reward of Fifty Pounds, besides a free pardon, in case such persons discovering may be liable to be prosecuted for the same.⁷⁹

⁷⁶ LRO, Bourne Quarter Sessions, 4 January 1831. Sleaford Quarter Sessions, 6 January 1831. General Proceedings and Correspondence, Kesteven, 1830. Letter from Lord Melbourne, 8 December 1830. R J Olney, *Rural Society and County Government in Nineteenth-Century Lincolnshire*, Lincoln, 1979, p 84.

⁷⁷ J Hughes, 'Tried Beyond Endurance', *The Land Worker*, November 1954, p 9.

⁷⁸ LRO, General Proceedings and Correspondence, Kesteven, 1830. Circular letter from the Chief Constable for Kesteven, 1 December 1830. Circular Letter from W Forbes to the Magistrates of the County, 29 November 1830. *The Stamford Mercury*, 7 January 1831, p 3.

⁷⁹ *The Stamford Mercury*, 7 January 1831, p 1.

The role played by the armed associations in containing the labourers' movement was effective because it was disciplined and well organized. In a letter to the county magistrates on the 25 November, the Home Secretary suggested that the Duke of Richmond's 'Sussex Plan', which had been employed to put-down the agricultural labourers in that county, should be used in Lincolnshire to subjugate the 'tumult' and restore the 'public tranquillity'.⁸⁰ The county authorities responded to the Home Secretary's suggestion with some alacrity. In Kesteven, clusters of four to five parishes were grouped into districts and placed under the direction of a Superintendent. Within each district farmers, 'their confidential Servants and respectable Labourers, Pensioners and Tradespeople' were sworn-in as special constables, armed with staves, and instructed to 'apprehend all suspicious Characters'. Similarly, the Grantham district, which embraced the parishes of Little and Great Gonerby, Manthorpe, and Grantham, had a volunteer force of 247 special constables at its disposal. Sixty-nine men formed the Mounted Section whilst 178 formed the Dismounted Section. In the event of an incendiary attack or a riot, bugles and church bells were sounded and the constables were assembled at various pre-determined points, such as the town hall or the market cross, before moving on to engage the labourers. Day and night patrols were established, fire appliances were given a mounted escort, and each constable was instructed to 'retain in his memory the Names of as many of ... [the rioters] as he possibly can in order that they may be afterwards apprehended'. Men with military experience were frequently put in charge of the operations. The 125 members of the Armed Association for the

Protection of Property in Stamford, for example, were sub-divided into five sections and placed under the command of a captain or a lieutenant.⁸¹

The Market Rasen Corps of Volunteer Cavalry, under the command of Ayscough Boucherett of Willingham House, a wealthy landowner with a 6000-acre estate in Lindsey, provided a military presence in the central claylands. Indeed, it is evident from Figure 2 that the spatial distribution of the Yeomanry Cavalry units and the labourers' disturbances were closely correlated. Most were located on the claylands and marshlands; especially along the eastern and western margins of the wolds, the eastern margin of the heath, and on the southern fenlands:

Alford	Folkingham
Horncastle	Grantham
Market Rasen	Stamford
Caistor	Deeping
Brigg	Spalding
Grimsby	Long Sutton
Barton	Heckington
Barrow	Sleaford
Gainsborough	Lincoln
Bourne	Holland Fen

The North Wold Troop covered a large area of Lindsey and had detachments based at various centres such as Caistor, Brigg, Barton, and Winterton.⁸² The mounted detachments were a particularly formidable force because they were armed with sabres, pistols, and muskets. The Sleaford Association of Volunteer Horsemen, for example, acquired 100 'scymetar' swords, leather belts, scabbards, and a quantity of muskets from the Royal Ordnance Store at Hull. Major Handley of the Folkingham Yeomanry obtained 100 'sycimitar' swords from the same source, whilst the Gran-

⁸⁰ LRO, General Proceedings and Correspondence, Kesteven, 1830. Circular Letter from Lord Melbourne, 25 November 1830.

⁸¹ LPL. UP 1051. Printed Rules and Regulations for the Preservation of Peace and the Protection of Property in Kesteven. 1 December 1830. LRO, General Proceedings and Correspondence. Printed List of Special Constables in the Grantham District, 13 December 1830. Printed List of the Armed Association for the Protection of Property at Stamford. December 1830.

⁸² *The Stamford Mercury*, 21 January-8 July 1831, p 1-3. R J Olney, *Lincolnshire Politics 1832-1885*, Oxford, 1973, p 15.

tham Yeomanry Cavalry acquired 150 sabres from the Weedon army barracks in Northampton. As one volunteer noted, in a letter to the Kesteven magistrates, the cavalry kept a vigil in the countryside whilst 'those of us who had no horses ... [were] ready to start on foot with our guns all day'.⁸³

V

Despite the array of forces before them, in the form of an unsympathetic government, a hostile judiciary, and the collective opposition of a well armed coalition of landowners, farmers, and tradespeople, the agricultural labouring classes continued to make their presence felt throughout the remainder of the decade. During 1831-2, for example, the labourers appeared to redirect their grievances over unemployment and poor wages from the farming classes to the itinerant Irish. The fact that the Irish competed for work in the local labour market, and were prepared to accept low wages, caused considerable friction within the Lincolnshire countryside. According to one local report, the Lincolnshire labourers were 'not well satisfied' with the competition posed by the Irish and that 'the farmers are somewhat to blame in rather restricting the Wages of our Men'. Indeed,

*Many, though civil, are gloomy and discontented. In populous villages, where they are less restrained, dark hints and threats to those who may employ Irish-men to reap in harvest are not unusual; and, in some instances, some of these unfortunates ... have been greatly maltreated and assaulted.*⁸⁴

Irish labourers making their way to the fenlands ran a gauntlet of abuse in the villages, as at Willoughby, Newton, Dunstan, Hameringham, Whittering, and Spalding. The populous around Boston were so incensed by the influx of Irish

harvesters that a riot broke out and local magistrates had to provide them with an escort to the fens. Irish labourers at Holbreach were rounded up and driven out of the area by local labourers wielding pitchforks and clubs, and similar attacks took place at Spalding and Long Sutton. Such was the state of tension between alien and denizen workers that it was said that 'Many farmers have refused to employ them ... the country labourers threatening gross assaults to the Irishman, and still worse to those farmers who may engage them'.⁸⁵

Apart from these overt expressions of anger, throughout the 1830s there appeared to be no 'disposition to acts of tumult or riot amongst the labourers, nor any orgained system of outrage'. Discontent, however, on the question of low wages, and the practical implementation of the 1834 Poor Law Amendment Act, continued to find expression in covert acts of intimidation. Farmers who paid their men poor wages, such as those in the Laceby area, continued to receive threatening letters:

*Firing is no warning to you at Laceby; you must not try the poor so any longer, for they will not submit to working for 1s a day; young men are fools to stand it any longer; they mean trying it; they would not if you would allow anything fair — you might sleep comfortable; if you do not raise their wages, you must suffer by the consequence.*⁸⁶

Elsewhere in the county, the curtailment of outdoor poor relief, at a time when farm wages were low, was said to be the cause of a number of 'diabolical acts'. 'Their minds are so excited ... against any curtailment of what they consider their rights', noted one observer, 'that they will do anything'. Reports of 'numerous instances of Malicious Injury to cattle' was a particular cause of concern, as was the 'atrocious crime' of arson. Indeed, throughout the remainder of the decade incendiarism remained a seri-

⁸³ LRO, General Proceedings and Correspondence, Kesteven 1830. Letter from W Thompson to W Forbes, 29 November 1830. Letters of Indenture and Receipt of Arms. *The Stamford Mercury* 24 December 1830, p 3.

⁸⁴ *The Stamford Mercury*, 29 July 1831, p 4.

⁸⁵ *Ibid*, 5 August-9 September 1831, pp 3-4; 10-26 August 1832, pp 3-4.

⁸⁶ *Ibid*, 13 March 1835, p 2.

ous problem in Lincolnshire. As the *Stamford Mercury* noted, 'The county appears Tranquil, but that dreadful fiend of incendiaryism is not yet satiated'.⁸⁷

VI

The foregoing analysis suggest that the existing model of Lincolnshire rural life can be revised in two main ways. First, although agricultural wages were high, they progressed only very slowly in the long-run and, until the 1820s, were invariably out of phase with variations in the cost of living. Given the stability of earnings, volatile short-run fluctuations in the prices of common foodstuffs proved to be the dynamic variable in the real wage equation. In view of the dichotomy between prices and wages, labourers in

regular employment on the Ancaster and Monson estates experienced a notable fall in their standard of living between 1794 and 1818. Elsewhere in the county, spiralling prices and falling real wages during the French wars, and the onset of unemployment and low wages up to 1830, especially in the clayland parishes, precipitated an upsurge in class antagonism and civil disobedience. The Lincolnshire countryside, far from being a place of peace and social harmony, witnessed a marked deterioration in class relations and the waging of a bitter struggle that was only partly resolved by the force of arms. Although most overt expressions of discontent were suppressed, the labourers' anger was not extinguished and continued to surface in the guise of covert acts of violence against landed property until at least the 1840s.

⁸⁷ *Ibid.*, 7 January 1831, p. 4; 18 March 1831, p. 4. LRO, 3 Anc 7/23/29-32/1-9.

APPENDIX 1

Indices of Agricultural Labourers' Wages, the Cost of Living and Real Wages in Lincolnshire, 1790-1840
(1790 = 100)

Year	Cost of Living Index	Agricultural Labourers' Wages	Stamford Wage Index	Real Wage Index	Year	Cost of Living Index	Agricultural Labourers' Wages	Stamford Wage Index	Real Wage Index
1790	100	9s 1d	100	100	1816	131	12s 0d	132	101
1791	100	9s 1d	100	100	1817	154	12s 0d	132	86
1792	100	9s 1d	100	100	1818	148	12s 0d	132	89
1793	99	9s 1d	100	101	1819	130	12s 0d	132	101
1794	103	9s 10d	108	105	1820	120	12s 0d	132	110
1795	135	10s 1d	111	82	1821	110	12s 0d	132	120
1796	136	10s 6d	115	85	1822	89	10s 0d	110	123
1797	108	10s 6d	115	106	1823	102	10s 0d	110	108
1798	109	10s 0d	110	101	1824	116	10s 0d	110	95
1799	141	10s 0d	110	78	1825	126	12s 0d	132	104
1800	191	11s 0d	121	63	1826	117	12s 0d	132	113
1801	179	11s 0d	121	68	1827	116	12s 0d	132	114
1802	142	11s 0d	121	85	1828	118	12s 0d	132	112
1803		11s 0d	121		1829	121	12s 0d	132	109
1804		11s 0d	121		1830	119	12s 0d	132	111
1805	167	11s 0d	121	72	1831	123	12s 0d	132	107
1806	142	11s 0d	121	85	1832	111	12s 0d	132	119
1807	148	11s 0d	121	82	1833	108	12s 0d	132	122
1808	162	11s 0d	121	75	1834		10s 0d	110	
1809	172	11s 0d	121	70	1835		10s 0d	110	
1810	174	12s 0d	132	76	1836		10s 0d	110	
1811	170	12s 0d	132	78	1837		10s 0d	110	
1812	204	12s 0d	132	65	1838	120	12s 0d	132	110
1813	186	12s 0d	132	71	1839	112	12s 0d	132	117
1814	140	12s 0d	132	94	1840	114	12s 0d	132	115
1815	126	12s 0d	132	105					

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From Black-Face to White-Face – An Aspect of the Agricultural Revolution in Norfolk

By SUSANNA WADE MARTINS

Abstract

This paper looks at the spread of new breeds of sheep across Norfolk in the early nineteenth century, the gradual eclipse of the native Norfolk horn breed, and the increase in the popularity of half-breeds, using as its source the Michaelmas sales announcements in the local newspapers, a source which allows for the study of a wide cross section of Norfolk farms. It demonstrates the relatively short space of time which saw the demise of the Norfolk as a pure breed, and the importance of the new breeds, partly as pure bred flocks, but more significantly for providing new blood to produce fast growing, more meaty sheep when crossed with the native breed.

THAT the development of livestock breeding played a fundamental role in the eighteenth-century agricultural revolution is well known. With this the names of Bakewell, Culley and Ellman as breeders and Thomas William Coke and the Duke of Bedford as publicists are firmly linked.

Chunky, short-legged breeds of sheep, first the New Leicester and then the Southdowns, were developed. These thrived on turnips and the improved pastures fattening more quickly than the native unimproved breeds. 'Small in size, but great in value' is the apt text under the Southdown sheep on the monument erected in Holkham park to Thomas William Coke after his death in 1842.

What is less clear is how fast these new breeds spread, not only on the farms of the landlords and gentlemen agriculturalists, but among the run-of-the-mill farmers. The relative merits of Leicesters, Southdowns, and the various crosses with the local breeds were discussed by N Kent, W Marshall and A Young, as well as at the Holkham sheep shearings¹, but how

far did these new breeds penetrate farming in general? As Copus points out, the Southdowns were very much a gentleman's sheep.² Bowie describes them as implying a 'certain social status'.³ Their popularity amongst the gentry meant that their price was too high for the average farmer. Similarly, the other improved breed, the Leicester, was thought by William Marshall not to be suited to Norfolk in general, but 'may not be unfitted to the "the paddocks of a gentleman"'.⁴

freely at two years old: bear the drift, remarkably well, to Smithfield, or other distant markets; and the superior flavor of the Norfolk mutton is universally acknowledged. Therefore the Norfolk husbandmen, in their sheep,...have much to lose'; Nathaniel Kent *General View of the Agriculture of Norfolk*, 1796, p 102-3, 'The Norfolk farmer will never be able to substitute any other sheep, that will answer penning so well as the native sheep. The heavy Leicester has not activity enough to move over sufficient of ground to get its living'; Arthur Young, *General View of the Agriculture of the County of Suffolk*, 1794, p 61 'In the case of sheep,...a foreign cross is necessary; as much for the good of the farmer as the interest of the nation...The South Down and Bakewell's breed are introduced and will without doubt make their way'; *Annals of Agriculture*, XIX, 1793, pp 114-120 report of the Holkham sheep shearings, 'Tuesday July 17th, find the rams so uncommonly fat, that it would be in vain for them to attempt to waddle away from us; take hold of one in the open marsh and measure him...To shew the difference of shape between this sort of sheep (Leicester) and the Norfolk we need only refer to the measures of a Norfolk ram at Rougham'.

² Andrew K Copus, 'Changing markets and the development of sheep breeds in Southern England, 1750-1900' *Ag Hist Rev*, 37, 1989, pp 36-51.

³ G S Bowie, 'New sheep for old - changes in sheep farming in Hampshire 1792-1879', *Ag Hist Rev*, 35, 1987, pp 15-24.

⁴ William Marshall, *op.cit.* p 365.

¹ William Marshall, *The Rural Economy of Norfolk*, 2 vols, 1787, vol 1 p 365, 'They (the Norfolks) may be bred and will thrive, upon heath and barren sheep walks, where nine tenths of the breeds in the kingdom would starve: they stand the fold perfectly well: fat

This paper attempts to study the spread of the new breeds in Norfolk using a relatively untapped source: the notices of farm dispersal auctions printed in the local papers. These have been used by Perry⁵ in the study of the severity of the late nineteenth-century agricultural depression, particularly in Dorset, and by Walton when investigating the spread of mechanization.⁶ The authors of the *Victoria County History*'s chapter on 'Agricultural Change, 1750-1875' have made detailed use of the local papers to study, not only the spread of mechanization, but also that of new livestock breeds across the county, and it is with this work that the present study is most comparable.⁷

The *Norfolk Chronicle* for the period 1790-1825, roughly the duration of the Holkham sheep shearings and the major period of the enclosure of commons and sheep walks in Norfolk⁸, was searched: a time during which we might expect to find the new breeds replacing the native Norfolks. Later papers were consulted for five-year intervals up to the 1860s in an attempt to pick up the emergence of the new Suffolk breed of sheep, important in the county by that date. Most sales were concentrated around Michaelmas, the traditional time for the renewal of leases, and so only the newspapers for September and October were used. All sales containing sheep were identified, and in addition, for the third year of each decade, details of all dispersal sales in these two months were noted to give an indication of the total farming picture and the proportion of farms that kept sheep.

There are several obvious problems with this source. Many of the sales took place following the death of a farmer, with the farm being run by executors until the dispersal. In many cases the farm would have been run down preceeding the sale or some of the stock sold to the incoming tenant and so only the residue was auctioned. Inevitably we are looking at the farms of a disappearing generation, rather than the innovative businesses of the young; the end rather than the beginning of the story. Sometimes the sale will only be a part sale, whilst elsewhere it is likely that, then as now, neighbouring farmers with stock or implements for sale would have put them in a local auction. Finally, again then as now, the sales particulars, especially in their more eulogistic passages, must be treated with the caution they deserve.

In spite of these problems, there are undoubted advantages. Here we have a random cross-section - albeit biased towards the older generation - of farms across the county; something which other sources cannot give us and something for which there is a great need if we are to extend our understanding of agricultural history beyond the county reports of the Board of Agriculture and accounts of the activities of the rich and famous.

I

The bare bones of this story are well known from contemporary descriptions and have been summarized by Trow-Smith's book on livestock husbandry, and more recently by Ryder, Russell, and Hall and Clutton-Brock.⁹ It will only be summarized here as it affected Norfolk.

The changing importance of sheep in the county, as well as the levels of farming

⁵ Peter Perry, 'Newspaper advertisements - A source for Agricultural History', *Local History*, 9, 1970-71, pp. 334-337.

⁶ J R Walton, 'Mechanisation in Agriculture', in H S A Fox and R A Butlin, eds, *Change in the Countryside*, 1979.

⁷ G C Baugh and R C Hill, eds, *Victoria County History, Shropshire*, IV, 1985, Agriculture 1750-1875, pp. 190-197.

⁸ Michael Turner, *English Parliamentary Enclosure* 1980. Most of Breckland was enclosed 1796-1816, p. 49; 65.9 per cent of Norfolk enclosure acts were between 1793 and 1815, pp. 78-9. Mary Manning, ed, *Commons in Norfolk*, 1988, A quarter of a million acres of common were enclosed between 1801 and 1810, p. 4.

⁹ Robert Trow-Smith, *A History of British Livestock Husbandry 1700-1900*, 1952; N Russell, *Like Engenders Like* 1986; Michael Ryder, *Sheep and Man*, 1983; Stephen J G Hall and Juliet Clutton-Brock, *Two Hundred Years of British Farm Livestock*, 1989.

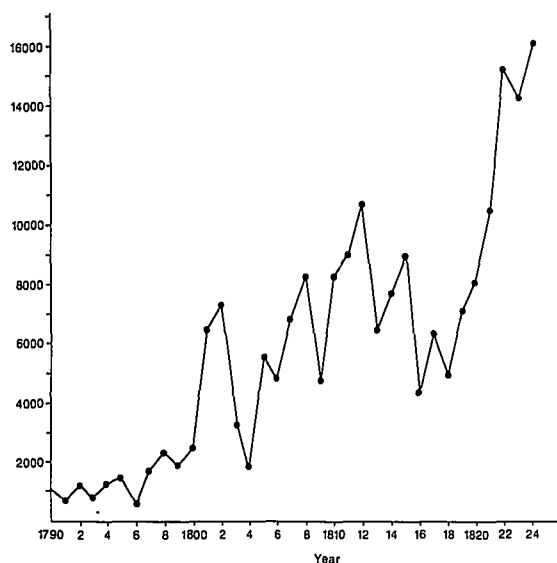


FIGURE 1
Total number of sheep listed in the sales notices

fortunes, is reflected in Figure 1 which shows the total number of sheep offered for sale in the years being considered. The gradually rising numbers of the Napoleonic years reflect the intensification of farming with the increasing prices of the period, whilst the steep rise after 1820 reflects the increasing farm sales of the depression years as more farms changed hands, and the number of sales resulting from bankruptcy and 'for the benefit of creditors' increased.

The first of the new white-faced breeds to be perfected was Bakewell's New Leicester or Dishley sheep. Work on improvement had begun before Bakewell's time, but by 1770 he was producing a distinct type which was breeding pure. Its qualities were obvious. It was quick maturing, producing plenty of meat whilst the bones remained light, thus reducing the bone-to-meat ratio. The problem was that in this short-legged, barrel-shaped animal, the quality of meat had been sacrificed to quantity. It had to be slaughtered under two years, otherwise there was too much fat. Copus has pointed

out that its increase in popularity coincides with the period when the price of tallow was also rising, and therefore fat was a valuable commodity.¹⁰ As the price fell, so did the popularity of the Leicester. After an initial, epidemic-like enthusiasm for the New Leicester, its true value was recognized in its ability to impart rapid and early fleshing to its progeny, and so it was the Leicester ram that was particularly valued.

Thomas William Coke, like many landowners, took an early interest in the Leicesters, buying his first ram some time before 1784 and soon advising his tenants to cross it with the native Norfolk sheep.¹¹ The Norfolk was a leggy, slow maturing animal, inclined to be jumpy. Its main advantages were that according to Marshall, it could thrive on barren sheep walks 'where nine tenths of the breeds of the kingdom would starve'.¹² It was also prolific and produced a short fleece of fine wool. It was well adapted to the traditional Norfolk foldcourse system and because of its long legs stood up well to the walk to Smithfield or other distant markets. Its main problem was the conformation of the carcass. George Culley, a Northumbrian farmer, pupil of Bakewell and author of *Observations on Livestock*, described its lean carcass and nervous behaviour as more like that of a deer.¹³ However, if its qualities could be combined with those of the Leicester, then the resulting animal would indeed be very useful.

By the 1790s, Coke was not the only flock owner in Norfolk keeping Leicesters. At a farm sale at Great Francham Parsonage in 1792, 'A few sheep of the Leicester breed' were offered for sale¹⁴, while in 1794 '400 ewes bred from Mr Bakewell's

¹⁰ Copus, *op.cit.*

¹¹ Susanna Wade Martins, 'Thomas William Coke and Livestock Breeding at Holkham', *The Ark*, xiii, 8, p 279.

¹² William Marshall, *op. cit.*, p 365.

¹³ George Culley, *Observations on Livestock*, 1786, pp 139-140.

¹⁴ *Norfolk Chronicle*, 6 October 1792.

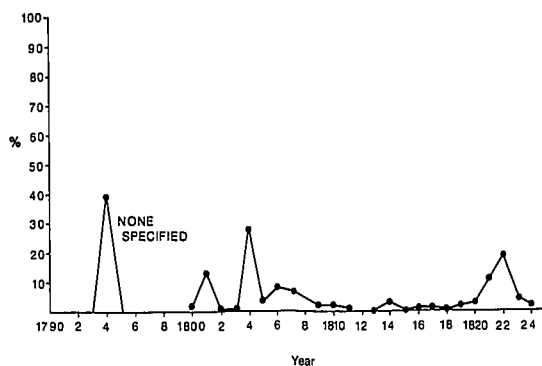


FIGURE 2

Percentage of sheep described as Leicesters in the sales notices

and Mr Buckling's rams' were sold at Downham Market.¹⁵ The annual show of rams at Leicester was advertised in the Norfolk papers from 1795. In spite of Coke's promotion of the Leicesters at the early sheep shearings, the farm sales show only two of his tenants becoming breeders of them. In 1799, the Holkham tenant at Godwick farm was advertising Leicester rams to let¹⁶ and some thoroughbred ewes sold near Blickling were described as 'the breed of Mr Purdy's well-known stock'.¹⁷ Mr Purdy was the tenant of a farm at Castle Acre and a frequent contributor to and competitor at the sheep shearings. Other aristocratic or 'gentleman' breeders included Lord William Bentinck near Kings Lynn, Oylett Woodhouse, Esq., of Sedgeford, and Thomas Masters of Gaywood Hall, both in west Norfolk.

However, numbers of Leicesters kept in Norfolk were always small; advertisements showed peaks of 900 in 1801 and 1200 in 1821, but by 1807 there were always far fewer than of other breeds and they usually made up less than 10 per cent of the sheep offered for sale (Fig 2). Flocks were all below 400 ewes, and mostly well below that figure, reflecting the fact that it was replacement rams, rather than large

ewe flocks, for which there was a market. Leicester rams remained popular throughout the period studied and were frequently used for crossing. An advertisement for tups to let or sold from Packfield House, near Rougham, Suffolk stated, 'The preference so generally given to lambs produced by a cross of the Leicester tup and the Southdown and Norfolk ewe at the late fairs for sheep induce the proprietors to think these tups will merit the attention and approbation of breeders.'¹⁸ Figure 6 shows that they were confined very much to the west of the county. None was kept on the sandy breckland soils.

Most common was the Leicester-Lincoln cross found in the extreme west of the county. It was the one that had been advocated by Culley. He claimed that it came to a marketable condition a year or eighteen months earlier than the pure Lincoln, although there was some loss in the quality of the fleece.¹⁹ No flocks of this cross were offered for sale before 1808. In September of that year a flock of 560 was sold at Mintlynn on the Norfolk fen edge. They were described as 'kind feeders with a good quantity of wool'.²⁰ Within the next six years two similar flocks were sold off, and in the four years following the end of the Napoleonic wars five flocks were sold, all within a very restricted area of west Norfolk.

The Leicester was also being crossed with the Norfolk and Southdown and examples of these two crosses are to be found in the sales particulars. Leicester-Southdowns were advertised at Hethersett near Norwich in 1797.²¹ In 1802, half-bred Leicester-Norfolk lambs 'by the most approved Leicester tups' were advertised for sale at the extensive lightland west-Norfolk farm of East Barsham. This cross seems to have been most popular in the

¹⁵ *Ibid*, 7 September 1794.

¹⁶ *Ibid*, 7 September 1799.

¹⁷ *Ibid*, 14 September 1799.

¹⁸ *Ibid*, 14 September 1805.

¹⁹ George Culley, *Observations on Livestock*, 1807, p 112.

²⁰ *Norfolk Chron*, 17 September 1808.

²¹ *Ibid*, 7 October 1797.

first ten years of the nineteenth century, but to have tailed off thereafter. 'South-down crosses', on the other hand, came on the market more between 1810 and 1825.

The work of improving the Southdown is credited to John Ellman of Glynde, although his main contribution was probably that of publicizing the work of several Sussex breeders.²² By careful selection, a short-legged heavy animal was produced which retained the qualities of fine, well flavoured meat and valuable wool. Wethers could be fattened up for sale within eighteen months. Arthur Young first saw the sheep in 1780 and did much to publicize its properties. A flock was brought to Norfolk by Mr Macro in 1789-90, and then sold to Houghton.²³ Six Southdown ram lambs were advertised for sale by a Norwich dealer in 1790. According to the announcement, 'They are very valuable to put to Norfolk ewes and will not fail to improve greatly the breed of this county'.²⁴

In 1792, Coke bought his first Southdowns and for thirteen years kept both Southdowns and Leicesters to compare their qualities both as pure stock and for crossing. In 1806 he came to the conclusion that Southdowns were in fact, better and sold his Leicester sheep.²⁵ By 1811 prizes for Leicesters were discontinued at the sheep shearings, and their popularity was also declining across the county. Gradually the Southdowns gained ground, both as a pure-bred sheep and for crossing, and huge flocks of over 700 sheep were kept. Some flocks that came on the market had been directly purchased in Sussex, and Sussex sheep fairs were advertised in the paper. Others derived either from Coke's 'famous flock' or from

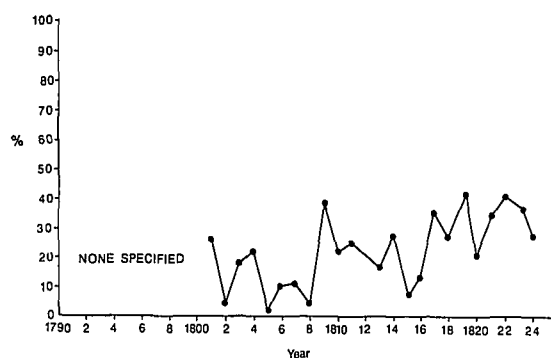


FIGURE 3

Percentage of sheep described as Southdowns in the sales notices

those of his tenants. In the early years of the nineteenth century, Southdowns were limited to the west of the county with the largest flocks on the sandy brecklands (Fig 7), suggesting that they could adapt to the poorer conditions there. After 1810, they gradually spread across into all the sheep-rearing areas. It would not be true to say that they were exclusively concentrated on Holkham or were primarily on the farms of Holkham tenants, although some certainly were breeders. Several are clustered around the Holkham-owned parish of Castle Acre, near Swaffham, between Norwich and Kings Lynn. The timing of their introduction does suggest that the publicity provided by the sheep shearings was influential in their spread. Between 1810 and 1820, about thirty flocks of Southdowns of over 100 sheep and several of over 700 came up for sale. A flock of nearly 2000, including 581 lambs, was sold at a breckland farm at West Tofts in 1823.²⁶ In 1819 and 1822 over 40 per cent of sheep offered for sale were classed as Southdowns (Fig 3). The total peaked in the depression year of high sales in 1822 when nearly 6500 sheep changed hands.

A sheep with a very brief period of popularity was the Merino. Imported from Spain, it was the prime fleec-

²² Trow-Smith, *op. cit.*, p 128.

²³ Arthur Young, *Annals of Agriculture*, XIII, 1790, p 162, and XV, 1791, pp 305-6.

²⁴ *Norfolk Chron.*, 25 September 1790.

²⁵ R A C Parker, *Coke of Norfolk*, 1975, p 120.

²⁶ *Norfolk Chron.*, 27 September 1823.

producing breed, and various attempts were made to cross it with English breeds to improve their fleeces. Coke had imported some by 1805, when they were let at the Holkham sheep shearings. He experimented with them until 1811, when he abandoned the scheme. It was between 1809 and 1814, that they found their way through to dispersal sales. There was a small flock at Felthorpe, and in 1810 some rams were sold in the castle ditches at Norwich market.²⁷ An advertisement for the sale of Merino rams 'just landed direct from Spain', at Long Ashton, near Bristol, appeared in the *Norfolk Chronicle* in 1810.²⁸ As well as the pure flock at Felthorpe, Merinos crossed with Norfolks were sold at Northrepps (1811)²⁹, with Leicesters at Weston Longville (1814),³⁰ and with Southdowns at Felthorpe (1810).³¹ Interest however was short-lived and none was offered for sale after 1814.

Pure-bred sheep were very much the preserve of the large-scale gentlemen farmers and it was the many varieties of half-breds which were playing an increasingly important role in the market. As Copus points out, the smaller farmers could only afford to buy an 'improved' ram and then use it on their own stock in an effort to upgrade it. He published a diagram which shows the effect of the Southdown on the many south country breeds to produce the various down sheep, such as the Oxford, Dorset, Wiltshire, and Hampshire.³² His article deals specifically with southern Britain, and so does not include the equally important Norfolk-Southdown cross which produced the Suffolk, one of the most influential breeds of the last 100 years.

Many different crosses are mentioned in the sales particulars, but frustratingly,

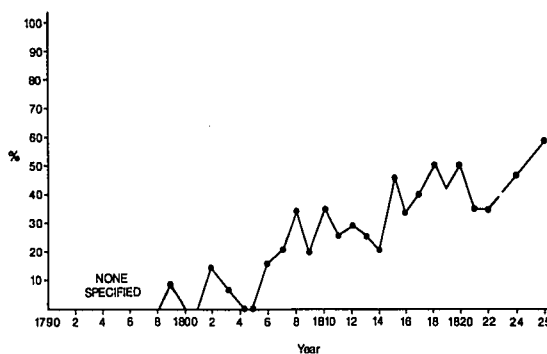


FIGURE 4

Percentage of sheep described as half-breds in the sales notices

in most early instances the specific cross is not given. The first record of 'half-breds' being offered for sale is in 1797³³, but it is not until the 1800s that the breeds of sheep being crossed are given. We have already seen that in the early years it was a Leicester ram that was being used on Norfolks and Southdowns, whilst after 1805, Southdown rams become increasingly popular.

That the resulting half-breds were used for breeding and not just for slaughter is indicated by the phrase, 'half-bred stock ewes', used in an advertisement for a sale at East Winch near Kings Lynn in 1806.³⁴ A flock to be sold on a dry chalkland west-Norfolk farm at Ringstead in 1818 was described as '40 half-bred Norfolk and Southdown ewes tupped by a Leicester tup'.³⁵

Rising from nothing, the half-breds soon dominated the market, reaching above 50 per cent after 1816 (Fig 4). The map for 1820-24 shows them distributed across all the sheep keeping areas of the county, avoiding only the extreme east of the Norfolk Broads and the heavy claylands of parts of the south. (Fig 9).

Of the various crosses that were tried, it was the Southdown-cross-Norfolk, first

²⁷ *Ibid.*, 8 September 1810.

²⁸ *Ibid.*, 1 September 1810.

²⁹ *Ibid.*, 28 September 1811.

³⁰ *Ibid.*, 15 October 1814.

³¹ *Ibid.*, 8 September 1810.

³² Copus, *op. cit.* p. 48.

³³ *Norfolk Chron.*, 7 October 1797.

³⁴ *Ibid.*, 6 September 1806.

³⁵ *Ibid.*, 3 October 1818.

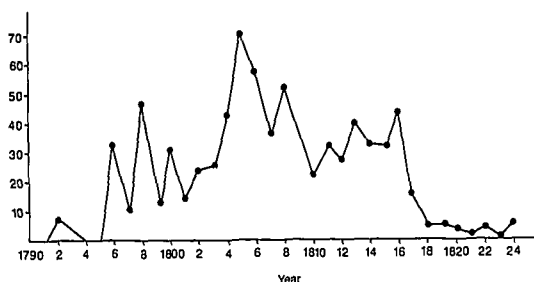


FIGURE 5
Percentage of sheep described as Norfolks in the sales notices

recorded as happening accidentally on Arthur Young's Suffolk farm in 1786, that was to be the most successful.³⁶ He was so impressed by the result that he continued the experiment, and by 1791 had 350 'Southdown cross Norfolk' ewes. Ewes of this cross did not filter through to dispersal sales in Norfolk until the period 1805-9 when three flocks were advertised. Between 1810 and 1814, the figure rose to sixteen, making it by far the most popular. In 1812 a flock of sheep from Morley Hall, near Wymondham was described as 'Norfolk Down',³⁷ but this name does not occur elsewhere. Instead, by 1845, the term 'black-face', to described the Norfolk-Southdown cross came into use, and by the 1860s it had become recognized as the Suffolk.

II

The most obvious trend of the period 1790-1825 is the decline in the number of pure black-faced Norfolk sheep for sale (Fig 5). The breed was frequently condemned by the commentators of the time, one of the most vehement being Arthur Young. In spite of his interest in the Southdown cross, he claimed to be a supporter of pure breeds only, particularly the Southdown. In 1804 he wrote, 'When will the flock masters of this celebrated

county adopt the whole blood (Southdown) instead of only a cross. The Norfolk sheep are confessedly falling into a well-merited disgrace'.³⁸ In this belief, the evidence of the sale advertisements suggests that Young was a little premature.

The importance of open heath grazing, where the grass was not over-lush, to the production of good fleeces which was recognized by Bakewell, Culley, and Ellman, was appreciated as far as the Norfolk sheep were concerned. In its natural environment, the sandy heaths, the Norfolk's fleece was, according to Young, the third most prized in England, the finest part, around the neck being 'equal to none'.³⁹ The importance of poor grazing to a good fleece is shown in an advertisement for sheep at Garboldisham on the edge of Breckland in the south of the county, offered for sale in 1790, 'The sheep walk is particularly dry and sandy and the fleece particularly fine'.⁴⁰ That it was primarily a sheep of open rather than enclosed countryside is indicated in the notice for the sale of a flock from Pockthorpe near Norwich in 1800: 140 Norfolk sheep were to be sold 'on account of the enclosing of Mousehold heath'.⁴¹

The fact remains that the Norfolk was still prized for the quality of its meat which graced the tables of the discerning. Perhaps because of this, stubborn efforts were made to improve the breed. Coke, who in spite of his encouragement of the Southdown, ate only Norfolks, offered a prize of 50 guineas at the sheep shearings for a Norfolk ram.⁴² This was more than any other premium offered, in an effort to encourage entries 'in order to obtain the sight and knowledge of a good Norfolk sheep if such a one can be produced'. However, there were several years when

³⁶ Young, *Annals of Agriculture*, VI, 1756, p 476 and XIX, 1793, p 89.

³⁷ *Norfolk Chron.*, 26 September 1812.

³⁸ Arthur Young, *General View of the Agriculture of Norfolk*, 1804, p 448.

³⁹ Young, *Annals of Agriculture*, XLII, 1804 p 538.

⁴⁰ *Norfolk Chron.*, 4 September 1790.

⁴¹ *Ibid.*, 4 October 1800.

⁴² Marshall, *Rural Economy of Norfolk*, I, p 365.

the prize was not awarded. Another reason for the long survival of so many flocks against all the odds was perhaps the one voiced by William Marshall when warning against the craze for half-breds: 'A valuable breed of stock, adapted to a given soil and situation, is the acquisition of ages; but let their superior excellences be what they may, a few years are sufficient to lose them, perhaps irretrievably'.⁴³

Even remembering that dispersal sales, particularly of the stock of deceased farmers, indicate the end, rather than the beginning of a phase, the decline in Norfolks was a slow one. However, the trade in Norfolk rams had almost ceased by 1825. Those huge flocks of Norfolk ewes that were still coming on the market were being served by Southdown, or less usually, Leicester rams.

The gradual decline of the Norfolks can be seen through the evidence of the sales. The ten years 1790-1800 was a period of low sales and therefore the sample is small. The breed of very few flocks is specified. A large flock of Leicesters was sold at Downham Market, a flock of half-breds at Gayton and Leicester-cross-Southdown at Hethersett. Otherwise we can assume that all the sheep were Norfolk. Very few sheep were kept in the east and all flocks of over 100 were in the west (Fig 6).

The number of sales increased in the 1800s and so there is a larger sample to consider. The number of other breeds, particularly Southdowns increased, but there was also a significant number of Leicesters (Figs 7 & 8). Between 1800 and 1804, just over twenty Norfolk flocks of over 100 sheep were sold, three of which contained more than 300 sheep. There were two main areas where these larger flocks were concentrated. As we might expect, there was a group in the poor sandy soils of Breckland, in Little Cres-

Flocks of Norfolks offered for sale in 1800-04



Flocks of Norfolks offered for sale in 1810-14



Flocks of Norfolks offered for sale in 1820-24

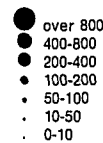


FIGURE 6
Distribution of sales of Norfolks in the sales notices,
1800-1824

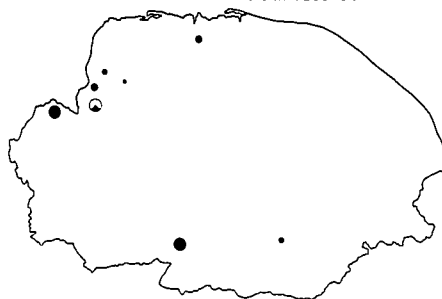
singham, Tottington, Wretham, and West Tofts. There were other large flocks in the light soils of north-west Norfolk, another important sheep area, and also three around Norwich (Fig 6). But Southdowns are also found in Breckland (Fig 7). The two breeds were not mutually exclusive and Southdowns appear to have adapted to the light soils which were supposed to be so suited to the Norfolk. The same

⁴³ *Ibid.*, p 366.

Flocks of Southdowns offered for sale in 1800-04



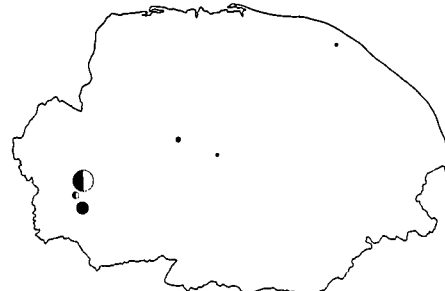
Flocks of Leicesters offered for sale in 1800-04



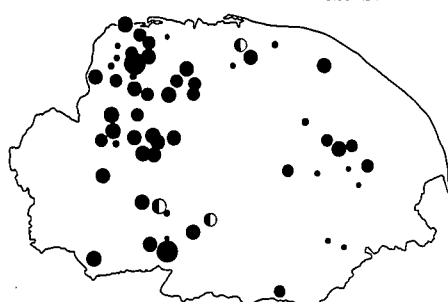
Flocks of Southdowns offered for sale in 1810-14



Flocks of Leicesters offered for sale in 1810-14



Flocks of Southdowns offered for sale in 1820-24



Flocks of Leicesters offered for sale in 1820-24

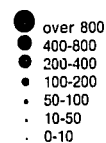
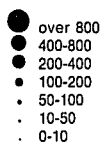


FIGURE 7

Distribution of sales of Southdowns in the sales notices, 1800-1824

FIGURE 8

Distribution of sales of Leicesters in the sales notices, 1800-1824

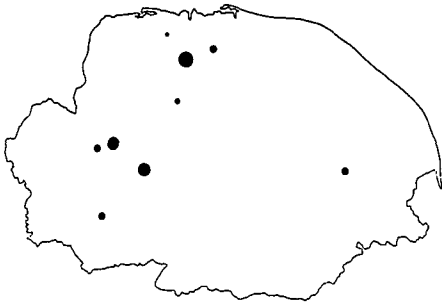
trends continue through to 1809. All large flocks of Norfolks were in the west of the county with three of over 700 sheep in Breckland or on the breck edge. Although the number of pure Southdowns for sale is down between 1805 and 1809, the number of half-breds was up (Fig 9). Norfolks still accounted for more than 20 per cent of the market.

There was still a good scatter of often large flocks of Norfolks in the area west

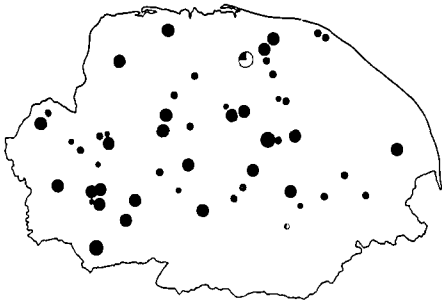
of Norwich between 1810 and 1814. Again there were concentrations in the north-west and around Breckland, but not to the exclusion of Southdowns. There was, not surprisingly, a concentration of Southdowns inland from Holkham on the north coast. Numbers of Norfolks for sale still remained over 20 per cent.

It is after 1815 that the dramatic decline of Norfolks set in. By 1818 the figure had dropped to 5 per cent of the market, and

Flocks of Half-breds offered for sale in 1800-04



Flocks of Half-breds offered for sale in 1810-14



Flocks of Half-breds offered for sale in 1820-24

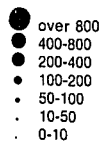


FIGURE 9

Distribution of sales of half-breds in the sales notices,
1800-1824

never again rose above that level. Flocks remained centred in the north-west and in Breckland.

After 1820, there were far fewer pure Norfolk flocks than earlier and even fewer with rams. An example from Methwold, on the edge of Breckland, sold in 1821 will serve as a typical example of the mixed flocks now found. It consisted of 140 prime stock ewes, 80 half-bred Nor-

folk and Down ewes, 30 crones, 190 half-bred ewe and wether lambs, 3 Southdown rams and 1 Leicester ram.⁴⁴ In the final year of this study, 1824, no Norfolk rams were offered for sale, but four flocks of breeding ewes, described for the first time with the prefix, 'real', or 'true-bred' with Leicester tups, were put on the market. The largest of these flocks consisted of 270 'superior real Norfolk ewes', and was sold at Narborough on the light soils of the Breckland edge.⁴⁵ In fact the distribution map for 1820-24 shows a group of flocks around the edge of Breckland as well as a scatter elsewhere but they had completely disappeared from the north-west of the county (Fig 6).

Pure-bred Southdown flocks were generally in the west of the county, with some huge flocks of over 1000 sheep in Breckland and in the light soils around Docket. There was a clear preference for the light soil belt which stretches north-south across the west of the county: the area traditionally associated with sheep production. Although the Leicester flocks have a slightly broader spread into the north-east (Fig 7) they were fewer and smaller. These few flocks were enough to produce the replacement rams required by the farmers of the county.

It was the half-breds (Fig 9) which showed an enormous increase in popularity. The fact that the flocks were not as large as the largest of the Southdowns suggests that they were more popular with the average mixed farmer than the great flock masters. Their spread too is much wider than that of pure breeds, penetrating areas in the east not usually regarded as sheep country. The creation of the half-breds would not have been possible without the existence of the pure-bred flocks, and so their importance is far more broad-

⁴⁴ *Norfolk Chron*, 2 September 1820.

⁴⁵ *Ibid*, 4 September 1824.

based than their distribution on its own might suggest.

III

Over the period covered, roughly equal to a generation, we can see the replacement of one breed, the local Norfolk, by another pure breed, the Southdown, across the main sheep keeping areas of the county. Of increasing numerical importance however, were the half-breds, the Southdown-cross-Norfolk becoming the most popular. The distribution and timing of the increase in Southdowns coincided with the sheep shearings which suggests that Holkham was in fact influential in the promotion of this breed. There are many areas where Norfolks and Southdowns were kept side by side, and even in its final years, the Norfolk was not, as we might expect, confined to Breckland, but was found in the northern corner of north-west Norfolk as well as in a few other locations. The story of its decline is not a simple one. It was certainly still popular, particularly where open heath remained into the nineteenth century, and was not in decline in the eighteenth as Holderness and Mingay suggest.⁴⁶ Its final stronghold was the infertile sandling region of the Suffolk coast, and it was from here that pure stock for crossing was being bought by the 1850s. Whilst many of the flocks of purebred Southdown and Leicester were to be

found on the farms of well-to-do farmers and large-scale flock masters, their importance was not confined to this group of farms. The distribution of these flocks may seem rather sparse on the maps, but their real role was in providing the blood for 'improving' the local breeds, and the rise of the half-bred is spectacularly shown in the graphs and on the maps. By 1825, they were found across all the sheep-keeping areas of the county on large and small farms alike. The word 'improving' in this context means producing a meat breed which fattened quickly. This could best and most cheaply be achieved by the half-bred sheep, and the Suffolk was to become one of the most popular British lowland breeds.

In this particular and significant aspect of the 'agricultural revolution' an almost complete break with the past was made over the working lives of one generation of farmers. Valuable and detailed information about a cross-section of farmers is available through the sales notices in the columns of local papers. Through them, it has been possible to piece together the gradual change in the breeds of sheep kept across the county in a way no other source will allow. It has enabled the detailed study of a crucial stage of one of the improvements that made up the 'Agricultural Revolution'.

ACKNOWLEDGEMENTS

This article is based on research undertaken for a wider study by Peter Wade-Martins on the history of Norfolks and the origins of Suffolk sheep. I am indebted to Phillip Judge, for drawing the figures.

⁴⁶ G E Mingay, ed, *The Agrarian History of England and Wales*, vol VI 1750-1850 1989, p 322, and B A Holderness in J Thirsk, ed, *Agrarian History of England and Wales*, 1640-1750, vol v, part 2, 1985 p 229.

The Agricultural Pollution of Watercourses: The Precedents Set by the Beet-sugar and Milk Industries

By JOHN SHEAIL

Abstract

The inter-war years were an important period in the development of an institutional and research response to pollution issues. The paper focuses on the problems arising from the newly-established beet-sugar factories and the increasingly-centralized milk-handling and -processing industries. Through research and development, it proved possible to accommodate the otherwise wholly welcome developments in rural enterprise, without incurring the risk of serious pollution to the nearby watercourses.

IN JUNE 1990, two of the UK Research Councils, namely the Agricultural and Food Research Council and the Science and Engineering Research Council, established a Clean Technology Unit. It was pointed out that 'leaks' and waste products had often occurred within the interlinked processes that characterized farming and the manufacture of farm produce. In some instances they posed a serious environmental threat. The Unit was intended to promote research that forestalled pollution, rather than removed it at the 'end of the pipe'. Through the rigorous analytical approach of process engineering, control strategies would be developed for the whole production process.

The purpose of this paper is to provide an historical context for the concern and commitment embodied in the Clean Technology and other initiatives, being taken to mitigate, if not eliminate, forms of agricultural pollution. The examples are drawn from the inter-war years. Not only were these decades important for the development of an institutional framework to fight pollution in the United Kingdom, but they yielded further examples of how innovation, whilst wholly welcome from an economic, social and political stance, might nevertheless bring unwelcome environmental impacts. The paper will cite the

experiences of the newly-established beet-sugar factories and increasing centralization of milk collection and distribution, and the processing of milk products.

I

An institutional framework that sought to ensure that policy initiatives were underpinned by surveys and experimentation, began to evolve in the 1920s. Mounting concern as to 'the deplorable position of the (inland) fisheries in relation to river pollution' caused the Ministry of Agriculture and Fisheries (MAF) to appoint an advisory Standing Committee on River Pollution (SCORP) in 1921. Representatives of the salmon, trout and coarse fishing interests, which had done so much to highlight the state of the rivers, together with representatives of the Federation of British Industries, made up the membership of the committee, which was chaired initially by the Fisheries Minister and later the Fisheries Secretary, Henry G Maurice. Through a greater knowledge of the condition of individual watercourses, and collaboration between fishing interests and industry, the Ministry hoped to encourage major improvements.¹

¹ J Sheail, 'Pollution and the protection of inland fisheries in inter-war Britain', in M Shortland, ed, *Science and Nature*, Oxford, 1993, pp 41-56.

As each river was surveyed, or re-surveyed, members of the SCORP and their respective fishery bodies, demanded action to tackle the many examples of pollution identified. Whilst refusing to countenance the establishment of a central statutory body to administer the river system, the Government conceded the need for a more comprehensive approach to research. River pollution was a national problem that would require many years' work to resolve. A Water Pollution Research Board was appointed in 1927, under the aegis of the Department of Scientific and Industrial Research (the forerunner of the Science (and Engineering) Research Council). The Board's Director of Research, W T Calvert, was Chemical Inspector for the Ministry of Health, having previously been Chief Chemist to the West Riding of Yorkshire Rivers Board.²

The Board had three research objectives, namely the treatment of water for public supply, purification of sewage, and prevention of pollution by trade effluents. As the Principal Assistant Secretary of the Department of Scientific and Industrial Research (DSIR), Henry T Tizard, told the first meeting, the Government were prepared to meet the costs of purely scientific work; the costs of the industrial applications would be borne by industry. More positively, there were outstanding opportunities to fulfil an avowed intention of the DSIR, namely to bring companies in relevant sectors of industry together jointly to fund and facilitate the necessary research. Annual reports of the Board recounted the close contacts made with companies. Relevant information and facilities were made freely available to the Board's scientists.³

By the outbreak of war in 1939, the volume and reputation of the Board's work warranted the establishment of a central research laboratory. Prominent among the water-pollution issues investigated, that included detailed surveys of the river Tees and Mersey estuary, were investigations as to ways of treating beet-sugar and milk effluents. Temporary war-time accommodation was provided for a Water Pollution Research Laboratory in 1940.⁴

II

The pollution caused by beet-sugar effluent was so serious and novel as to make the factory-owners pioneers in forging the kind of close relationship sought between different industries and the Water Pollution Research Board. Whilst sugar beet (*Beta vulgaris*) had been grown for nearly two centuries, a large-scale processing industry had only developed in the 1920s (Fig 1). The amount of beet sugar manufactured rose from 7000 tons in 1922-3 to over 500,000 tons by 1938-39. A report published by the MAF in 1931, described the establishment of the industry as a 'large-scale experiment without parallel in the recent history of this country'. Direct State support was provided under the British Sugar (Subsidy) Act of 1925. By the time the Water Pollution Research Board was set up in 1927, there were fourteen factories, and the prospect of many more. An inquiry into future support for the industry, in 1935, found them well-equipped; they compared favourably with those on the Continent. Beet-sugar production was 'a technical process of considerable nicety'. As a continuous operation from washing

² Water Pollution Research Board (WPRB), *Water pollution research 1947*, HMSO, p 1.

³ Public Record Office (PRO), DSIR 13, 5; WPRB, *Report for the year ended 29 June 1931*, HMSO, 1931, pp 2 & 6-8; H Melville, *The Department of Scientific and Industrial Research*, 1962.

⁴ PRO, DSIR 13, 93; WPRB, *Water pollution research 1939-1945*, HMSO, 1947.

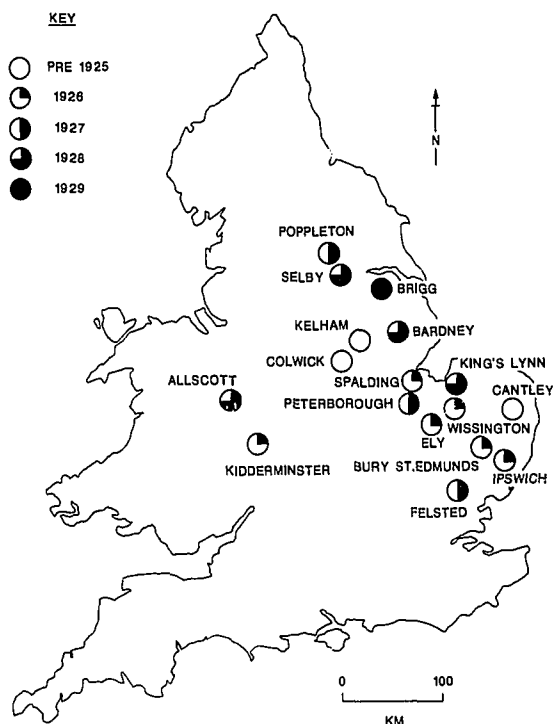


FIGURE 1

Development of beet-sugar factories (after H D Watts, The location of the beet-sugar industry in England and Wales, 1912-36, *Transactions of the Institute of British Geographers*, 53, 1971, p 109)

the roots to the bagging of the sugar, it had to be carefully balanced (Fig 2).⁵

Much publicity was given to the fact that nothing was wasted. If the farmer kept the beet tops, and could be persuaded to use the residues from the manufacturing process (as happened on the Continent and in America), practically everything was returned to the soil. There remained, however, the question of the waste waters, that would have to be discharged to nearby streams or rivers. Whilst they contained scarcely any directly toxic substances, the organic matter decomposed

so rapidly as to reduce the concentration of dissolved oxygen to so low a level as to destroy fish and other aquatic life, characteristic of a healthy river.⁶

When King George V toured the Colwick factory in November 1926, local newspapers highlighted how he enquired as to what became of the waste waters, commenting, 'You must be very careful you do not get in danger of river pollution'. The Managing Director assured him that the water was not returned to the river until it had been filtered and purified. Less than half of one per cent in weight of the beet was lost during the manufacturing process. A month later, however, magistrates fined the company £25, with £15 costs, as a result of an action brought with reluctance, but after due warning, by the Trent Fishery Board. The secretary of the Nottingham City Police Angling Club recounted how hundreds of dead and dying fish had been found. Chemical analysis of the river water, and post-mortem examination of two bream, carried out by lecturers at University College, Nottingham, pointed to their having been killed by the beet effluent.⁷

Visually, the most obvious effect of pollution was the growth of the saprophytic organisms, known collectively as 'sewage fungus'. Whereas it was commonplace to find a small growth within a short distance of the outfall of sewage works, an unmistakable and heavy crop extended for some twenty miles along the river Ouse, below the Ely and Wissington factories, and for twelve miles downstream of the Bury St Edmunds works in Suffolk. Besides its unpleasant appearance, portions of the fungus broke loose and floated downstream in masses, adhering to any obstruction. In time, every object in the water might be covered, thereby

⁵ Ministry of Agriculture and Fisheries, *Report on the sugar beet industry at home and abroad*, Economic series 27, HMSO, London, 1931, p i; PP, 1934-35, XI, Ministry of Agriculture, *Report of the UK Sugar Industry Inquiry Committee*, Cmd 4871; H D Watts, 'The location of the beet sugar industry in England and Wales', 1912-36, *Trans Inst Brit Geog*, 53, 1971, pp 95-116; H D Watts, 'Conflict and collusion in the British sugar industry 1924-28', *Jn Hist Geog*, 6, 1980, pp 291-314.

⁶ *Nottingham Journal*, 24 November 1926.

⁷ *Nottingham Guardian*, 17 November 1926; *Nott Jn*, 25 November and 9 December 1926.

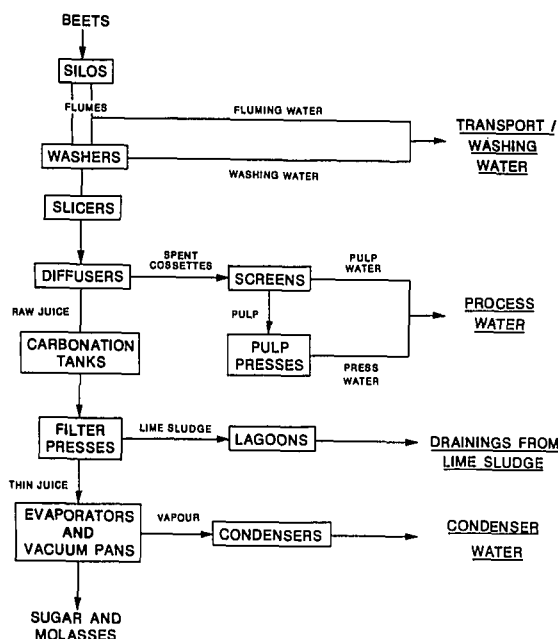


FIGURE 2

Discharges of waste waters from a beet-sugar factory (after B A Southgate, *Treatment and disposal of industrial waste waters*, 1948, p 317)

further displacing the plant and animal life characteristic of the watercourse.⁸

The impact of beet-sugar effluent on river life was most closely studied by MAF fishery biologists on the river Lark, below the Bury St Edmunds factory. They highlighted how some problems could arise from ignorance on the part of those operating the plant as to how effluents behaved. The water used to wash the beets was stored at the beginning of the 1926–7 manufacturing season in the mistaken belief this would improve its quality. The water contained not only mud in suspension, but the tips and parts of the beet. Through fermentation, it became black and so foul-smelling that, after a fortnight, it was discharged, causing a six-mile length of the river Lark to become almost completely deoxygenated. The effect was

disastrous. Fish came to the surface and died, and smaller animals were almost completely wiped out.

Whilst careful management of the effluents might avoid such catastrophic effects, the oxygen content of the water was still too low to support fish during periods when the factory was in use. The fish must either migrate downstream or into tributaries free of the effluent. The additional stock to those waters was likely to lead to over-population, causing semi-starvation and greater incidence of disease and predation. Whilst the fish were observed to re-populate the polluted stretches, after each season, fishery biologists warned of how there could be no guarantee that this would continue. Having been driven away so many times, the surviving fish might abandon the polluted stretch altogether.⁹

As the MAF conceded, in its Economic Report on the industry in 1931, nobody wished to interfere with an industry new to the country and of great potential value to agriculture. There had been 'a fairly general disinclination to set the law in motion against the offending factories'. As an official of the Ministry of Health emphasized, the problem did not arise through a lack of foresight, but rather from the absence of any means to tackle it. Whilst the MAF had obtained, through the Foreign Office, much useful information on practices on the Continent and in America, it was clear that 'no completely successful method of treating effluents' had been found. It was an outstanding example of the need for 'a body of technical information on which remedial measures' could be based. In supporting the case for the establishment of the Water Pollution Research Board, the Ministry of Health insisted on the

⁸R W Butcher, F T K Pentelow and J W A Woodley, 'An investigation of the river Lark and the effect of beet sugar pollution', *Ministry of Agriculture and Fisheries Fishery Investigations Series, I*, vol 3 (3), 1930; PRO, MAF 41, 99.

⁹PRO, MAF 41, 300 & 312.

problem of beet-sugar effluents being placed at the top of its agenda.¹⁰

III

The fact that the research on beet-sugar effluents was to be carried out under the aegis of the Water Pollution Research Board meant there was every opportunity for applying the knowledge and experience gained to other industries, where the incidence of pollution imposed similarly heavy costs, both on the river environment and, ultimately, the industry itself. The benefits of this form of 'technology transfer' were highlighted by the treatment of effluents in the dairying and milk-products industries, and later the search for economies in local-authority sewage disposal works.

The treatment of beet-sugar effluent

At the instigation of the Ministry of Health and MAF, a meeting was held with the Technical Committee of the British Sugar Beet Society, to consider what joint action could be taken. The latter agreed to form an Effluent Subcommittee as a means of sharing information on waste disposal. On the recommendation of the MAF, G Bertram Kershaw (who had acted as engineer to the pre-war Royal Commission on Sewage Disposal) was appointed to visit all factories, so as to advise on immediate measures and to formulate a longer-term programme of research.¹¹

Most factories were designed to deal with 1000 tons of beet a day during the annual 'campaign', which usually lasted a hundred days from the lifting of the first beet in October. From the storage silos, the beets were transported by water flowing in flumes through a washing machine, after which they were cut into slices or

'cosettes' (Fig 2). It was usual to place the cosettes in diffusers, in which they were treated with hot water to dissolve the sugar and other soluble substances. The solution was treated with lime and carbon presses. Finally, the partially purified solution of sugar was concentrated in multiple-effect evaporators and in vacuum pans, to yield crystalline sugar and molasses.

Some three to four million gallons of water a day might be required for the manufacturing process. Kershaw distinguished two forms of waste water, namely the transport/washing water and condenser water, and, secondly, the process water and drainings from lime sludge. In his report of March 1927, he identified a number of remedial measures that could be taken straightaway in dealing with the wash and condenser water. The three million gallons of water, used each day for transporting and washing the beets, might contain over 150 tons of soil and beet debris, together with a small amount of dissolved organic substances. It was usual to pass the water through settling ponds, and to screen it. Whilst standards varied, Kershaw found them to be generally unsatisfactory. The earth-banked ponds were generally large and, except at Peterborough, little thought had been given to their design. Sand banks were easily formed; the deposited material was difficult to remove. Kershaw emphasized how a continuous flow could be maintained if well-designed sedimentation tanks were used in a series, the first being for the removal of grit, sand and other heavy material, the second to extract leaves and other beet debris, and the last for removing the bulk of the remaining suspended solids. Screening should be carried out in stages, final screening by self-cleaning fine-aperture filter.¹²

¹⁰ Ministry of Agriculture, *op. cit.*, 1931; PRO, DSIR 3, 2 & MAF 41, 303.

¹¹ PRO, MAF 41, 303.

¹² WPRB, *Report for the year 1927-28*, HMSO, 1928, pp 7-11; WPRB, *Report for the year ended 30 June 1929*, HMSO, 1930, pp 11-19; PRO, MAF 41, 99.

The 'really taxing problem' was the treatment of the process water and lime sludge. Once the sugar was extracted, the spent-cossettes were pressed to remove excess moisture. This process water, of up to 500,000 gallons a day, contained considerable amounts of organic material in true, or colloidal, solution. One of Kershaw's first moves was to visit the Rothamsted Experimental Station. The Director of the Station, Sir John Russell, and head of the Fermentation Department, Eric Hannaford Richards, agreed, in January 1927, to carry out research (subject to DSIR funding) that might 'shed light upon the useful recovery, or special treatment', of these waters. A DSIR Technical Paper was published in 1933, in which Richards and D Ward Cutler, the head of the General Microbiology Department, reported their research findings.¹³

Three possible means of purification were identified, namely fermentation using lime, bio-aeration with an 'activated' sludge, and thirdly (and by far the most promising) biological filters, whereby purification was achieved through the life processes of bacteria or microbes. In an early report, Richards and Cutler described, in trials at Rothamsted, how filters had achieved a standard of 95 per cent purification of an acid-tank liquor from a jam factory. The combined waste from a large jam factory was almost as polluting as the strong 'portions' of beet-sugar effluent. Effluents of a high standard were obtained in the laboratory, using mangolds and dried beet. Richards and Cutler suspected that attempts at large-scale biological treatment had previously failed, because of inadequate screening and badly-designed filters. Even whole beets might be found in the overloaded filters.¹⁴

¹³ E H Richards and D Ward Cutler, *The purification of waste waters from beet sugar factories*, HMSO, DSIR Water Pollution Research, Technical Paper 3, 1933.

¹⁴ PRO, DSIR 13, 5 & 8.

The Water Pollution Research Board strongly endorsed further trials, both in the laboratory and at a semi-commercial scale, to assess the effect of such factors as the strength of the liquor, rate of flow, and size of medium, upon the oxidation of the press water. Discussions held at the instigation of the Chairman of the Water Pollution Research Board, Sir Robert Robertson (the Government Chemist) led to an agreement, whereby facilities (including laboratory accommodation) were provided free of charge by the Anglo-Scottish Beet Sugar Corporation Ltd at Colwick. The industry as a whole agreed to contribute £3000 towards operating costs over three campaigns. Two filters, each of 25 feet in diameter and 6 feet in depth, were designed by, and constructed under the supervision of, H C Whitehead, the Chief Engineer of the Birmingham, Tame, and Rea District Drainage Board. Whitehead had been appointed to the Water Pollution Research Board in 1927 as 'the man in the sewage world with the most scientific outlook'. Two chemists and biologists from Rothamsted were placed in charge of the trials.¹⁵

Despite exasperating and continuous breakdowns of the screening plant, the trials at Colwick indicated that standards of over 90 per cent purification could be achieved from filters of about 6 feet in depth, if most of the suspended solid matter were removed and the strength of the liquor were diluted to the equivalent in strength of a solution containing about 0.1 per cent sucrose. Dilution might be effected by mixing with river water, effluent from the filter, or transport and washing water. The diluted water should be filtered at a rate not exceeding 100 to 150 gallons per cubic yard of medium per day. The most suitable medium was a

¹⁵ PRO, DSIR 13, 2 & 5.

hard, insoluble material, such as gravel, flint or slag.¹⁶

By the third and last year of the Colwick trials, studies of a more fundamental kind were underway as to how carbohydrates decomposed. A survey provided important insights into the kinds of organisms present on the biological filters.¹⁷ If it were possible to inoculate the filters with selected organisms, and thereby increase the rate of purification and reduce the amount of time needed for new filters to mature, there would be major opportunities for reducing the size and operating costs of such plant. In practice, it was found that inoculation with medium from a sewage-works percolating filter made no apparent difference to the purification of the effluent. There was no difference in the development of the population in the filters, other than the introduction of insect larvae at an earlier stage than occurred in the uninoculated filters.¹⁸

The treatment of milk effluent

The Annual Report of the Water Pollution Research Board for 1931-32 was the first to refer to preliminary experiments with discharges from depots and factories producing milk-products. It was noted how problems were similar, in many respects, to those of beet-sugar effluent. At the meeting of the Board, in April 1933, the Chairman, Sir Roy Robertson, emphasized the need to tackle them before further large depots were established. Whereas few handled over 5000 gallons a day before the war, a through-put of 50,000 gallons a day was becoming commonplace. Under the Agricultural Marketing Act of 1931, proposals had been put forward for a marketing system for England

and Wales, which, if implemented, would lead to much greater concentration of milk collection and distribution. Similar proposals had been made for the Glasgow and Aberdeen areas of Scotland.¹⁹

Because the demand for milk was fairly constant, but output was much higher in spring and summer, some of the surplus was manufactured into butter or cheese. Of the 900 million gallons sold under contract in 1935-36, some 38 per cent was used for manufacturing purposes. Waste waters from these centres consisted mainly of water mixed with milk, and sometimes caustic soda and other detergents. The waters were largely derived from five sources, namely the washings and milk draining from the floors, churns and their lids, the equipment used to wash the churns, the pasteurizing plant, and the cooling plant. Since the processes that gave rise to the milk washings were intermittent, there was a wide fluctuation in the volume and character of waste waters during the day.

On a tour of plant in early 1933, Cutler and Richards found none of the methods used to treat and discharge the variety of effluents to be wholly satisfactory. The washings from the depot at Castle Cary were passed through a septic tank, and then irrigated over land planted with osiers, before being discharged into the river Brue. Under an agreement with the local authority, the effluent from the Evercreech depot (which also made some cheese) was mixed with sewage from a hundred houses, before being treated in the same way and allowed to flow into the river Alham. Up to 3000 gallons of effluent a day were treated by septic tank and percolating filters at the comparatively large depot and seasonal cheese-

¹⁶ PRO, DSIR 13, 6; Richards and Cutler, *op. cit.*, 1933.

¹⁷ PRO, DSIR 13, 8; WPRB, *Report for the year 1927-28*, HMSO, 1928, pp 13-6.

¹⁸ WPRB, *Report for the year ended 20 June 1931*, HMSO, 1931, pp 6-8.

¹⁹ WPRB, *Report for the year ended 30 June 1932*, HMSO, 1933, pp 5-7; WPRB, *Report for the year ended 30 June 1933*, HMSO, 1934, p 6; PRO, DSIR 13, 14; S Baker, *Milk to market: forty years of milk marketing*, London.

making factory at Sparkford, before being discharged into the river Spark.²⁰

A detailed study of the impact of milk wastes was made on the Bristol Avon by the fishery biologists of the MAF between 1934 and 1936. The most obvious effect of the effluents from the factory at Chippenham, producing condensed milk and dried milk food, was the increase in the turbidity of the water and growth of sewage fungus on a scale almost as extensive as that caused by beet-sugar factories. As with beet-sugar effluent, the most promising methods appeared to be much-modified forms of the processes used at sewage disposal works. In a series of trials at Rothamsted, good results were obtained from both biological filtration and the activated sludge process. Whilst a single percolating filter produced effluents of good quality, there was a major limitation. Solid fatty matter soon accumulated in the upper layers of the filtering medium, causing them to become choked. This could be avoided by first allowing the milk washings to ferment in an open tank for one or two days. The fats and other solid matter would be deposited as a sludge at the bottom of the tank, or as scum on the surface. The separated liquid could then be passed through the filter. Not only was there a problem of disposing of so much sludge, but the smell was awful.²¹

During large-scale trials, some years previously at the Minworth works of the Birmingham, Tame, and Rea District Drainage Board, a percolating filter became similarly clogged with sewage. It was cleared by diverting sewage effluent from another filter. Whitehead recollected the incident and, with the Board's Chief Chemist, F R O'Shaughnessy, indepen-

dent trials were conducted in their laboratories. Preliminary fermentation was found to be unnecessary, if the waste waters (after sedimentation) were treated in two percolating filters in series, and the order of these filters was changed every two or three weeks. The slimy, solid matter deposited in the top layers became granular, and was oxidised or washed away, when the filter became the second in the series.²²

The Water Pollution Research Board recognized, as early as July 1933, the need to apply the laboratory findings at a semi-commercial scale. It was the only way to discover how the plant might be designed and constructed at minimum cost, yet consistent with maximum efficiency. Citing the experience of the beet-sugar industry, the Board's Annual Report for 1933-34 urged the dairy industry as a whole to cooperate, both technically and financially. Whilst negotiations began in the autumn of 1933, with the Chairman of the newly-created Milk Marketing Board, Secretary of the National Association of Creamery Proprietors, and Wholesale Dairymen, and personnel in the MAF, it was not until August 1934 that agreement was reached. The Finance Committee of the National Milk Publicity Council was to represent the industry. In the first instance, £2000 per annum would be provided over two years, through the Milk Marketing Board. The Scottish Milk Marketing Board contributed a further £300 a year. A total of £12,050 was eventually raised by the industry.²³

Calvert and Whitehead rejected the factory of Midland County Dairies Ltd at Kilkewydd, near Welshpool, as being too remote as a site for the trials. They accepted, instead, the offer by United Dairies Ltd of a site and laboratory accom-

²⁰ PRO, DSIR 13, 14; F T K Pentelow, R W Butcher, and J Grindley, 'An investigation of the effects of milk wastes on the Bristol Avon', MAF Fish Inv Ser, I, vol 4 (1), 1938.

²¹ PRO, DSIR 13, 10; WPRB, *Report for the year ended 30 June 1934*, HMSO, 1934, pp 4 & 13-8.

²² PRO, DSIR 13, 18; WPRB, *Report for the year ended 30 June 1936*, HMSO, 1937, pp 4-7 & 16-28.

²³ PRO, DSIR 13, 8, 14-6; WPRB, *Report for the year ended 30 June 1934*, HMSO, 1934, p 4.

modation at Ellesmere in Shropshire. The depot handled up to 40,000 gallons of milk a day, of which a small proportion was used for the manufacture of cheese. Whitehead designed and supervised the construction of two sets of experimental plant, both of which were operated over the three-year period, August 1935 until September 1938. One plant consisted of two percolating filters, each 25 feet in diameter. Milk washings or whey washings, or mixtures of the two, could be passed through, after settlement, with the filters working in parallel, or in either order in series. The other plant used the activated sludge process.²⁴

At a meeting of the Board in October 1937, Richards described how trials at Ellesmere, using double filtration, had produced effluents of excellent quality, with a biochemical oxygen demand of less than 1 part per 100,000, when settled and dilute crude liquid (with a biochemical oxygen demand of 20 to 30 parts per 100,000) was discharged at a rate of 160 gallons a day per cubic yard of medium in the two filters together. Not only were the effluents of higher quality, but filtration was likely to be far more robust than the activated sludge process. Operating conditions at a depot or factory would be much more demanding than in a carefully-regulated sewage disposal works. Whereas the 'activated' sludge process was easily upset by flushes of liquid of abnormally high strength, perhaps after a mishap in the factory, there might be only a temporary deterioration in the quality of the final effluent from filters. Any excessive deposition of solid matter could be rapidly removed.²⁵

The Annual Report for 1935-36 reported how several factories had installed, or were planning to instal,

purifying plant on the basis of the information already obtained. The design of the plant at the Whitland factory of the United Dairies Company in Carmarthenshire was directly based on the Ellesmere findings. It produced a final effluent of excellent quality, with a biochemical oxygen demand of between 0.1 and 1.0 part per 100,000. A DSIR Technical Paper, summarising the results of the various trials, was completed in October 1939.²⁶

The treatment of sewage

There was a possibility of a further transfer of skills and experience, this time to the vastly greater challenge of sewage disposal. At a meeting of the Board in July 1937, Whitehead drew particular attention to the quality of the effluents at Ellesmere, despite their being passed through the filtering medium at a much greater rate per cubic yard than that ordinarily adopted for domestic sewage by single filtration. The financial savings would be considerable if double filtration could similarly increase the through-put of domestic sewage. The Water Pollution Research Board accepted the offer of four of the sixty filters at Minworth for large-scale trials, with the Birmingham, Tame and Rea District Drainage Board meeting the cost of £7000 required to adapt them. Staff were transferred from Ellesmere for the commencement of the trials in October 1938.²⁷

Of the studies of the Water Pollution Research Board, under way at the outbreak of war, only the work at Minworth was continued, albeit at a reduced staffing level. With materials and labour in short supply, it was important to find the most efficient methods of constructing and

²⁴ PRO, DSIR 13, 15; WPRB, *Report for the year ended 30 June 1936*, HMSO, 1937, pp 16-7.

²⁵ PRO, DSIR 13, 18. The measurements are cited in the form used in the original documentation.

²⁶ WRPB, *Report for the year ended 30 June 1936*, HMSO, 1937, pp 4-5; PRO, DSIR 13, 93; Department of Scientific and Industrial Research, *The treatment and disposal of waste water from dairies and milk product factories*, HMSO, Water Pollution Research Technical Paper 8, 1941.

²⁷ PRO, DSIR, 13, 18 & 93.

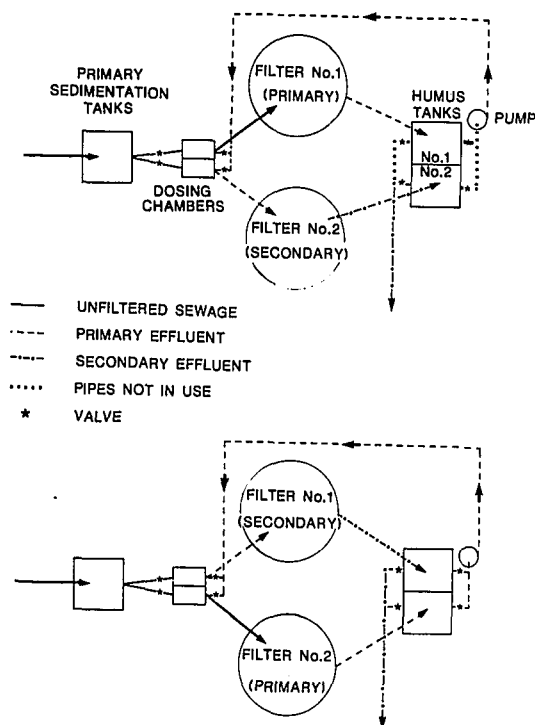


FIGURE 3

Arrangement of plant for treatment of settled sewage by alternating double filtration (after Southgate, *op. cit.* p 62)

operating the new and enlarged sewage-disposal works that would be required for the wartime camps, factories and other establishments. Trials with alternating double filtration, from June 1942 to May 1944, achieved an application rate three to four times that of a single filter, using comparatively weak sewage, as judged by the test of biochemical oxygen demand (Fig 3). Whilst the plant might need twice as many tanks and pumps, there were major capital savings in the number of filters required.²⁸

IV

It quickly became apparent that something more was required than 'end-pipe' treat-

ment for beet-sugar effluents. Not only were there serious doubts on the part of industry as to whether biological filtration on a commercial scale would achieve levels of only 80 per cent purification (the waste waters would still be too polluting for discharge), but the plant would have to be impossibly large and expensive to cope with the considerable volumes of liquor produced during the short, annual campaigns, that corresponded with the coldest months of the year. Whilst farmers were encouraged to 'clamp' down their beet in pits, and factories commonly made clamps in neighbouring fields, there was no satisfactory means of storing beet for long periods so as to enable factories to handle smaller volumes over a longer season.²⁹

The Water Pollution Research Board strove to portray the impasse more positively. Its Annual Report for 1930-31 recounted how, as the work progressed, industry recognized that the intention was to help, rather than hinder, operations. Far from adding to costs, the prevention of pollution could lead to savings. As the Board's first Report pointed out, the real solution was to alter the manufacturing process so as to remove any need for wastes and, therefore, for waste treatment.³⁰

To achieve this end, manufacturing processes had to be reorganized. Visits by Robertson and Calvert to France and Holland provided first hand insights into the procedures adopted, for example, at Marguillies, near Lille, where pollution had been considerably reduced by using the transport and washing waters over and over again. In Britain, the factories at Felsted, Kidderminster, Spalding, and Poppleton (of the Anglo-Scottish group) had adopted the Raabe continuous process, whereby water was returned to the cylin-

²⁸ WPRB, *Water pollution research 1939-1945*, HMSO, B A Southgate, *The treatment and disposal of industrial waste waters*, HMSO, 1948, pp 62-4.

²⁹ MAF, *op. cit.*, 1931, pp 193-7; Southgate, *op. cit.* pp 316-22.

³⁰ WPRB, *Report for the year 1927-8*, HMSO, 1928, pp 7-11; WPRB, *Report for the year ended 20 June 1931*, HMSO, 1931, p 2.

dricol diffuser after the sugar had been extracted from the cossettes. Other groups contended that this would reduce the amount of crystalline sugar that could be extracted from a given weight of beet – a view refuted by later trials conducted by the Water Pollution Research Laboratory. Of much greater weight was the objection that recirculation would increase corrosion of pipelines and lead, therefore, to greater expense and disruption in the manufacturing process.³¹

Whilst the re-use, rather than the treatment, of effluent became the guiding principle of the beet-sugar industry, discharges could not be entirely eliminated. The various liquids of a recirculation system had to be emptied at the end of the campaign. Instances of serious pollution still occurred. At the request of the British Sugar Corporation, the Water Pollution Research Laboratory carried out further trials in the 1944–5 campaign. If the liquor could be run-off at a comparatively low and even rate during the interval between campaigns, it might be possible to treat it effectively in plant of comparatively small size.³²

Again, drawing on the experience of the beet-sugar industry, all parties in the dairy industry recognized the need, wherever practicable, to modify manufacturing processes, so as to reduce the quantity, or the polluting effect, of any waste discharged. Not only were there direct savings to be made, in terms of increasing the amount of milk or milk-derived products to be sold, but there would be significant reductions in the size and cost of the plant needed to treat any waste.

The wastes could be of two kinds. There might be 'wilful losses', where the factory decided not to make use of by-products, such as buttermilk or whey,

from the butter- and cheese-making processes. The Board and its expert advisers were unremitting in their condemnation of such commercial shortsightedness, which also had a devastating effect on watercourses. If the whole of the whey from a cheese factory, handling 10,000 gallons of milk a day, were discharged into a stream, the effect would be comparable to that of the sewage outfall from a town of up to 50,000 people.³³

The second, and more usual, kind of loss arose from the many relatively small losses from different parts of the plant, which in aggregate might represent as much as 0.5 to 1.0 per cent of the volume of the milk handled. Each stage of milk handling and manufacture had to be closely scrutinized. The most important loss from a single source was the drainage of the 10-gallon churns and their lids. By installing a simple drainage rack, with a milk-collecting channel, losses might be halved, if the churns were allowed to stand for between one and two minutes. If very small quantities of water were used for the first washings of the butter- and cheese-making apparatus, they might be added to the buttermilk or whey. Subsequent washings, using larger quantities of water, would have a much less polluting effect, when discharged. Such conservation measures might not only take advantage of the expanding market for dried whey and buttermilk, but they might remove the most serious threats of pollution.

V

As the Board's Annual Report for 1935–36 commented, satisfactory methods had to be quickly found for treating and disposing of sewage and industrial effluents. There would otherwise be considerable difficulty in providing the large volume

³¹ Richards and Ward Cutler, *op. cit.*, pp 1–5.

³² T W Brandon, 'Waste waters from beet-sugar factories. Their treatment and disposal', *International Sugar Journal*, 49, 1947, pp 98–100 & 124–6.

³³ Department of Scientific and Industrial Research, *op. cit.*

of good-quality water required for domestic, agricultural and recreational purposes. As well as long-standing problems still to be resolved, further threats to water purity were bound to arise as the geographical distribution of population and industry changed, industrial processes were modified, and new industries developed.³⁴ This paper has focused on the problems posed by the newly-established beet-sugar factories and increasingly-centralized milk-handling and processing industry. How could these otherwise wholly welcome developments in rural enterprise and employment be promoted and sustained, whilst protecting rivers and streams from the damaging effects of pollution?

Not only was it important for the individual localities and industries that solutions should be found, but the elimination of such forms of pollution would demonstrate, in the most public way possible, the value of the partnership being forged between industry and scientific research, as envisaged by the DSIR in its decision to establish a Water Pollution Research Board. There was no concealing the impatience of Sir Robert Robertson, the Chairman of the Board, to exploit the opportunities offered. From the chair, he expressed disappointment in June 1936, that investigations into the use of biological filtration for treating milk effluents were still incomplete. It was so important 'to publish definite conclusions and precise data as rapidly as possible for the guidance of the industry'. Calvert protested that studies, which simulated as closely as possible the working-conditions of a factory, could not be hurried. At the Ellesmere plant, 'each set of conditions had to be stabilised before changing to another set of conditions, otherwise it would not be

possible to differentiate the effects of the various factors'.³⁵

Even if scientists could not provide the immediate answers sought by policy makers, the Board had no doubt that 'a definite technical advance' had been made, both in terms of transferring technologies from one industry to another, and in the increasing importance attached to modifying manufacturing techniques, as opposed to relying solely on waste treatment. In the Board's view, the experience of its first ten years had given substance to the view that only when all practicable measures had been taken to reduce the quantity of polluting material leaving the factory should methods of purification of the effluents be considered.³⁶

Whilst there was public kudos for industries in enabling such advances to be made through their support, there was no mistaking the unease felt by individual companies as to how the new-found knowledge might be deployed. How far might the availability of new techniques encourage the greater use of statutory controls? The final report of the SCORP, in January 1930, recounted how the beet-sugar industry was 'a pregnant illustration of the useful stimulus that may be given by legal compulsion'. The prospect of a simple and practical method of preventing pollution had already encouraged County Councils to take proceedings against five factories in the 1929-30 campaign, using the powers of the Salmon and Freshwater Fisheries Act of 1923.³⁷

Whilst companies might not complain if legal proceedings brought their competitors up to a common standard, each insisted that the overriding consideration should be 'What was needed to protect the watercourses?', rather than 'What

³⁴ WPRB, *Report for the year ended 30 June 1936*, HMSO, p. 1.

³⁵ PRO, DSIR 13, 17.

³⁶ WPRB, *Report for the year ended 30 June 1937*, HMSO, pp. 14-25.

³⁷ Ministry of Agriculture, *River pollution and fisheries. A non-technical report on the work during 1926, 1927 and 1928 of the Standing Committee on River Pollution*, HMSO; PRO, DSIR 13, 10.

forms of technology are now available?'. The responses to a questionnaire, distributed by the Effluents Sub-committee of the British Beet Sugar Society, gave notice of the anxieties felt by some members. In answer to a question as to how the waste waters were to be dealt with, in the 1930-1 campaign, the Yorkshire Sugar Company protested that not too much should be expected. The factory at Selby was located not only on the tidal part of the Ouse, but the river was very dirty. It would be unjust 'if we were compelled to adopt measures which we quite realise are necessary in some factories but which we are firmly convinced at not at all necessary here'.³⁸

Together with adaptations of the manu-

facturing process and the treatment of wastes, there was increasing recognition of the need for a third dimension in pollution research, namely a fuller understanding of the functional processes of the watercourses themselves and, ultimately, the fragility of the ecosystem. Research agendas were opening up that transcended even the terms of reference of the Water Pollution Research Board. If objective appraisals were to be made of the impacts of pollutants and, therefore, the need for controls, a baseline of knowledge was required as to how the natural environment functioned both in a polluted, and a pristine, state.

ACKNOWLEDGEMENTS

I am grateful for the guidance of Dr H D Watts and the assistance given me by the Cambridge University Library and Public Record Office.

³⁸ PRO, DSIR 13, 8.

Notes and Comments

The 40th AGM was held at 9.00 am in Florence Boot Hall, University of Nottingham, on Tuesday 14 April 1991 with Dr Phillips in the Chair. Mr Havinden was elected as President in succession to Professor Thompson. Dr Collins was re-elected as Treasurer, Dr Perren re-elected as Secretary, Prof. Chartres was re-appointed as Editor. Mr Brassley, Dr Edwards, Professor Thompson, and Dr Phillips were elected as Committee members.

The retiring President thanked the staff at Florence Boot Hall, and Professor Beckett and Mrs Janice Avery of the History Department for their fine work in preparing an enjoyable and memorable conference. The University of Nottingham was thanked for the forthcoming reception before dinner that evening.

Dr Phillips, presented the Committee's report. One meeting of the Executive Committee and two conferences had been held during the year. Dr Collins reported a healthy balance of income over expenditure of £6749 as at 31 January 1992. The accumulated surplus now stood at £1609 compared with a deficit of £5140 on 31 January 1991. We now had 410 UK Ordinary members (a net increase of 1); 73 Overseas Ordinary (a net decrease of 1); 150 UK Library (a net decrease of 3); 119 Overseas Library (a net decrease of 3). This

represents a fall of 6 compared with 1991. Prof. Chartres said that fourteen articles had been submitted from March 1991 to March 1992. The transfer of printing from Leeds University to Charlesworth had been smooth, but the Society would re-tender the printing of its journal every three years to ensure we paid competitive rates. On the subject balance of articles in the *Review*, we still lacked sufficient pieces on the sixteenth to eighteenth centuries. The first of the Supplements was available and others were in hand.

The following changes to the Constitution were agreed. (1) Paragraph 2: replace 'the history of agriculture and rural economy' with 'agricultural history and the history of rural economy and society'. (2) Paragraph 3: delete the sentence 'Candidates for membership shall be nominated by any member of the Society and all such nominations shall be approved by the Executive Committee'. (3) Paragraph 4: delete full point at the end of second sentence and add, 'who may set a lower subscription for those who are registered for a degree and not in full time employment and those who are registered unemployed'.... (4) Paragraph 7: replace 'sixteen' with 'twelve'. (5) Paragraph 8:

(continued on page 70)

British Economic Warfare in the Far East and the Australian Wool Industry

By KOSMAS TSOKHAS

Abstract

Historians have claimed that the British government was able to mobilize the economic resources of the empire during the Second World War. Further, it has been suggested that this helped the British to hold the line against the Axis, and with the involvement of the United States and the Soviet Union, to eventually defeat Italy, Germany, and Japan. However a protracted conflict occurred between the Australian and British governments over the use to be made of Australian wool. Australia considered its wool a commercial product to be sold for a satisfactory price, while the British saw it as a strategic raw material to be used in economic warfare. The Australians were united in their negotiations with the British over what was for them an extremely important matter. For their part the British regarded Australian wool as just one of many issues on the policy agenda. The British government purchased the Australian wool clip in order to ensure its own supply, to deny wool to Germany, and to use it in negotiations with Japan and the United States. Their ability to do so was limited by Australian commercial and strategic objectives. In particular, the British wanted to influence Japanese foreign policy by withholding wool, whereas the Australians were concerned to appease Japan and to earn profits by selling wool to Japan. In the process, any illusions of imperial unity dissipated and a compromise based on economic and strategic interests and perceptions resulted.

IT HAS often been assumed that the British empire provided strategic primary products that made an important contribution to the United Kingdom's victory over the Axis during the Second World War. For example, Hancock and Gowing drew attention to the advantages enjoyed by the UK by virtue of its access to the manpower and natural resources of the empire. They concluded that through lend-lease and the special arrangements with the dominions, the economic resources that the UK could draw on were only limited by the UK's capacity to pay.¹ The UK depended on 'the good will of her distant oceanic neighbours, and upon their feeling of a common interest between themselves and her'.² This underestimates the degree of difference over the terms and prices of commodities and over how these resources would be used to secure divergent foreign policy goals. Max

Beloff has suggested that while the UK was able to draw on troops and raw materials from the dominions, the UK did not have the resources to wage an international war effort. Beloff concludes that the resulting 'financial burdens' were 'too great'.³ However these authorities do not consider how the actions of the dominions may have contributed to this burden. This article challenges these assessments through a consideration of the economic and diplomatic functions of the wool industry in relations between Australia and the UK.⁴ In the late 1930s wool accounted for over 30 per cent of the value of Australian exports. In 1938-9 the UK purchased 38 per cent, Japan 17 per cent, Belgium 14 per cent, France 13 per cent, and Germany 5 per cent. While the UK was the main market, war in

¹ W K Hancock and M M Gowing, *British War Economy*, 1949, p 103.

² *Ibid.*

³ Max Beloff, *Wars and Welfare: Britain, 1914-1945*, Baltimore, 1984, p 254.

⁴ This article has been written against the more detailed background provided in K Tsokhas, *Markets, Money and Empire. The Political Economy of the Australian Wool Industry*, Melbourne, 1990.

Europe would clearly pose a serious threat to other important export markets.

The British gave a higher priority to the purchase of Australian wool than to other agricultural products. This was because wool was a strategic raw material and Australia was the main producer. In contrast, wheat and other foodstuffs could be obtained from North America, which was closer to the UK, and allowed for the more efficient use of scarce shipping. Between 1938/9 and 1944/5, the acreage of wheat in Australia fell from 14.345 to 8.463 million acres. The principal decline was in the states of New South Wales, Victoria, and South Australia. In contrast, wool production increased in all states, including those where wheat farmers also produced wool: they increased their sheep flocks, and reduced the acreage they devoted to wheat. Overall, between 1938/9 and 1943/4, wool production increased from 983,582 lbs to 1,169,016: output fell in 1944/5, to 1,016,489 lbs, largely as a consequence of drought. While the British wool purchase was concluded quickly, it was not until June 1941 that the UK agreed to buy as much Australian agricultural produce as was consistent with the availability of shipping and British requirements. This together with labour shortages and the rationing of fertilizer, led to a decline in the output of agricultural products other than wool.⁵

The war allowed the British government to become a monopsony (single buyer) in its relationship with Australian woolgrowers, but this did not result in the complete or easy acquisition of the Australian wool clip. Nor did it contribute to a harmonious convergence of strategic

and diplomatic objectives. As the sole buyer the British government appeared to be in a position to obtain large amounts of cheap wool. But the woolgrowers were not competing among themselves. The British government was confronted by an Australian government-led coalition, or monopoly of woolgrowers, headed by S M Bruce, the Australian High Commissioner in London, and the Australian Prime Minister, R G Menzies. The article shows that, while the British viewed Australian wool as a strategic raw material to be used in economic warfare, for the Australians wool was also a commercial product that had to be sold at a satisfactory price. Through effective bargaining by Bruce, the Australian wool industry extracted a favourable deal from the British government, even though the relevant negotiations were carried out several steps removed from the political organizations of the woolgrowers. In return the British government secured its supply of wool and was able to deny Australian wool to Germany. The UK was also able to use its control of wool in its diplomatic, strategic and financial relations with Japan and the United States. This led to further conflict with Australia. Bruce and Menzies wanted to sell wool to Japan because they wanted to avoid provoking or offending the Japanese. Because the Australian government doubted the ability of the UK to defend Australia from Japanese aggression, Bruce and Menzies tried to appease Japan. On the other hand, the British believed that Japan could be dissuaded from further expansion by a trade embargo. At this point Australia's diplomatic and economic goals converged, because wool sales to Japan would boost the incomes of woolgrowers while also dissuading the Japanese from resorting to substitutes. As has been pointed out above, Japan was Australia's major market for wool after the UK. Although Australia relied on British shipping and encountered

⁵ See *Year Book of the Commonwealth of Australia*, Canberra, 1941, pp 465-6; E R Walker, *The Australian Economy in War and Reconstruction*, New York, 1947, pp 184-92; and S J Eutlin, *War Economy*, Canberra, 1955, pp 55-66. For the labour supply see K Tsokhas, 'The Myth of Wartime Harmony and Conflict in the Pastoral Industry, 1939-1945', *Australian Journal of Politics and History*, 36, no 2, 1990, pp 217-30.

the much greater financial and market strength of the British government, Bruce and Menzies exercised a great deal of bargaining power and tried to shift as much of the financial burden onto the UK as possible. Bruce and Menzies found it easier than the British to present a firm, united front, whereas the British bureaucracy often took much longer to arrive at a lasting consensus, or to formulate consistent, long-term objectives. The British faced a much wider range of more complex problems and considerations than the Australians, and found it difficult to conceal vital information from Bruce who enjoyed a special relationship with the Dominions Office.

I

Before the UK could gain any leverage over the disposition of Australian wool a purchase price had to be negotiated. These negotiations were characterized by conflict rather than co-operation based on Australia's acceptance of a compliant role in providing economic assistance for the UK's war effort. When war seemed imminent in the second half of 1939, concrete negotiations over the purchase of Australian wool began between Australia and the UK. On 19 September Bruce reminded himself:

One factor we have to keep very much in mind with regard to the price which we do fight to get for wool is that we must not allow, during this war, the price of wool to go too high as it will only be an encouragement for the development of the utilisation of a substitute.⁶

Bruce, Menzies and grazier leaders knew that the price at which wool was purchased would be passed on to British manufacturers and processors, as well as to buyers outside the UK to whom the British government in consultation with the Australian government, may have

decided to sell wool. They wanted a price that was only as high as the risk of substitution allowed. This was confirmed on 20 September when Bruce met with R J P Boyer of the Graziers' Federal Council of Australia and Dr Ian Clunies Ross, an academic and occasional lobbyist for the wool industry. They inquired about the price negotiations, but Bruce said nothing, preferring to ask them what they thought would be a fair price; they both replied 13*d* per lb Australian. Boyer was opposed to the price going higher than 14*d* per lb, out of acute concern over the threat from synthetic fibres. Clunies Ross, in a further gesture calculated to defend and extend the use of wool, suggested that prices be sufficient to allow a limited profit of 5–10 per cent to growers. The three agreed that Australia needed to have some say in the UK's resale policy, in order to ensure that wool was not resold overseas at very high prices, even though the higher the prices, the bigger the amounts going to the woolgrowers in the short-term, as they would receive 50 per cent of the profits from resales. Bruce intimated to Boyer and Clunies Ross that the price would probably be higher than 13*d*, but not as high as 15*d*, which would be to the long-term disadvantage of the industry.⁷

The approach of the British government was not based primarily on a careful assessment of economic advantages. Rather, only rudimentary estimates and calculations of costs and benefits were made. At this stage the price of wool, which eventually would be set 30 per cent above the 1938–9 level, was merely a budgetary problem. With war breaking out, Australian wool was hardly at the forefront of the issues preoccupying the UK. The British government's overwhelming concern was with war in

⁶ Monthly War Files, September 1939. 'Wool. Lord Inverforth, 19 September 1939'. AA (Australian Archives, Canberra), CRS M100.

⁷ Monthly War Files, September 1939. 'Wool. Mr Boyer-Dr Clunies Ross, 20 September 1939'. AA, CRS M100. Prices are £ Australian throughout, unless otherwise specified.

Europe, and to the extent that wool entered the thinking of ministers it was as a strategic raw material, rather than as a commercial commodity. Unlike Bruce and the Australian government, British officials could not devote much time or energy to wool matters. In 1939 purchases of wool were made in order to guarantee the UK's supplies, to deny this basic staple to the enemies of the Empire, and to use it to put diplomatic pressure on major consumers of Australian wool, such as Japan. This had the effect of minimizing the quantity of wool available on the spot market, or passing into the hands of neutral countries likely to resell it to Germany. On the other hand, for Australia wool was of great economic significance.

Apparently at first the UK offered 12.9875*d* per lb, the average price for the last season prior to the outbreak of war, but this was rejected by the Australian government. It claimed that the minimum it could agree to was 14*d* per lb, however, this was unacceptable to the UK. Menzies personally entered the negotiations, in part because he had come under mounting criticism from his political allies in the Country Party over the handling of wool and wheat sales to the UK. The UK then offered 13.13*d* per lb. The intervention by Menzies lifted wool a few points on the agenda of the British government and sharpened its awareness of just how important a satisfactory price was to Australia.⁸ Meanwhile Bruce had taken on himself the responsibility of bringing both sides to a compromise. He presented the British with the face of a friend, who could only do so much for them without arousing offence and suspicion in Australia. To an extent he was manipulating both governments to the point of agreeing to what he believed would be a reasonable

position. His objective was to ensure that the economic interests of the Australian wool industry should not be jeopardized. Menzies trusted in his judgement and allowed him the freedom of action he required. He observed of his meeting with Anthony Eden, the Secretary of State for Dominion Affairs, on 20 September 1939: 'I urged very strenuously that having gone to the 13.13*d* Australian per lb, they might as well go the 14*d* and settle the matter without further discussion'.⁹ In the end it was decided that the British Prime Minister should cable Menzies informing him that all the financial aspects had been weighed carefully and the British government could not go beyond 13.13*d* per lb. However, Bruce made it clear that he would also be cabling Australia that he felt that 14*d* was reasonable and that the Australian government should hold out for this higher price.¹⁰ In contrast to Bruce and Menzies, the British were not well prepared. As Sir Eric Machtig, Deputy Under-Secretary of State for Dominion Affairs, explained to Sir Geoffrey Whiskard, the British High Commissioner in Australia, negotiations over purchases of raw materials from the dominions had 'taken place in circumstances of great pressure and strain upon the newly-formed Departments here'.¹¹

On 25 September, Bruce once again joined argument with the British, who seemed implacably opposed to 14*d* per lb. He refused to give ground so the British came back with an offer of 13.4375*d* per lb. In addition Australian growers would receive 50 per cent of the profits from the sale of wool by the British government to buyers outside the UK. The prices at which such wool was resold would be decided on after consultations with the

⁸ J W Allen to R D Bakewell, 29 November 1948, E246/49, E246 refers to the records of the Australian Woolgrowers' Council held at the Australian National University Archives of Business and Labour.

⁹ Monthly War Files, September 1939. 'Mr A Eden, 20 September 1939, Wool'. AA, CRS M100.

¹⁰ *Ibid.*

¹¹ E Machtig to Sir Geoffrey Whiskard, 15 November 1939, Public Record Office, DO 35/1016.

Australian government. The undertaking to consult with the Australian government over prices for wool exports from the UK came as a result of representations by Bruce on 25 September, when he stressed that Australia was not only interested in profits, but also in retaining the international competitiveness of wool, so it was important that wool not be resold at too high a price. But when the British negotiators suggested that in return for their moving from 13.13*d* per lb to 13.4375*d*, per lb, Australia should share in any losses as well as profits, Bruce refused this out of hand. He informed Menzies that there was little hope of going above 13.4375*d*, and apparently Menzies found this acceptable. Bruce created the impression that in return for the UK going up to 13.4375*d*, which he suggested to them was still below the 14*d* preferred by Australia, he would use his influence with Menzies to ensure that the agreement would cover wool purchases for more than one year. In fact, this was no concession at all by Australia, Menzies also wanting the purchase to be for as long as the war lasted.¹²

While Menzies' consent to the final price was not lacking in some reluctance, by this stage he was more concerned to obtain a share of the profits from wool that was resold. He also insisted that there be provision in the contract for changes in the purchase price from year to year to take account of movements in costs of production; eventually this was also agreed to by the British. While the British government accepted that the income from the resale of Australian wool should be shared between the UK and Australia, it would not give Australian growers part of the profits from the resale of wool for

domestic use in the UK.¹³ In addition, Bruce secured assurances that wool would be made available to the US and other neutrals at prices competitive with synthetics.¹⁴ The Australian government also secured that the British government would pay up to 3/4*d* per lb to cover the cost of transporting wool from store to port; this was on top of the price of 13.4375*d* per lb for the wool. Any saving from this 3/4*d* per lb would be shared between the Australian and British governments at war's end. However, as we show below, after the 1942/3 clip, when the purchase price was increased, the sharing arrangement came to an end, all savings reverting to the British government alone. The British agreed that the Australian Central Wool Committee and various state Wool Committees would organize the scheme.

Graziers were reasonably satisfied with the imperial wool purchase. The emergence of the British government as a single buyer eliminated price uncertainty and reduced the transaction costs incurred by growers when negotiating separate broking and selling arrangements each season. The search costs involved in comparing the interest on advances and the services offered by different brokers were eliminated. With the imperial wool purchase the often sharp changes in woolgrowers' incomes caused by fluctuations in wool prices did not occur. During the war the biggest European consumers of wool other than the UK were lost to Australian growers.¹⁵ Without the imperial wool purchase vast stocks of unsold wool would have accumulated, and the incomes of growers would have been slashed. In the

¹² Monthly War Files, September 1939. Cablegram sent to the Prime Minister, Canberra, from the High Commissioner, London, 25 September 1939; Cablegram sent to the Prime Minister, Canberra, from the High Commissioner, London, 27 September 1939; and 'Wool. Sir Eric Machtig-Dominions Office, 26 September 1939'. AA, CRS M100.

¹³ Monthly War Files, September 1939. Cablegram sent to the Prime Minister, Canberra, from the High Commissioner, London, 29 September 1939. AA, CRS M100.

¹⁴ Monthly War Files, September, 1939. Cypher telegram sent to Mr K Officer, Washington, from the High Commissioner, London, 30 September 1939. AA, CRS M100.

¹⁵ See J P Abbott, 'The Future of the Wool Industry'. Address to the Australian Institute of Political Science, undated.

three seasons commencing in 1939/40 an average of 3,581,175 bales was produced, realizing £63,105,026 per year. In the three seasons prior to 1939/40, there had been an average of 2,893,205 bales valued at £47,907,120. The advantages of the British price were borne out by the fact that appraised prices lingered below the British price. In April, 1940 when the Australian Woolgrowers' Council asked affiliated organizations whether a higher price should be sought from the British government, four of them opposed such a move, while four others were in favour of a higher price. These two sets of opinions were passed on to the Australian government. A meeting of the Council in June, however, decided that costs of production had not risen sufficiently.

II

The manipulation of Australian wool supplies was an important component of the UK's Far Eastern policy. This policy was based on a recognition of the fact that the UK lacked the military capacity to assert or defend its interests. With its army, navy, and air force concentrated in Europe, the British government resorted to economic diplomacy. On 14 September, representatives of the relevant British ministries met with Bruce to discuss Japan's request for 300,000 bales of Australian wool, which would be purchased at a higher price than was paid to the woolgrowers by the UK. Crossbred wool was used for military purposes and apparently the 300,000 bales requested by Japan would account for about half of the Australian crossbred clip. This led to conflicts with Australia, conflicts that were only partly resolved in favour of the UK. The Australian government had been insisting that wool be available for export to Japan; the woolgrowers were anxious that they should not lose their share of this major market to other wool suppliers or to synthetics. Menzies was also con-

cerned by the possibility of a Japanese military threat to Australia. Whereas the British wanted to use an economic embargo to dissuade Japan from further expansion, Australia held to a policy of appeasement. Uncertain of the UK's capacity to come to Australia's aid, Menzies and Bruce were loath to do anything that could provoke the Japanese. The intensity of Menzies' response to the UK's reluctance to make sufficient wool available to the Japanese could also be traced to the fact that he was the leader of a minority United Australia Party (UAP) government which relied on the uncertain support of the Country Party. A G Cameron, the leader of the Country Party, had been very critical of the government's handling of Australian exports of primary products and Menzies needed to respond to this. He feared that when parliament resumed on 15 November his government could be defeated.¹⁶ Menzies referred to 'issues which may have very great diplomatic significance and which may go far beyond any commercial transaction on wool. These issues are of such importance that in my opinion they should not be left solely to the British Wool Committee'.¹⁷ For their part the British doubted Japan's willingness or ability to threaten Australia. In the opinion of Whitehall the Japanese lacked the naval capability and were fully occupied with their war in China. In any case if Japan were to attack British, French, and Dutch interests in the Far East, the Americans would be drawn into any resulting conflict.¹⁸

¹⁶ R G Menzies to S M Bruce, nd [17 October 1939]. Cablegram, document 309. R G Neale, ed., *Documents on Australian Foreign Policy 1937-49*, Volume II: 1939, Canberra, 1976. It is worth noting that an Australian Trade Commissioner was appointed to Japan in 1935. The growing autonomy of Australian policy was reflected in the appointment of Sir John Latham as the Minister to Japan and head of the Australian legation in 1940.

¹⁷ R G Menzies to S M Bruce, 5 October 1939. Cablegram, document 265, in *ibid.*

¹⁸ R G Casey, Minister for Supply and Development to R G Menzies, 5 November 1939. Cablegram, document 327, and R G Casey to R G Menzies, 17 November 1939. Cablegram, document 372, in *ibid.*

While the British and Bruce were trying to work towards a coherent policy on this issue, Menzies was demanding a rapid decision, preferably one that allowed for substantial wool sales, rather than the monthly rationing of supplies suggested by the British. There was no abeyance in the flow of criticisms and suggestions from Australia. The Prime Minister blandly pointed out that Japan had agreed to pay 25 per cent above the British price. In part Menzies was intolerant of the lumbering complexity of decision-making in London. On the other hand, he was attempting to rush the British into making a decision which was favourable to the economic interest of the wool industry and in step with Australia's policy of appeasing Japan. A major cause of indecision and delay in the UK was the Treasury's view that nothing definite should be concluded until the Bank of England and the National Bank of Japan finalized negotiations for a new payments agreement, whereby it was hoped the Japanese would be forced into accepting payment in sterling for their exports to the UK. The British government was putting pressure on the Japanese by withholding supplies of raw materials, including wool. Unlike the Treasury, the Dominions Office and the Ministry of Supply were sympathetic to Menzies' concern for a quick decision and declared that they wanted the matter settled with more haste. A key concern of the Dominions Office was that there should not be unnecessary frictions between the British and Australian governments. The Ministry of Economic Warfare took the side of the Treasury, but only because it regarded the withholding of wool and other raw materials as a way of ensuring that they did not reach Germany via Japan. By December, a compromise between conflicting British bureaucracies led to an agreement that there would be monthly sales to Japan, and that the Japanese should not be told

that in order to appease the Australians a block allocation of 200,000 bales had been set aside for Japan. However, this came undone in mid-December when Lord Essendon, who was responsible for wool sales outside the UK, informed the Australian Central Wool Committee that 200,000 bales had been allocated and 25,000 bales could be sent straight away. The Australians revealed this to the Japanese in order to force the hand of the British government. An inter-departmental meeting on 29 December 'took note with some surprise of the fact that the Japanese had already been informed of the block allocation'.¹⁹ Confusion within the British bureaucracy had given the Australians an opportunity to pre-empt the discussions in London and to make it difficult for the British to use wool sales to Japan in the way they had intended. The action of the Australian Central Wool Committee and the Australian government also aroused expectations among woolgrowers that could only be denied at substantial political cost to Menzies.

Although they owned the wool, the British could not avoid consulting Bruce or the Australian government over its disposal. The Australians could not be treated with indifference or contempt. The Dominions Office and the Foreign Office searched for a compromise acceptable to the Ministry of Economic Warfare, and hopefully, to the Australians. On 3 January 1940 the Foreign Office contacted the Ministry of Economic Warfare to let it know that the Foreign Office was pleased to approve the sale of 100,000 bales, rather than the earlier 200,000 bales, to Japan by means of monthly shipments in February, March, and April; but commitments would not be made in advance. The Foreign Office believed that in this way British

¹⁹ Record of a meeting held at the Foreign Office on 29 December 1939 to discuss exports of wool from Australia to Japan. DO 35/1089.

diplomacy, the aims of the Ministry of Economic Warfare, and the interests of the wool industry would be reconciled.²⁰ But Bruce was unrelenting and at the end of January he told an interdepartmental committee that Australia's main commercial worry was that a failure to supply neutrals could lead to substitution and this would make it more difficult to dispose of accumulated Australian wool at the end of the war. Bruce made his listeners wince when he declared that it was his belief that British woollen textile manufacturers had too much influence over the Wool Control. It included representatives of a number of manufacturing firms and they were unlikely to favor sales of wool to competing companies in Japan. He suggested that a desire to protect the interests of British manufacturers lay behind the rationing of wool to Japan. The Ministry of Supply pointed out that wool sales to neutrals did have a high priority, but told Bruce that the Wool Control could not be blamed if wool was not allocated to neutrals. If this occurred it was more likely to be as a result of decisions by the Ministry of Economic Warfare. Limits on sales to Japan were not maintained in order to serve the interests of British manufacturers at the expense of the wool-growers or of Australian diplomacy. Rather, the restrictions arose out of broader concerns of British diplomacy and economic warfare.²¹

The British government made decisions and formulated policies in a complex, changeable and uncertain environment. With barely a trace of condescension, in February 1940 Sir Eric Machtig explained to Bruce how Australia's co-operation was crucial to British economic diplomacy:

Our political and economic relations with Japan at present are such that we cannot afford to give

up our most important, if not our sole means of pressure upon her, which consists in our power to keep her short of raw materials. Of these, wool is one of the most important; and for this reason it is felt essential that, while not withholding supplies, we should only furnish them on a month to month basis, and enter into no long-term commitments.

The US complicated the picture, because the British government did not want to do anything on trade matters that would upset the Americans, who were also restricting their sales of raw materials to Japan:

We are anxious to reach some understanding with the United States so as to ensure that her exports of raw materials essential to Germany, such as cotton and oil, shall not reach dangerous destinations. The United States has, at the same time, announced the imposition of a 'naval embargo' upon the export of certain supplies to Japan and the Foreign Relations Committee of the Senate has before it a Resolution which would extend this embargo to all exports to Japan. If we desire the co-operation of the United States in the restriction of her exports to Germany, our policy must clearly be to co-operate with her as far as we can in restricting supplies to Japan. It would be contrary to that policy and would justifiably arouse American suspicion, if we were at this juncture – i.e. just after the lapse of the United States-Japan commercial treaty – to give favourable treatment to Japan in respect of wool or any other commodity.

Machtig reflected on the extent to which British war policy had been compromised by the need to meet the interest of the wool industry: 'We have already gone further than we should have wished in committing ourselves to the supply of 75,000 bales up to the end of April'. He hoped that all this would convince the Australian government to agree to month-by-month deliveries.²²

Nevertheless, Menzies would not be deflected. His protests were passed on by Bruce to the Dominions Office. In a telegram on 6 February Menzies declared that the UK was ignoring Australia's economic and strategic interests in opposing sales of

²⁰ N B Ronald to A B Cohen, Ministry of Economic Warfare, 3 January 1940. DO 35/1089.

²¹ Notes of Meeting held at the Dominions Office on 30 January to discuss the sale of Australian wool to Japan. DO 35/1089.

²² For Machtig's views, see memorandum to S M Bruce from Sir Eric Machtig, February 1940. DO 35/1089.

larger quantities of wool to Japan. He repeated the incorrect view that British manufacturers were responsible for this because they had considerable influence over British policy-makers. These matters had been cleared up at an interdepartmental meeting on 30 January, so it could only be concluded that Bruce had not informed Menzies of the outcome of this meeting, or had 'reported that he was not satisfied with what he heard there'.²³ Bruce, of course, knew only too well that once the pressure from Australia eased, his negotiating strength would decline and bureaucracies such as the Dominions Office would lower the priority enjoyed by wool in interdepartmental discussions. Despite his public declarations of Empire-loyalty, Menzies continued doggedly to promote the woolgrowers' economic interests and Australia's appeasement of Japan. He gave an encouraging response to a Japanese request to buy wool after 30 June 1940 on the basis of one crossbred bale for every two bales of merino. The British were surprised to learn that independently of them, negotiations had begun between the Australian Central Wool Committee and the Japanese Consul-General. The Japanese had accepted that the wool would only be delivered in monthly lots of 25,000 bales, but they insisted on the ratio of one bale of crossbred for two of merino.²⁴

The intransigence of Menzies, the role played by Bruce, disunity within the British bureaucracy and the possibility of independent offers and decisions by the Central Wool Committee or the Australian government, all constrained the independence of British policy. The UK had paid a heavy commercial price for Australian wool, but now found that it could not freely use wool in the pursuit of political

or strategic objectives. The Dominions Office acknowledged that already the British had been compelled to compromise their policy by allowing wool to go to Japan under conditions not of their choosing. The Australians were willing and able to force the UK to modify its policy:

Owing to some misunderstanding (possibly deliberate on the part of Australia) in the correspondence between Lord Essendon's organisation here and the Central Wool Control (sic) in Australia, Japan was allowed a three months' programme covering February, March and April. This was contrary to our policy of 'hand to mouth' rationing of Japan, i.e. that the amounts to be released should not be disclosed to Japan more than one month ahead.²⁵

Although there were calls in April 1940 from Australia for a decision on wool sales for June onwards, the British had little choice but to wait. By this time the British government was especially anxious to maintain Japan's uncertainty over raw material supplies, because the British wanted to enlist the support of the Japanese for the British blockade of Germany by sealing the opening at Vladivostok from which goods could then pass to Germany along the Trans-Siberian Railway:

The policy envisages the early opening of negotiations with Japan for an agreement whereby they would co-operate with us. It had been proposed in order to put the Japanese in a receptive frame of mind, to impose drastic restrictions on British imports into Japan prior to and during the initial period of the negotiations. Largely at the instance of the Dominions Office it is now intended not to do much more in this direction than to maintain the existing restrictions both quantitative and by short term allocations and that the present allocation of one month's supply of wool from Australia to Japan is the most which United Kingdom authorities can be reasonably expected by the Commonwealth authorities to agree to at the moment.²⁶

²³ P Liesching, (PL) re-sale of Australian wool to Japan, 6 February 1940. DO 35/1089.

²⁴ P Liesching to Sir Geoffrey Whiskard, 11 March 1940. DO 35/1089.

²⁵ E Machtig 29 April 40. PL DO 35/1089.

²⁶ Attachment to 'Sir E Machtig', 29 April 1940. DO 35/1089.

A decision on wool allocations to Japan for June 1940 was also postponed because the Japanese were being 'deliberately obstructive' over the completion of a payments agreement with the UK, because 'they intended merely to keep the ball in play pending a decision on the far-reaching political issues now under review'.²⁷ Never likely to deprecate its powers, the Australian government challenged the British decision to continue with uncertain volumes of monthly allocations. Once again the Australians could not be ignored and the stiff resistance offered in the past made the British rather tentative and self-doubting.²⁸

By now the Australians were aware of the UK's limited ability to stand in the way of any southward advance by the Japanese. The Australians wanted the British to agree to Japan's demand that they close the Burma Road to China. This represented a radical departure from the UK's existing policy of close cooperation with the US policy of assisting China and embargoing Japan. For Menzies the issues were more pressing: 'Australia is vitally affected and we would not relish having to defend ourselves against even a minor attack from Japan in less than a year from now'.²⁹ In this context wool sales were of diplomatic and strategic importance, as well as a matter of economic gain:

Again it seems to us that suggested approach to Japan with a view to a solution of economic problems and with a statement that the British Government is willing and anxious to assure to Japan supplies of raw materials will be somewhat unconvincing to Japan when she knows that for a long time modest supplies of wool to her from Australia have been withheld.³⁰

III

Throughout the early years of the war the British government gave a high priority to the formation of an alliance with the US in the Far East and Europe. This process was accelerated when Japan signed the Tripartite Pact with Germany and Italy, by F D Roosevelt's consolidation in the presidency of the US, and by growing Japanese military pressure in south-east Asia. In this context the disposition of Australian wool caused another divergence between British and Australian interests. While the British were keen to avoid anything that would cause a rift with the US, they were also desperate for dollar exchange. British exports had been curbed so that the bulk of the UK's resources could be used for the war effort. The UK was under pressure to sell its overseas assets and gold reserves in order to pay for imports from the US. In November 1939 Lord Essendon agreed to supply wool to Canada and the US at a price 15 per cent higher than the imperial purchase price. At this stage the Wool Control knew that large stocks of unused wool would accumulate and that it was most important to sell off as much as possible since storage costs were also growing. The aim was not to 'realise fancy prices but get on with selling it at easy rates as soon as possible'.³¹ The British were quite keen to sell wool, but only if such sales were on commercial terms that did not undermine more important diplomatic and strategic concerns. The US Under-Secretary of the Treasury was told that the UK would do all it could to meet America's requirements once British needs had been met. The Americans were also told that the British did not intend 'to make undue profits from the United States'.³² This was not incompatible with the view from Australia. On the other

²⁷ Minutes, 6 July 1940. DO 35/1089.

²⁸ Ministry of Supply, minutes, 19 April 1940. DO 35/1089.

²⁹ Monthly War Files, July 1940. Telegram (in cypher) to Bruce, 9 July 1940. AA, CRS M100.

³⁰ *Ibid.*

³¹ Note of a meeting on wool prices, 7 November 1939. DO 35/1088.

³² Notes of representations made by other countries. DO 35/1088.

hand, under the influence of the Treasury, the British government rarely lost sight of the possibility of earning US dollars from wool sales. In July 1940 when the Americans eventually suggested that a wool reserve could be established in the US, the Treasury believed that 'our correct course was to force the United States to buy the wool and hold it themselves. This would be very helpful in providing us with much needed dollars and was too good an opportunity to be missed'.³³

The next question was whether the Americans should be induced to buy South African as well as Australian wool. In the Treasury's opinion, if the Americans were buying the wool it was up to them to decide what wool they wanted. The Ministry of Supply did not agree and suggested that it was appropriate to offer a quantity of South African wool, especially as it was accumulating rapidly and would prove more difficult to sell than Australian wool. This issue was left unresolved, but the British government was determined for the time being, to confine discussions 'to the Embassy and keeping the... Australian Ministers out of them'.³⁴ This was easier said than done. The importance of keeping things from the Australian government emerged once it became necessary to discuss the matter with Bruce. The Dominions Office was worried most of all by the British proposal to require that the US take some South African wool, when the US wanted to buy Australian wool. It was decided that a representative of the Dominions Office should meet Bruce, but not in the presence of members of the other ministries. This would enable the Dominions Office representative to hear his views without making any commitment in response. Bruce would know that no firm decisions

or commitments could be made, under circumstances when other ministries were not present. It was also necessary to conceal some of this from the South Africans. P Liesching emphasized to Sir Eric Machtig:

Whatever meeting is held with Mr. Bruce here, it is exceedingly important that not a word should be said in his presence regarding the consideration which we are giving to arranging that part of the wool to be stored in or acquired by the United States is Union wool. Just as the matter has to be dealt with with great discretion on this point at Washington, so it must be safeguarded here. The result of any leakage might be that the Union Government would hold off from our proposals for the joint acquisition by them and ourselves of the Union clip and might dispose of Union wool (outside our general arrangements) in the United States to meet American demands.³⁵

But Bruce was one step ahead of the Dominions Office and on the telephone before Liesching's memo had reached Machtig's desk. Bruce had learned of the US scheme on the diplomatic grapevine, and having anticipated the Dominions Office ploy, he requested a meeting as soon as possible with representatives of the Dominions Office, Foreign Office, Ministry of Supply and the Treasury.³⁶ The Australian government had also been alerted to the whole scheme through R G Casey its representative in Washington.³⁷ Bruce agreed that the UK owned the wool and that the US should pay for it, but it seemed to him that the key issue was whether there was likely to be a surplus of wool that would be difficult to sell. With France out of the war a surplus over and above UK requirements was probable. He was close to the emerging consensus within the British government, when he expressed the opinion that it would be ideal to sell the wool to the Americans, but if this was not possible 'would it not be a good move to get the

³³ Sir E Machtig. Mr Liesching. 17 July 1940. United States Suggestion for Creation of a wool reserve in the United States. DO 35/1089.

³⁴ *Ibid.*

³⁵ PL 17.7.40, minute. DO 35/1089.

³⁶ Minutes Sir E Machtig, 17 July 1940. DO 35/1089.

³⁷ Minute 19 July 1940. DO 35/1089.

wool away from Australia and into the United States where it would at least be readily accessible'.³⁸

There were political and strategic pressures in Australia and the Pacific that made it necessary to conclude the arrangement with the Americans, who continued to reject the UK's efforts to include some South African wool. The Americans had pointed out that a possible Japanese naval threat in the Pacific made it necessary to lift as much Australian wool as possible, sooner rather than later. By August 1940 the Dominions Office was convinced that the Australians simply had to be told that the Americans wanted Australian wool, but that the British government had been trying to persuade them to take some South African wool as well; the Ministry of Supply agreed. By September 1941 the Americans were moving closer to war with Japan and were willing to buy 250 million lbs of wool. Now wool sales were part of a larger set of problems associated with lend-lease and British payments for US military aid. The fundamental economic objective of the British government was outlined by the Foreign Office in September 1941: 'Proposals now under discussion in Washington for sale to United States Government of wool in the strategic reserve or to be shipped for that reserve during the rest of this year arise primarily from the urgent need to augment our current dollar resources which are gravely depleted'. When similar negotiations had taken place in December 1940 the Americans had refused to pay for wool. Now with war in the Pacific likely and some concern over the ability to ship wool from Australia, the Americans had to give ground and the British believed that the time was ripe 'to avail ourselves of this means of obtaining dollars which we urgently require'. The British could only hope that the Australian

government would be sympathetic to the pressure on them to dispose of some South African wool, although the negotiators in Washington were instructed not to advance the interests of Australia over those of South Africa. In any case most of the wool would have to come from Australia, and the Australian government was aware of the US preference for Australian wool. The Australians were demanding that the US pay more than the UK had paid to the woolgrowers. Also, if the best quality wool was sold to the Americans at cost, there would be little margin for meeting losses when disposing of inferior wools: 'Anticipation of Australian growers of dividend would not materialise'. The Australian government searched in vain for a counter-pressure to the UK's need for dollars, a need that made the British anxious to complete a sales contract with the US. The Australian government hinted that it would accept a trade-off between British and Australian interests, but stressed how crucial the outcome was for Australia's economy and capacity to contribute to the war effort.³⁹

As time passed the British grew more desperate to earn dollars and could not resist effectively the demands of the Americans. Like Australia the UK would benefit from a higher price, but the short-term pressures on the British government were overwhelming. The British negotiators were resigned to the American price, which left the British government and the woolgrowers with a small margin for profit. They did not believe they could get a better one and were paralysed by a fear that the US could withdraw from the whole deal. In October 1941 the Defence Supplies Corporation of the US agreed to buy all the Australian wool that could be shipped by 31 December 1941 at 10 per cent less than the f.o.b. commer-

³⁸ *Ibid.*

³⁹ For this paragraph including the quotations, see PL 8 October 1940. Creation of a reserve of 250,000,000 lbs of Australian wool in the United States. DO 35/1089.

cial price. This was not an unreasonable compromise given the declining negotiating strength of the British. The Treasury warned that unless the wool sale went ahead by the end of March 1942, the UK would run out of dollars. The Treasury wanted to avoid selling gold to the US while negotiating over UK dollar requirements. Those handling the wool negotiations in the US were informed, that it was 'most important to get in wool proceeds during the next few days'.⁴⁰

IV

A common war effort, ethnic loyalty, and imperial sentiment were not enough to prevent another outburst of commercial bargaining in 1942. The British government was aware that the agreement between the two countries allowed for negotiations each May, and in 1941 the British wondered if they had been excessively generous in 1939. Given Australia's failure to co-operate with the British government's policy of manipulating Japan's wool supply, the British considered whether to exercise their right to seek a review of the purchase price. It was suggested that Australia could be asked to share in the losses as well as the profits that flowed from the imperial wool purchase. But once again the political constraints on the British came to the fore. The Australian High Commissioner was informed: 'We assume that any such review would create great difficulties for your Government, which we are anxious to avoid and accordingly we have decided not to raise the question in this form'.⁴¹ In addition, the Ministries of Supply and Economic Warfare believed that a fall in the purchase price paid to Australia would have to be translated into lower issue

prices at which the British Wool Control sold wool in the UK and to neutrals: 'An immediate result of such a reduction would probably be resentment in the USA. in view of their recent heavy stock purchases and a virtual cessation of new export orders'.⁴² The Ministry of Supply and the Dominions Office combined forces to oppose the other suggestion, that Australia be asked to share in the losses as well as the profits from the resale of wool during and after the war. They pointed out that the Australians would offer great resistance to such a change.⁴³ What was more, Australia could 'ask for an increase in the buying price now to enable them to set aside a reserve against the possibility of loss at the end of the war'.⁴⁴

At this point Bruce's action in 1940 came into play. In May 1940 Bruce had raised the possibility of Australian wool-growers sharing in profits from resales by the British government within the UK. It seems that the beguiling Bruce had used this slightly outrageous claim to short-circuit preliminary moves by the British to renegotiate the imperial wool purchase. He had made the British aware of what could be asked of them and this had encouraged them to be cautious about making demands of their own.⁴⁵ The British had to take into account the possibility that the Australians could ask for a share in the profits from sales by the British government in the UK. Also, Australia would ask to be closely involved in the UK's wartime selling policy. This would hamper the ability of the UK to use wool in economic warfare, for diplomatic purposes, and to earn precious US dollars. The Australians had demonstrated just how difficult they could be over sales to

⁴⁰ Outward telegram (Cypher) from Foreign Office to Washington, 20 March 1942. DO 35/1087.

⁴¹ Draft letter to the Australian and New Zealand High Commissioners from the Minister without Portfolio. DO 35/1088.

⁴² Note of a meeting held at the Treasury on the 2 May. DO 35/1088.

⁴³ *Ibid.*

⁴⁴ A R Duncan, Ministry of Supply to Sir Kingsley Wood, Chancellor of the Exchequer, 26 May 1941. DO 35/1088.

⁴⁵ Dominions Office to Sir Geoffrey Whiskard, 8 June 1940. DO 35/1088.

Japan. In this way the British expressed and reinforced the limits to their power. The Dominions Office noted in May 1942:

In 1941 there was considerable pressure here for the United Kingdom to take up the question, not so much because the price was thought to be too high, but rather because this would be an indirect means of negotiating for revision of certain other features of the arrangements which were regarded as being too favourable to Australia. After a good deal of discussion here and inter-changes between Ministers, this proposal was eventually dropped.⁴⁶

From 1940 to 1942 Australian wool-growers were also divided over whether to ask for an increase in the price, but politically active woolgrowers within the Australian Woolgrowers' Council were of the opinion that 1942 was the best time to push for a better price, despite the reluctance of some of the Council's members. Production costs had increased and smaller growers who produced crossbred wool were protesting that prices on spot markets had risen beyond the imperial purchase price.⁴⁷ So the Australian government sent H V Evatt, the Minister for External Affairs, and W S Robinson, a leading figure in major Anglo-Australian mining companies, to the UK. They informed J M Keynes, that they would be seeking an increase in the price of wool of 22½ per cent. The British bureaucracy did not have a common view. For its part the Dominions Office returned to the assumptions that had guided British policy in 1939 and concluded 'that it would be a mistake to haggle over a price increase, especially as we shall probably have to finance Australia in any case'.⁴⁸ The Ministry of Supply suggested that in return for acceding to the price increase the UK could ask for a change in the original agreement so that Australia would share some of the losses from bulk purchase

arrangements. But not surprisingly the Ministry of Supply eventually decided not to pursue the matter because it was anticipated that the Australians would respond by demanding a direct say in the UK's selling policy, which would create problems for the Ministry of Supply and the Wool Control.⁴⁹

However, the British government wanted to make some savings. A representative of the Ministry of Supply met privately with Robinson and put it to him that perhaps the Australians could reduce the amount paid to them by the UK to cover storage costs. The British did not feel that they could ask for much more, because a public declaration in Australia had limited their options. A meeting of the major ministries was informed that 'from the political standpoint the main factor seemed to be that the Commonwealth Government had announced that Dr Evatt had been instructed to seek an increase of price. They had thus committed themselves in public on the proposal for an increase and it seemed pretty clear in the circumstances that something would have to be done to meet them'.⁵⁰ But there was some room for negotiation and it was decided to agree to an increase of only 15 per cent. The plan was to initially offer only 12½ per cent and then concede up to 15 per cent in return for an adjustment to the ¾d storage charge.⁵¹ The British were convinced that they could not give the impression that they were unmindful of Australia's economic well being, as to do so would make it politically difficult for the Australian government to continue to contribute to the war effort and could dampen popular support for the UK's cause.

Evatt and Robinson's case rested on an increase of 10-15 per cent in production

⁴⁶ Price to be paid for Australian wool, 13 May 1942. DO 35/1088.

⁴⁷ M Chesson, general secretary, the Wheat and Woolgrowers' Union of Western Australia to the secretary, Australian Wool Board, 3 January 1942. E246/11.

⁴⁸ Price to be paid for Australian wool, 13 May 1942. DO 35/1088.

⁴⁹ *Ibid.*

⁵⁰ Report on meeting held at the Treasury, 14 May 1942. DO 35/1088.

⁵¹ *Ibid.*

costs since 1939 and a deterioration in Australia's external balance. Although the British Treasury had armed itself with arguments against these two claims, it was decided to concede a price rise, although the initial offer had been changed to 10 per cent rather than 12½ per cent, as the former was at the bottom of the range of Australia's estimate of increased costs of production. In return Australia would be asked to pay to the UK any profits earned from storage charges, and Robinson had already agreed to this. Such profits would amount to what was left over after the real costs were deducted from the ¾d per lb paid by the UK to cover expenses from warehouse to f.o.b. This was not an onerous concession for Australia to make and was outweighed by the benefits flowing from the higher price. The ¾d had been annoying the British since January 1940. Generally, the acceptance of an increase of 15 per cent by the Australians was regarded as something of a victory, given previous examples of Australian commercial bargaining. Interestingly, while Evatt was negotiating over the new price for wool, the British were also persuaded to lend sterling to Australia to ensure that Australia's London reserves were not depleted. No interest was charged on these loans for the duration of the war, and how they would be repaid was left open for discussion at the end of hostilities. The willingness of the British to make these loans showed that they recognized that Australia did have balance of payments problems, which incidentally, would be alleviated to some extent by the improved price for wool. Since September 1939 import prices had risen by 50 per cent while the prices of Australia's exports were held steady, so the terms of trade had moved against Australia. Imports had been curbed while export production had been maintained, but the external balance remained unstable. Australia needed to earn more from exports in order to pur-

chase the imports required for the war effort and to service the American armies gathering in Australia. For the Australian government an improvement in the commodity balance was preferable to overseas borrowing, so it was glad to receive the 15 per cent increase in the price of wool.⁵²

V

Australia's dominion status and the fact that the UK was the sole buyer did not bestow overwhelming power on the British government. In the case of restrictions on wool exports to Japan, the British government tried to use its apparent control of Australian wool to pressure Japan into supporting the blockade of Germany and to secure other objectives, such as payment for Japanese exports in sterling. The Australian government had somewhat different commercial and diplomatic interests, which were connected and mutually reinforcing. Bruce and Menzies adhered firmly to a policy of selling wool to Japan. This policy had the advantage of meeting the material interests of the woolgrowers, the political needs of the Menzies government which had to mollify the Country Party, and the diplomatic objective of appeasing Japan at a time when the UK seemed to be losing the capacity to defend its interests in the Far East.

Far from easing the financial burden of war on the UK, the wool purchase increased it. Bruce and the Australian government obtained a satisfactory price from the British by clever bargaining that involved a willingness by Australia to concede less than was surrendered by the British government. The price paid was acceptable to most of the leaders of the

⁵² Memorandum for Dr Evatt, from W S Robinson, 14 May 1942. DO 35/1088. For Australian borrowing from the UK see K Tsokhas, 'S M Bruce, Imperial Relations and War Finance, 1939-1943', *Australian Journal of Public Administration*, 49, no 4, 1990, pp 442-55.

wool industry and members of the Australian government, who understood that it was not in the interests of woolgrowers to have a price that was high enough to encourage substitution of wool by synthetics. There were other benefits. The price uncertainty of the 1930s was eliminated by the guaranteed price paid by the UK. Woolgrowers would share in the profits from the resale of wool outside the UK by the British government. Given the loss of major markets in Europe and shipping shortages, the industry would have faced ruin if the British had not purchased the wool. When the British reconsidered what had been agreed to in 1939, they could not bring themselves to demand that Australia share in the risks and the losses. From earlier experiences they knew that Bruce and the Australian government would offer stiff resistance and would counter with new demands of their own. To the extent that all the wool was purchased, the UK assisted Australia's balance of payments, and stimulated investment and capital accumulation. The British recognized that this was vital to Australia's ability to contribute to the war effort.

For their part the British were assured of an adequate supply of wool for their armed forces. They also gained ownership of large stocks of unused wool, but they could not convert ownership into total control because the Australian woolgrowers retained a residual interest in the wool and were entitled to 50 per cent of any profits from resales. The British did not make policy on their own, and did not have a monopoly of information. While the British conception of the uses of wool grew wider, under the imperial wool purchase they had agreed to consult the

Australian government over resales to neutral countries such as Japan and the US. Whatever the formal commitments, the British assumed that they had to discuss resales with the Australian government, and the Australians never doubted that it was perfectly legitimate for them to express views and make demands. In the case of wool sales to Japan, British policy was influenced by a need to respond to Australian interests and perceptions. Indeed, decisions in Australia compromised British policy. The British government found it difficult to withhold information from Bruce, the Central Wool Committee, and the Australian government. The British government was further constrained by a concern within the Dominions Office and the Foreign Office to avoid political conflict with Australia. In the case of wool sales to the US the British tried secretly to promote the sale of some South African wool, but their deception was not very costly for Australian woolgrowers as the vast bulk of the wool bought by the US came from Australia. The British government and the woolgrowers also had interests in common. Both stood to benefit from sales of wool to the US at high prices, but the British were not in a strong negotiating position. Desperate for dollars, the UK sold the wool to the Americans for less than the Australians or the British would have preferred. Nevertheless, wool sales to the US helped to stave off further sales of British overseas assets and gold. Even so, the imperial wool purchase demonstrated how difficult it was to mobilize the resources of the dominions behind British strategic and foreign policy objectives.

A Fair Field once Full of Folk: Agrarian Change in an Era of Population Decline, 1348–1500*

By BRUCE M S CAMPBELL

IT WAS William Langland, reared during the crowded and hungry years before the Black Death, who employed the image of a 'fair field full of folk' to evoke the medieval rural world peopled 'of all manner of men, the meaner and the richer, working and wandering, as the world asks of them'.¹ Yet at the time that he was writing *The Vision of Piers Plowman*, in the aftermath of successive outbreaks of plague, that world was rapidly changing as excess mortality transformed population surfeit into population deficit, shaking the traditional fabric of rural society to the core. It is this age – from the outbreak of plague in 1348 to the close of the fifteenth century – and this changing social world which are the subjects of Volume III of the *Agrarian History of England and Wales*. A further 2½ inches and 1000 pages of rich and varied scholarship are thereby added to a series now running to approximately 6500 pages, occupying almost two feet of shelf-space, and wanting only Volume VII to provide a continuous agrarian history of England and Wales from prehistoric times to 1939.² Perhaps the time has now come for Joan Thirsk, the *Agrarian History's* indefatigable General Editor, to commission a ninth and final volume to complete the story down to the present.

Publication of a new volume in the *Agrarian History* is always an event, and this volume, so long awaited, is no exception. It is warmly to be welcomed. Of course, no major collaborative volume conceived in the 1950s, planned in the 1960s, researched and written in the 1970s and 1980s, and published in the 1990s, could be flawless, and there are the inevitable regrets, disappointments, and reservations. But Professor Miller and his fourteen distinguished contributors have laboured hard and wrought well and to such telling effect that they have rescued from obscurity one of the most formative but least researched periods in English agrarian history. Not only is a framework thereby established for a period whose agrarian history formerly lacked one, but along the way a great store of fresh data and learning is provided on a wide range of topics for which historians will be grateful for many years to come. Scholarly books on this scale come expensive, but at a little less than nine pence a page this is better value than many: those prepared to invest in its £85 will acquire an indispensable work of reference.

Justification for treating 1348–1500 as a separate and self-contained period derives from the fact that it corresponds to 'the longest period of declining and stagnant population in recorded English history'.³ Whether national demographic decline began with, or some time before, the Black Death of 1348–9 is a moot point. For Edward Miller, in his lucid but cautious introductory chapter on 'People and land', 'the balance between success and failure during the early fourteenth century in meeting the challenge of multiplying people has still to be exactly determined'.⁴ This issue has recently been explored in some detail by Richard Smith, whose careful review of such demographic evidence as is currently available suggests that the balance is more likely to have been tipped in favour of failure than of success.⁵ Nevertheless, there is no doubting the massive mortality of the 'Great Pestilence' itself. J F D Shrewsbury was sceptical of estimates which placed plague mortality above twenty per cent, but such scepticism appears entirely unwarranted in the light of the

oured hard and wrought well and to such telling effect that they have rescued from obscurity one of the most formative but least researched periods in English agrarian history. Not only is a framework thereby established for a period whose agrarian history formerly lacked one, but along the way a great store of fresh data and learning is provided on a wide range of topics for which historians will be grateful for many years to come. Scholarly books on this scale come expensive, but at a little less than nine pence a page this is better value than many: those prepared to invest in its £85 will acquire an indispensable work of reference.

* A review article of Edward Miller, ed, *The Agrarian History of England and Wales*, III, 1348–1500, CUP, 1991. xxv + 982, illus, £85 (hereafter AHIII).

¹ *Visions from Piers Plowman taken from the Poem of William Langland*, trans N Coghill, 1949, p 15.

² H P R Finberg, 'An Agrarian History of England', *Ag Hist Rev*, IV, 1956, pp 2–3.

³ J Hatcher, *Plague, Population and the English Economy, 1348–1500*, 1977, p 11.

⁴ AHIII, p 2.

⁵ R M Smith, 'Demographic Developments in Rural England, 1300–48: a Survey', pp 25–78 in B M S Campbell, ed, *Before the Black Death: Studies in the 'Crisis' of the Early Fourteenth Century*, Manchester, 1991.

evidence assembled in this volume.⁶ Subsequent plague outbreaks, together with a continuing high background mortality, reduced the population still further, so that between 1347 and 1377 – when the Poll Tax indicates a national population of 2.2–3.0 million – the total may have been reduced by at least half.⁷ Thereafter the pace of decline was slow but the trend remained ineluctably downwards, so that by the third quarter of the fifteenth century the population may have shrunk to barely two millions.⁸ Only in the final decades of the century are there indications that decline had been halted and from the 1480s and 1490s signs of modest recovery become apparent in such widely separate locations as Yorkshire and Lancashire, the West Midlands, Kent and Sussex, and Devon and Cornwall.⁹ Recent work points to an improvement in aristocratic replacement rates at about the same time.¹⁰ Nevertheless, in Miller's view 'recovery ... had not gone far by the 1520s'.¹¹

Such long waves of demographic depression were a recurrent feature of pre-industrial populations.¹² The late Romano-British and early Anglo-Saxon period dealt with in Volume I part ii certainly experienced a major demographic hiatus.¹³ The years 1640–1750, spanned by Volume V, also stand out as a demographic lull between two sustained surges of growth.¹⁴ More recently still, Ireland between 1845 and 1960 suffered a reduction in population which in its scale and duration closely paralleled English experience 1348–1500.¹⁵ In each case changes were effected in agrarian institutions which were to exercise an enduring influence long after the circumstances which brought them into being had passed. Herein lies the wider significance of these periods of demographic depression. Yet it is the agrarian consequence of population growth that have hith-

erto attracted the greater attention.¹⁶ Volume III thus ought to interest theorist and empiricist alike, early modernists as much as late medievalists, and all those concerned with long-term processes of agrarian change.

Above all, the years 1348–1500 occupied a pivotal position in the transition from feudalism to capitalism.¹⁷ The decline of serfdom, which formed one important aspect of this transition, is rightly a major theme of the volume. In addition to a series of regional essays on tenant farmers which chart the demise of customary tenures, E B and Natalie Fryde contribute an account of the role of peasant rebellions and peasant discontent in this process (Chapter 8). The latter, if in part already superseded by the flurry of publications on this subject which celebrated the six-hundredth anniversary of the Revolt, may be recommended to students as a lucid review of the main issues involved.¹⁸ Beyond this, more explicit discussion of the decay of feudal socio-property relations is lacking and there is little to suggest the uniqueness of the English path of development or the intense ideological debate which has been generated by attempts to provide an explanation of it.¹⁹

Unfortunately, the decay of feudal institutions is a major reason for the documentary discontinuity that renders investigation of this period's agrarian history so peculiarly difficult. Much more can be said of the second half of the fourteenth century, when most demesnes were still in hand and before the jurisdiction and authority of manorial courts had become seriously eroded, than can be said of the second half of the fifteenth, which, notwithstanding the efforts of all concerned, remains one of the murkiest eras in English agrarian history. Discussion of farming practice and techniques in Chapter 3 is thus disproportionately biased towards the first half of the period, and the account of tenant farming and farmers in Chapter 7 fares only marginally better. This deterioration in manorial documentation poses particular problems for D L Farmer's painstaking reconstruction of continuous agricultural price and wage series, an

⁶ J F D Shrewsbury, *A History of Bubonic Plague in the British Isles*, Cambridge, 1970, pp 122–3, and the review by C Morris in *Hist Jnl*, XIV, 1971, pp 209–10; *AHIII*, pp 4–5, 36–7, 70–1, 119, 139, 609, 611, 625–6, 636, 722.

⁷ *AHIII*, p 6.

⁸ *Loc cit*.

⁹ *AHIII*, pp 45, 636, 119, 731.

¹⁰ S J Payling, 'Social Mobility, Demographic Change, and Landed Society in Late Medieval England', *Econ Hist Rev*, 2nd ser, XLV, 1992, pp 54–6.

¹¹ *AHIII*, p 6.

¹² J D Chambers, *Population, Economy and Society in Pre-Industrial England*, Oxford, 1972; R D Lee, 'Population Homeostasis and English Demographic History', pp 75–100 in R I Rotberg and T K Rabb, eds, *Population and Economy: Population History from the Traditional to the Modern World*, Cambridge, 1986.

¹³ H P R Finberg, ed, *The Agrarian History of England and Wales, I, ii, A.D. 43–1042*, Cambridge, 1972.

¹⁴ J Thirsk, ed, *The Agrarian History of England and Wales, V, 1640–1750*, 2 vols, Cambridge, 1984–5.

¹⁵ R E Kennedy, *The Irish: Emigration, Marriage, and Fertility*, 1973.

¹⁶ E Boserup, *The Conditions of Agricultural Growth: the Economics of Agrarian Change under Population Pressure*, 1965; D B Grigg, *Population Growth and Agrarian Change: an Historical Perspective*, Cambridge, 1980.

¹⁷ M Dobb, *Studies in the Development of Capitalism*, 1946; J E Martin, *Feudalism to Capitalism: Peasant and Landlord in English Agrarian Development*, Atlantic Highlands, NJ, 1983; T H Aston and C H E Philpin, eds, *The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe*, Cambridge, 1985.

¹⁸ For example, R H Hilton and T H Aston, eds, *The English Rising of 1381*, Cambridge, 1984; R Hilton, *Class Conflict and the Crisis of Feudalism: Essays in Medieval Social History*, 2nd edn, 1990.

¹⁹ Aston and Philpin, *op cit*; Martin, *op cit*; M Dunford and D Perrons, *The Arena of Capital*, 1983, pp 90–123.

historical resource of the first order surprisingly neglected by other contributors to the volume. As he observes, 'for the fourteenth century, evidence is available from most parts of England south of a line between the Severn and the Wash; by the 1440s, however, almost all the manorial sources are from Hampshire and Sussex alone'.²⁰ In most cases he is able to make good the deficiency by recourse to alternative classes of record, although completion of certain specific wage series to the close of the fifteenth century defeats even his patience and ingenuity.²¹ Where statistical precision is less imperative there is an obvious temptation to extrapolate back to the late fifteenth century from sixteenth-century evidence, but most contributors wisely resist this temptation. Documentary inadequacies therefore blur the chronology of these years and render some of the consequences of demographic depression elusive of direct investigation.

Among the most immediate and conspicuous of adjustments were a major shift in land-use from arable to grass (as the demand for bread-grain contracted and, at least initially, that for livestock products expanded), together with a general contraction in the size and number of rural settlements, as the rural population shrank. It is to the documentation and description of these related developments that Chapter 2, 'The occupation of the land', is largely devoted. This is the first of three chapters to be organized regionally. The plethora of examples produced from all parts of the country bears witness to the universality of the trends in question, but more attempt could have been made to quantify the scale of settlement shrinkage and desertion, and only Miller for Yorkshire and Lancashire, C C Dyer for the West Midlands, and H S A Fox for Devon and Cornwall exploit the potential of Inquisitions *Post Mortem* and Feet of Fines to measure the extent of the swing from arable to grass.²² What is at issue here are differential rates of regional change and the degree to which, as Fox rightly ponders, the removal of demographic pressures 'strengthened regional contrasts as farmers adjusted land use according to the best capabilities of the land and the survival or otherwise of local markets'.²³ Yet this issue is left implicit rather than explicit since the individual regional analyses, although finely crafted, are far too self-contained. There is virtually no cross-referencing between them, no direct comparison

between regions, and absolutely no attempt to draw the separate regional threads together and provide an overview.²⁴ Nor is there any exploration of the links to related themes – on farming systems, marketing, prices and wages, and rural buildings – dealt with elsewhere in the volume.

That important spatial changes occurred during this period, as populations became more mobile and rural industry offered expanding employment opportunities, is not in doubt.²⁵ But how these mapped themselves out into changing patterns of land-use and agricultural activity remains an only partially answered question. Individual regional farming systems are successively described – by J A Tuck on the Northern Borders, Miller on Yorkshire and Lancashire, R H Britnell on Eastern England, Edmund King on the East Midlands, Dyer on the West Midlands, D Huw Owen on Wales and the Marches, P D A Harvey on the Home Counties, Mavis Mate on the Southern Counties, and Fox on Devon and Cornwall – each drawing upon an impressive range of primary and secondary sources; but the broader picture remains stubbornly out of focus. In part this derives from a greater reliance upon description than upon measurement, even when the variables concerned are eminently quantifiable (as in the case of the crops and livestock recorded in manorial accounts). Statistics are tabulated for individual demesnes and some groups of demesnes, but the number of demesnes involved is small and the level of aggregation low, thus thwarting attempts at regional aggregation and inter-regional comparison. Nor is there any attempt at mapping. But the problem goes deeper than this and is inherent within the actual regional scheme adopted.

Volume III, like Volumes II and IV, carves up the country into ten basic 'regions'. In Volume IV the individual regional descriptions and the broader overview which sets them in context are the product of a single author, Joan Thirsk.²⁶ This makes for considerable consistency of treatment and facilitated construction of her celebrated map

²⁰ AHIII, p 431.

²¹ AHIII, pp 516–20.

²² AHIII, pp 50, 78–80, 152–5. See, L R Poos, *A Rural Society after the Black Death: Essex 1350–1525*, Cambridge, 1991, pp 47–8, for comparable figures for Essex.

²³ AHIII, p 163.

²⁴ The lack of cross-referencing is a consistent weakness of the book. There is, for instance, no cross-referencing between the separate discussions of the Statutes of Labourers legislation on pp 483–90 and pp 753–60.

²⁵ AHIII, pp. 17–18, 27–9, 599–600, 612, 621, 678–9, 703, 705, 740–3, 785; R S Schofield, 'The Geographical Distribution of Wealth in England, 1334–1649', *Econ Hist Rev*, 2nd ser, XVIII, 1965, pp 483–510; H C Darby, R E Glasscock, J Sheail, and G R Versey, 'The Changing Geographical Distribution of Wealth in England, 1086–1334–1525', *Jnl Hist Geog*, 5, 1979, pp 247–62.

²⁶ J Thirsk, ed, *The Agrarian History of England and Wales, IV, 1500–1640*, Cambridge, 1967, pp 1–112.

of the farming regions of England 1500–1640.²⁷ In Volumes II and III the individual regions are assigned to separate authors and in Volume III there is neither any discussion of the rationale upon which this regional scheme is based nor any evaluation of the overall picture thereby revealed.²⁸ In this instance, there is no attempt to reconstruct a map of farming regions. Nor is a picture pieced together from regions apparently so arbitrarily defined likely to provide an accurate definition of reality. On what grounds, for instance, is Lincolnshire lumped with East Anglia rather than the East Midlands, or the counties west of the Pennines with those to the east? It is not as if the boundaries of these regions correspond with those employed in Volumes II and IV, for they do not.

Tracing the evolving agricultural geography of England from 1042–1348, to 1348–1500, to 1500–1640 thus becomes an unnecessarily subjective exercise. Apart from the fact that certain counties have got missed out along the way (Surrey from both Volumes III and IV, and Huntingdonshire, Cambridgeshire, and Middlesex from Volume IV), others are classified very differently within the three volumes, and whether this is justified by the changing configuration of agrarian activity is not easily established. Oxfordshire, for instance, is grouped with the West Midlands in Volume II, with the Home Counties in Volume III, and with the Southern Counties in Volume IV. Excellent as are the individual regional accounts contained within Volume III, each will consequently be read more profitably by those interested in the particular localities and regions concerned than by those curious about the similarities and contrasts between regions. Collectively they do not provide a systematic overall picture and their coherence as regional case-studies has been broken by splitting their three component sections between Chapters 2, 3, and 7. These chapters are therefore no substitute for a systematic classification and analysis of farming systems across the country as a whole, for which the data certainly exist and the methodology is now available to hand.²⁹

Nevertheless, enough is already known for it to be clear that significant changes were afoot as individual localities and regions adapted in often quite different ways to the changing opportunities of the age. As land became cheaper and labour dearer there was a crying down in the intensity of the most intensive systems, a development clearly documented by Britnell in East Anglia and Mate in Kent and Sussex.³⁰ Elsewhere, in the East Midlands in particular but also in parts of the West Midlands, King and Dyer describe how brewing grains expanded at the expense of bread grains, and more land was given over to leguminous fodder crops as the pastoral component of common-field mixed-farming systems expanded in importance.³¹ The varying fortunes of legumes, in fact, bear witness to the often quite divergent strategies adopted by farmers according to their circumstances: legumes tended to lose rather than gain ground in the intensive husbandry regimes of Norfolk, Kent, and Sussex, where formerly they had been most important; made striking gains in the common-field country of parts of the east and west midlands and north-east where permanent pasture had always been in short supply; but remained of relatively minor importance in southern England and particularly so in the south-west where husbandry had always been more extensive than intensive and a natural abundance of pasture rendered the cultivation of fodder crops unnecessary.³²

Whether by dint of increased fodder cropping, the conversion of arable to grass, or the development of convertible husbandry, pastoral farming almost everywhere was on the increase.³³ One method of measuring this is in terms of a weighted total of livestock per 100 cropped acres as recorded by manorial accounts.³⁴ Fox calculates this for Devon and Cornwall and thereby reveals little increase in demesne stocking densities during the fourteenth century but a virtual doubling during the fifteenth.³⁵ It is a pity that similar measures are not available for other parts of the country for it is doubtful whether all regions participated in this

²⁷ *Ibid.*, p. 4. This map is, however, essentially qualitative in derivation: for a critique see M. Overton 'Agricultural Regions in Early Modern England: an Example from East Anglia', University of Newcastle upon Tyne, Department of Geography seminar paper, XLII, 1983.

²⁸ Cf H. E. Hallam, ed., *The Agrarian History of England and Wales*, II, 1042–1350, Cambridge, 1988, pp. 137–8.

²⁹ J. L. Langdon, *Horses, Oxen and Technological Innovation: the Use of Draught Animals in English Farming from 1066–1500*, Cambridge, 1986; B. M. S. Campbell and J. P. Power, 'Mapping the Agricultural Geography of Medieval England', *J. Hist. Geog.*, XV, 1989, pp. 24–39; J. P. Power and B. M. S. Campbell, 'Cluster Analysis and the Classification of Medieval Demesne-Farming Systems', *Trans. Inst. Brit. Geog.*, new ser., 17, 1992, pp. 227–45.

³⁰ *AHIII*, pp. 57, 209, 268–71.

³¹ *AHIII*, pp. 214–15, 230.

³² *AHIII*, pp. 60, 63, 121, 178, 187, 213–14, 215, 229–30, 260, 269, 271, 289, 304; B. M. S. Campbell, 'The Diffusion of Vetches in Medieval England', *Econ. Hist. Rev.*, 2nd ser., XLI, 1988, pp. 193–208.

³³ *AHIII*, pp. 10, 233–4, 264, 314.

³⁴ B. M. S. Campbell, 'Land, Labour, Livestock, and Productivity Trends in English Seigneurial Agriculture, 1208–1450', pp. 144–82 in *idem* and M. Overton, eds., *Land, Labour and Livestock: Historical Studies in European Agricultural Productivity*, Manchester, 1991, pp. 156–7.

³⁵ *AHIII*, p. 314. For corresponding trends within the country as a whole 1250–1450 see, Campbell, *op. cit.*, 1991, pp. 153–9.

process to the same extent.³⁶ *A priori*, it seems plausible to conjecture that livestock made their greatest gains where arable resources were most readily given over to the cultivation of fodder crops or converted outright to grass, as in certain of the central and southern counties.³⁷ Regions with a stronger comparative advantage in grain and whose pastoral regimes tended to be more exclusively arable based are likely to have met with less success.³⁸ Likewise, regions with a well-developed pastoral sector will have possessed only a limited capacity for developing it further. Thus, as Tuck and Miller show, permanent grassland had always been a conspicuous feature of land use in much of northern England and specialist livestock farms had long been well established.³⁹ In fact, livestock rearing in these areas tended to suffer from some drying up of demand during the later Middle Ages as lowland regions to the south and east became more self-sufficient in livestock.⁴⁰ Near the Scottish border and in those parts of the Welsh Marches exposed to the Glyn Dwr rebellion, attacks by the Scots and the Welsh acted as a further discouragement to the build up of flocks and herds.⁴¹ There were therefore many local and regional variations upon the prevailing national trend which more systematic measurement might help to map out in more detail. Since similar measures can be generated for later centuries from information contained in probate inventories there is potential, too, for some instructive comparisons across time.⁴² In this context, evidence already to hand suggests that the pastoral sector may have been the most dynamic sector within English agriculture in the period from the fifteenth to the eighteenth centuries.⁴³

Between 1348 and 1500 it was the more extensive forms of pastoralism that tended to gain most: rearing and fattening rather than dairying, and sheep rather than cattle. Sheep farming was, how-

ever, no panacea to the problems of the age and the enthusiasm with which it was conducted depended a great deal upon wool quality, wool prices, and changing regional demand for meat and wool.⁴⁴ The fifteenth century was certainly no unqualified golden age for pastoral producers, for, as T H Lloyd long ago pointed out and Farmer's price series makes clear, it was lower production costs rather than higher product prices that underpinned the shift from crops to livestock.⁴⁵ Given the continued decline in population, the low marginal elasticity of demand for food, and industry's finite capacity to absorb raw materials, the point was eventually reached in the mid-fifteenth century when the supply of pastoral as well as arable products was considerably in excess of demand.⁴⁶ The ensuing agricultural depression probably forced many producers – by this date mostly tenants rather than lords – back upon self-sufficiency except where access to urban and industrial markets provided a relatively sustained demand for their produce.⁴⁷ If the dimensions of this depression are now more clearly defined, there is much about its impact that warrants closer examination, especially in terms of the interaction between prices, production costs, production mix, profits, and rents.

These changes in both the composition and techniques of production were accompanied by equally important changes in the units of production. Direct demesne management ended almost everywhere and demesnes were either leased whole or broken up.⁴⁸ Labour services were commuted and customary tenures converted into leaseholds held for terms of lives or years and copyholds held at the will of the lord. As the rural population shrank there was a natural tendency for tenant land to become concentrated into fewer hands. Mean holding size rose and some tenants built up very substantial holdings. The mechanisms involved were quite complex and varied considerably from manor to manor and locality to locality according to the nature of prevailing inheritance practices, the ease with which land could be transferred *inter vivos*, and the strength of manorial jurisdiction. Recent years have produced a number of instructive case-studies of individual villages which point to the loosening of strong ties between families and their land and the rapid build-up and

³⁶ B M S Campbell, 'People and Land in the Middle Ages, 1066–1500', pp 69–121 in R A Dodgshon and R A Butlin, eds, *An Historical Geography of England and Wales*, 2nd edn, 1990, pp 106–7.

³⁷ Cf A Kussmaul, 'Agrarian Change in Seventeenth-Century England: the Economic Historian as Paleontologist', *Jnl Econ Hist*, XLV, 1985, pp 1–30.

³⁸ For a case study of Norfolk see, 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 & Pres*, forthcoming.

³⁹ *AHIII*, pp 41, 50, 179–81, 189–90.

⁴⁰ *AHIII*, p 381.

⁴¹ *AHIII*, pp 37–8, 99–100, 181–2.

⁴² M Overton and B M S Campbell, 'Norfolk Livestock Farming 1250–1740: a Comparative Study of Manorial Accounts and Probate Inventories', *Jnl Hist Geog*, 18, 1992, pp 377–96.

⁴³ G Clark, 'Labour Productivity in English Agriculture, 1300–1860', pp 211–35 in Campbell and Overton, *op cit*, 1991, pp 214–19; Campbell and Overton, *op cit*, forthcoming.

⁴⁴ *AHIII*, pp 281–2, 400–1, 462–3, 574–6; J H Munro, 'Wool-Price Schedules and the Qualities of English Wools in the Later Middle Ages, c.1270–1499', *Textile History*, IX, 1978, pp 118–69.

⁴⁵ T H Lloyd, 'The Movement of Wool Prices in Medieval England', *Econ Hist Rev*, Supplement, VI, 1973, pp 24–30.

⁴⁶ *AHIII*, pp 13, 462–3, 464.

⁴⁷ *AHIII*, pp 14, 103, 265, 677, 705, 740–3.

⁴⁸ *AHIII*, pp 573–6, 580–2, 587–9, 614, 641, 662–3, 704–5, 728.

break-up of holdings.⁴⁹ But the number of such studies is not yet so great nor so representative that firm generalizations can be made with confidence. Why some villages and locations proved consistently more attractive than others, and what led some tenants to acquire land and others to dispose of it, are as yet far from clear.

Concomitant changes occurred in the physical layout of fields, as parcel was laid on parcel and selion on selion, and there was much rationalization and reorganization of field systems to accommodate modifications to rotations. The creation and development of common-field systems have often been equated with a process of population growth.⁵⁰ Indeed, the belief that the twelfth and thirteenth centuries witnessed a widespread conversion of two-field to three-field systems in response to the pressure to raise output used to be a truism of medieval agricultural history until recently subjected to systematic scrutiny by Fox.⁵¹ Yet if there are few documented cases of the replanning of field systems during the era of demographic expansion before 1300, the same cannot be said of the situation thereafter. Those who would equate changes in field systems with periods of reduced or declining population will find much supporting evidence in this volume.⁵² Here are documented cases of the evolution of two-field into three-field systems, of two-field into four-field systems, of three-field into four-field systems, and other more complex arrangements.⁵³ In many regular field systems furlongs rather than fields increasingly became the units of cropping, and it was at this time, as Mark Bailey has shown, that the shift system of cropping became more fully elaborated in East Anglia as the foldcourse system entered a new phase of development.⁵⁴

Some communities found it difficult to sustain traditional communal arrangements, and piecemeal and wholesale enclosure began to transform the landscape in many parts of the country, both in the core areas of common-field husbandry and more particularly around their periphery.⁵⁵

Such far-reaching changes in so many aspects of both the forces and the relations of production raise obvious questions about their consequences for agricultural productivity. The volume of total agricultural output cannot of course be measured, but by implication it fell as land was withdrawn from agricultural use, that which remained in use was exploited less intensively, and arable products accounted for a smaller share of total production. But within that context did the ratio of outputs to inputs improve, as production concentrated upon the most profitable products, on the better land, in the most advantageous locations? If, as some have suggested, a deficiency of livestock depressed yields in the late thirteenth and early fourteenth centuries, did improved stocking densities and larger sowings of legumes in the fourteenth and fifteenth centuries provide the precondition for a more effective cycling of soil nitrogen and thus higher crop yields?⁵⁶ Or were the gains obtained in this way offset by the general reduction in labour inputs, as manuring, marling, ploughing, weeding, and harvesting were all undertaken less thoroughly?⁵⁷ Moreover, crop yields are only one measure of physical productivity: what of carcass weights, fleece weights, milk yields, and fertility/mortality rates?⁵⁸ And how were these affected by changing management strategies and ratios of livestock to labour?

There has been a tendency among continental historians to see a direct correlation between the level of physical productivity and the supply of labour, with the result that yields and other measures of physical productivity are believed to have declined with population from a medieval peak in

⁴⁹ For example, R M Smith, ed, *Land, Kinship and Life-Cycle*, Cambridge, 1984; P D A Harvey, ed, *The Peasant Land Market in England*, Oxford, 1984.

⁵⁰ Most notably, J Thirsk, 'The Origin of the Common Fields', *Past & Present*, 29, 1964, pp 3-25; and more recently, S Fenoaltea, 'Transaction Costs, Whig History, and the Common Fields', *Politics and Society*, 16, 1988, pp 171-240.

⁵¹ H S A Fox, 'The Alleged Transformation from Two-Field to Three-Field Systems in Medieval England', *Econ Hist Rev*, 2nd ser, XXXIX, 1986, pp 526-48.

⁵² B M S Campbell, 'Commonfield Origins - The Regional Dimension', pp 112-29 in T Rowley, ed, *The Origins of Open-Field Agriculture*, 1981; *idem* and R A Godoy, 'Commonfield Agriculture: the Andes and Medieval England Compared', pp 323-58 in *Proceedings of the Conference on Common Property Resource Management*, Washington, DC, 1986; R A Godoy, 'The Evolution of Common-Field Agriculture in the Andes: a Hypothesis', *Comparative Studies in Society and History*, 33, 1991, pp 395-414.

⁵³ *AHIII*, pp 254-5, 223-4, 198.

⁵⁴ *AHIII*, pp 200-3; M Bailey, 'Sand into Gold: the Evolution of the Foldcourse System in West Suffolk, 1200-1600', *Ag Hist Rev*, 38, 1990, pp 40-57.

⁵⁵ *AHIII*, pp 177, 185-6, 223, 225-7, 257-8, 613-14, 732.

⁵⁶ J Z Titow, *Winchester Yields: a Study in Medieval Agricultural Productivity*, Cambridge, 1972; D L Farmer, 'Grain Yields on the Winchester Manors in the Later Middle Ages', *Econ Hist Rev*, 2nd ser, XXX, 1977, pp 555-66; *idem*, 'Grain Yields on Westminster Abbey Manors, 1271-1410', *Can Jnl Hist*, XVIII, 1983, pp 331-49; R S Shiel, 'Improving Soil Fertility in the Pre-Fertiliser Era', pp 51-77 in Campbell and Overton, *op cit*, 1991.

⁵⁷ C Thornton, 'The Determinants of Land Productivity on the Bishop of Winchester's Demesne of Rimpton, 1208 to 1403', pp 183-210 in Campbell and Overton, *op cit*, 1991.

⁵⁸ For a discussion of the different components and methods of measuring land productivity see, M Overton and B M S Campbell, 'Productivity Change in European Agricultural Development', pp 1-50 in Campbell and Overton, *op cit*, 1991, pp 7-28.

the late thirteenth and early fourteenth centuries.⁵⁹ Did a similar relationship hold in England? And even if on balance land productivity was falling, which it is by no means clear that it was, could labour productivity not have been rising? There is certainly a strong implication that it was, to judge from the marked improvement in agricultural wage rates and the increased proportion of the population engaging in non-agricultural activities.⁶⁰ If so, what was the source of that productivity rise? Did it derive from a better fed, less servile, and more motivated labour force, from lower levels of rural under-employment, a shift to more labour-productive types of enterprise, or changes in technology?⁶¹

Readers who seek answers to these and other questions concerning productivity levels and trends during this intriguing period will be disappointed. Discussion of productivity is largely confined to a consideration of crop yields, mostly measured as yield ratios rather than yields per acre and dispersed through the separate regional sections.⁶² Nor are such yield statistics as are cited presented in a way which facilitates comparison. Some measures of livestock productivity are given – principally milk yields and fleece weights – but, again, not in sufficient quantity to cast significant light upon trends.⁶³ Yet manorial accounts, which survive in quantity for the second half of the fourteenth century and continue to provide information for a dwindling number of demesnes down to the middle of the following century, provide all the information necessary for the calculation of several useful productivity measures. In this way trends in the yields of individual crops and in the productivity of the cereal sector in general have been calculated for individual demesnes, particular estates, and entire counties.⁶⁴ Where detailed works accounts are available, as in the Winchester Pipe Rolls, Christopher Thornton has recently demonstrated that it is also possible to infer levels of

labour productivity in cereal husbandry.⁶⁵ Moreover, he has developed a method of estimating fertility and mortality rates for the principal categories of demesne livestock from the detailed information contained in stock accounts.⁶⁶ This complements Martin Stephenson's work on fleece weights and Annie Grant's use of animal bones to infer trends in carcass weights.⁶⁷

These are all approaches which are capable of much wider application. Most are, of course, contingent upon the availability of manorial accounts and they leave unanswered questions about the relative productivities of the demesne and peasant sectors and trends within the latter. The productivity of peasant agriculture is always likely to remain a serious lacuna due to the absence of suitable sources. Britnell, King, and Fox conclude that patterns of cropping on peasant holdings are unlikely to have been significantly different from those on seigneurial demesnes in the same locality.⁶⁸ Nevertheless, different factor endowments of labour and capital may well have resulted in very different levels of land and labour productivity.⁶⁹ One possible way forward has recently been pioneered by P T Hoffman with reference to the Paris Basin between 1450 and 1789.⁷⁰ He has combined evidence from leases with price series to infer trends in total factor productivity. In principle, such an approach ought to be directly applicable to late fourteenth- and fifteenth-century England. Gregory Clark has also made ingenious use of piece-rate payments to agricultural workers to infer trends in crop yields between 1250 and 1860.⁷¹ These are new approaches for a new generation of historians and their application will be greatly facilitated by more mechanized methods of data collection and analysis.⁷²

Medieval historians, like their medieval forebears, have traditionally worked with hand tools and this has rendered the build up of data bases to the scale at which valid generalizations are possible

⁵⁹ H Van der Wee and E Van Cauwenberghe, eds, *Productivity of Land and Agricultural Innovation in the Low Countries (1250–1800)*, Leuven, 1978; E Le Roy Ladurie and J Goy, *Tithe and Agrarian History from the Fourteenth to the Nineteenth Centuries: an Essay in Comparative History*, Cambridge, 1982; Campbell, 'Land, Labour, Livestock, and Productivity Trends', pp 144–9.

⁶⁰ Clark, *op cit*, 1991; G Persson, *Pre-Industrial Economic Growth, Social Organization and Technological Progress in Europe*, Oxford, 1988.

⁶¹ G Clark, 'Productivity Growth without Technical Change in European Agriculture before 1850', *Jnl Econ Hist*, XLVII, 1987, pp 419–32; Overton and Campbell, *op cit*, 1991, pp 36–7; Clark, *op cit*, 1991, pp 231–5.

⁶² AHIII, pp 179, 216–17, 230–1, 261–2, 277–80, 287–9, 308, 315.

⁶³ AHIII, pp 192, 207, 220, 235, 300, 321 (milk yields); pp 192, 209, 220, 235, 281, 296–7, 320 (fleece weights).

⁶⁴ For example: Thornton, *op cit*, 1991; Titow, *op cit*, 1972; Campbell, 'Land, Labour, Livestock, and Productivity Trends'.

⁶⁵ Thornton, *op cit*, 1991, pp 201–7.

⁶⁶ C Thornton, 'Efficiency in Thirteenth-Century Livestock Farming: the Fertility and Mortality of Herds and Flocks at Rimpton, Somerset, 1208–1349', in P R Coss and S D Lloyd, eds, *Thirteenth-Century England*, IV, Woodbridge, forthcoming.

⁶⁷ M J Stephenson, 'Wool Yields in the Medieval Economy', *Econ Hist Rev*, 2nd ser, XLI, 1988, pp 368–91; A Grant, 'Animal Resources', pp 149–87 in G Astill and A Grant, eds, *The Countryside of Medieval England*, Oxford, 1988, pp 176–8.

⁶⁸ AHIII, pp 64–5, 217–18, 306. But see also pp 228–9.

⁶⁹ AHIII, p 262.

⁷⁰ P T Hoffman, 'Land Rents and Agricultural Productivity: the Paris Basin, 1450–1789', *Jnl Econ Hist*, LI, 1991, pp 771–805.

⁷¹ G Clark, 'Yields per Acre in English Agriculture, 1250–1860: Evidence from Labour Inputs', *Econ Hist Rev*, 2nd ser, XLIV, 1991, pp 445–60.

⁷² M Overton, 'Computer Analysis of Probate Inventories: From Portable Micro to Mainframe' pp 96–104 in D Hopkin and P Denley, eds, *History and Computing*, Manchester, 1987.

across a range of manors and estates a slow and arduous task.⁷³ Farmer's feat in drawing upon data from several different estates to reconstruct marketing patterns within the country as a whole for a comprehensive range of agricultural products across a 300-year period is therefore all the more remarkable. His consecutive and complementary chapters, 'Marketing the produce of the countryside, 1200-1500' and 'Prices and wages, 1350-1500', lie at the very core of this volume, the former in its chronological range partially compensating for the absence of a corresponding chapter in Volume II.⁷⁴ Together they will provide the essential starting point for all future work on this subject. Much of this work will be concerned with testing and amplifying the findings so cautiously advanced by Farmer and sharpening their chronological focus, for, as he freely acknowledges, his is but a provisional view qualified by the time and sources at his disposal.⁷⁵ Since the latter are predominantly demesne accounts drawn in the main from major ecclesiastical estates – the Bishopric of Winchester, Glastonbury Abbey and Westminster Abbey, plus Merton College Oxford – there is an immediate need to broaden the perspective so as to incorporate evidence from other types of estate and categories of landlord.⁷⁶ In particular, more needs to be known about the market involvement of manors belonging to minor lay landlords for, although less well served by surviving records, numerically they were of far greater importance than their great ecclesiastical counterparts.⁷⁷ In those rare instances where accounts are extant for the very smallest of lay manors we are also brought closest to the kinds of marketing strategy likely to have been encountered

among the uppermost echelons of tenant society.⁷⁸ Investigating the market involvement of the rest of the peasantry requires other sources and methodologies, and here progress will inevitably be slower, although, as M K McIntosh has demonstrated, there is much that detailed case-studies of well-documented manors can reveal.⁷⁹

An earlier generation of historians identified self-sufficiency as the paramount objective of most medieval rural producers, and of the peasantry in particular.⁸⁰ Yet such a view is hardly reconcilable with the abundant evidence of marketing assembled here. By the end of the thirteenth century England was covered by a close network of trading institutions – markets, fairs, and boroughs – and market prices were established for almost every conceivable type of agricultural commodity. As Farmer documents, agricultural products were traded locally, regionally, nationally, and internationally, the quantities and distance traded depending upon the type of good, the nature of demand, and the costs of transport. Wool, for instance, the most commercialized of agricultural commodities, produced by lord and peasant alike, non-perishable and high in value relative to its bulk, was traded in large quantities over long distances. Such a large and well-established trade would not have been possible without the necessary commercial infrastructure.⁸¹ Likewise, the provisioning of London, by 1300 a major city of perhaps 80-100,000 inhabitants, impinged upon rural producers over a wide area of south-eastern England and involved increasingly complex trading relationships.⁸² Much of the trade in grain was handled by specialist bladders based in the capital, many of whom combined dealing in corn with dealing in fish, wine, and other food-

⁷³ The *Feeding the City Projects I and II* at the Centre for Metropolitan History, Institute of Historical Research, London, have employed computerized methods to collect, analyse, and map data from manorial accounts and *Inquisitiones Post Mortem*: see, J A Galloway and M Murphy, 'Feeding the City: Medieval London and its Agrarian Hinterland', *London Jnl*, 16, 1991, pp 4-5. A parallel project at The Queen's University of Belfast, *The Geography of Seigneurial Land Ownership and Use, 1270-1349*, is using portable laptop computers to collect information in the archives from *inquisitiones post mortem* which will then be analysed using standard software packages.

⁷⁴ B M S Campbell, 'Laying Foundations: the Agrarian History of England and Wales, 1042-1348', *Ag Hist Rev*, 37, 1989, p 191.

⁷⁵ *AHIII*, p 324, n 1.

⁷⁶ R H Britnell, 'Minor Landlords in England and Medieval Agrarian Capitalism', *Past & Pres*, 89, 1980, pp 3-22; B M S Campbell, J A Galloway, and M Murphy, 'How Commercialised was the Demesne Sector of English Agriculture c.1300? Some Evidence from the Hinterland of London', in R H Britnell and B M S Campbell, eds, *A Commercialising Economy: England 1086-1300*, Manchester, forthcoming.

⁷⁷ E A Kosminsky, *Studies in the Agrarian History of England in the Thirteenth Century*, Oxford, 1956, pp 95-142.

⁷⁸ For example, B M S Campbell, 'The Complexity of Manorial Structure in Medieval Norfolk: a Case Study', *Norfolk Arch*, XXXIX, 1986, pp 225-61.

⁷⁹ K Biddick, 'Medieval English Peasants and Market Involvement', *Jnl Econ Hist*, XLV, 1985, pp 823-31; E Clark, 'Debt Litigation in a Late Medieval English Vill', pp 247-79 in J A Raftis, ed, *Pathways to Medieval Peasants*, Toronto, 1981; M K McIntosh, *Autonomy and Community: the Royal Manor of Havering, 1200-1500*, Cambridge, 1986.

⁸⁰ M M Postan, 'Note', *Econ Hist Rev*, 2nd ser, XII, 1959, p 79; R H Hilton, 'Medieval Agrarian History', pp 145-98 in W G Hoskins and R A McKinley, eds, *Victoria County History of Leicestershire*, II, 1954, p 145 (for a revision to this view see, *idem*, 'Towns in Societies - Medieval England', *Urban Hist Yearbook* 1982, p 7).

⁸¹ E E Power, *The Wool Trade in English Medieval History*, Oxford, 1941; T H Lloyd, *The English Wool Trade in the Middle Ages*, Cambridge, 1977.

⁸² B M S Campbell, J A Galloway, D J Keene and M Murphy, *A Medieval Capital and its Grain Supply: Agrarian Production and Distribution in the London Region, c.1300*, Historical Geography Research Series, forthcoming.

stuffs.⁸³ Henley was the most prominent of several towns which served as collecting centres for grain destined for London and the Thames was the vital artery down which much of that grain was sent.⁸⁴ For its meat London seems to have drawn upon an even wider area, for as Farmer demonstrates 'urban dealers seeking meat travelled longer distances than those seeking grain'.⁸⁵ Together, the grain and meat trades provided employment for carters, hauliers, boatmen, drovers and a host of other intermediaries. Nevertheless, London's importance and that of other major centres of demand should not be overstressed; the bulk of England's population and therefore the bulk of demand remained rural rather than urban and hence local markets remained the most important outlets for agricultural produce.⁸⁶

How commercialized, therefore, was English agriculture at the beginning of the fourteenth century? Were producers merely using the market, on the one hand, to dispose of surpluses after their own consumption needs had been met and, on the other, to compensate for inadequacies in the range and quantity of the goods they themselves produced?⁸⁷ Or had they moved beyond petty commodity production: were producers specializing and gearing their production to the market? Kathleen Biddick has shown how clear answers to these kinds of question can be obtained for the demesne sector from manorial accounts, since these detail the quantities of grain, animals, and animal products produced, the quantities sold, and the quantities purchased.⁸⁸ Such information now needs to be collected and analysed for a wide range of different estates, controlling as far as possible for soil and environment; in this way it should be possible to form a clearer idea of the degree of commercial involvement of different categories of landlord.⁸⁹ In theory, farm enterprise reflected the interaction of Ricardian and von Thünen economic rent (the former embracing such factors as climate, soils, and population density

and the latter distance from the market).⁹⁰ Fuller exploration of the links between Farmer's analysis of markets and prices and the separate regional accounts of land-use and farming systems might therefore have been particularly fruitful. Certainly, it is hard, given the evidence now to hand, not to attribute considerable influence to the role of market-determined economic rent in the articulation of regional farming systems.⁹¹ Nevertheless, R A Dodgshon has doubted whether at this date the commercial impulse was powerful enough to have 'taken space to market'.⁹²

In this context, the question of whether English agriculture became more or less commercialized during the long years of demographic decline which followed the Black Death becomes particularly intriguing.⁹³ Did producers become more or less reliant upon the market for their inputs: iron, salt, seed, replacement animals, and labour? Did the proportion of total agricultural production destined for the market increase or decrease? Did market demand thereby exert a greater or lesser influence upon patterns of production as manifest in the nature and intensity of farm enterprise? And did farmers become more or less commercial in their attitudes to the land and its management?

In certain respects the period was clearly retrogressive. Aggregate demand shrank. Transaction costs, especially in international trade, almost certainly rose.⁹⁴ A combination of disease and crown interference disrupted the wool trade.⁹⁵ London declined in population, if not in relative importance, and the radius of its provisioning zone contracted.⁹⁶ From the second quarter of the fifteenth century urban demand in general tended to wither.⁹⁷ An increasing proportion of production emanated from the small and middling-sized farms of tenants rather than the substantial demesnes of

⁸³ *AHIII*, pp 334, 370-1; Campbell, Galloway, Keene, and Murphy, *op cit*, forthcoming.

⁸⁴ *AHIII*, pp. 371-2; Galloway and Murphy, *op cit*, 1991, pp 6-7.

⁸⁵ *AHIII*, p 335; Campbell and Power, *op cit*, 1989, pp 30-7.

⁸⁶ *AHIII*, p 329; G Grantham, 'Agricultural Productivity and Urban Provisioning Zones before the Industrial Revolution', forthcoming.

⁸⁷ R H Hilton, 'A Crisis of Feudalism', pp 119-37 in Aston and Philpin, *op cit*, 1985, p 129.

⁸⁸ K Biddick, *The Other Economy: Pastoral Husbandry on a Medieval Estate*, Berkeley and Los Angeles, 1989.

⁸⁹ The research project *Feeding the City I* has analysed the relative importance of grain sales on a range of estates in a ten-county area around London. This has revealed significant differences in the degree of commercial involvement between, first, episcopal demesnes (the most commercialized), second, royal demesnes, demesnes in the king's hands, and lay demesnes, and third, monastic demesnes (the least commercialized).

⁹⁰ M Chisholm, *Rural Settlement and Land-Use: an Essay on Location*, 1962, pp 20-32; D Grigg, *The Dynamics of Agricultural Change*, 1982, pp 50-9; B M S Campbell, J A Galloway, and M Murphy, 'Rural Land-Use in the Metropolitan Hinterland, 1270-1339: the Evidence of *Inquisitiones Post Mortem*', *Ag Hist Rev*, 40, 1992, pp 2-3.

⁹¹ For example, B M S Campbell, 'Ecology versus Economics in Late Thirteenth- and Early Fourteenth-Century English Agriculture', in D Sweeney, ed, *Reality and Image in Medieval Agriculture*, State College, Pa, forthcoming.

⁹² R A Dodgshon, *The European Past: Social Evolution and Spatial Order*, 1987, pp 287-351.

⁹³ R H Britnell, *The Commercialisation of English Society 1000-1500*, Cambridge, 1992.

⁹⁴ J H Munro, 'Industrial Transformations in the North-West European Textile Trades, c.1290-c.1340: Economic Progress or Economic Crisis?', pp 110-48 in Campbell, *Before the Black Death*, 1991.

⁹⁵ *AHIII*, pp 400-1.

⁹⁶ D J Keene, 'Medieval London and its Region', *London Jnl*, 14, 1989, pp 99-111; *AHIII*, pp 372-3, 375-6.

⁹⁷ A. Dyer, *Decline and Growth in English Towns 1400-1640*, Basingstoke, 1991, pp 20-36.

lords. More farmers commanded the resources necessary to ensure self-sufficiency, especially in livestock. Finally, rising wage rates encouraged greater use of family labour and living-in-servants rather than waged labour.⁹⁸ On the other hand, per capita incomes rose, encouraging the exchange of agricultural produce for non-agricultural goods and services. In town and country more of the more commercialized products – ale, meat, and dairy produce – were consumed.⁹⁹ The leather and textile industries grew apace, providing a domestic market for hides and wool and stimulating the demand of the non-agricultural sector for food-stuffs.¹⁰⁰ Great lords and ecclesiastical households relied less on their estates and more on the market for their provisions.¹⁰¹ Customary labour declined as a source of agricultural labour. Many of the institutional constraints to changes in land use and rotations were loosened. And as farm size rose more farmers found themselves with a disposable surplus.¹⁰²

These conflicting traits take us to the core of this period's enigmatic character. At one level it was a time of decay and contraction: at another, of transition to a more innovative, market-sensitive, and productive agriculture. Among producers there were inevitably losers but there were also gainers. Pastoral farmers tended to fare better than arable, and there was a shift in the economic and political balance of power from landlords to tenants. It is usually taken as axiomatic that the losses to lords were absolute as well as relative, since, according to Robert Brenner, 'lords could extract only much lower, now basically economic, contractual rents'.¹⁰³ This is one of the issues considered by J M W Bean in his chapter on 'landlords', in many respects the most technical and difficult in the entire book.¹⁰⁴ He postulates a four-part chronology to the development of landed revenues – 1350–1380, 1380–1420, 1420–1470, and 1470–1500 – and argues that it was only the third of these that witnessed 'a marked fall in landed revenues on many estates'.¹⁰⁵

At work here were the abandonment of sheep farming by many landlords as wool prices collapsed, especially between 1440 and 1460, a general decline in rents and farms, and a formidable increase in arrears. The Paston letters bear witness to the difficulties experienced at this time by a gentry family in one of the foremost arable-farming districts of England, and it is surprising that Bean does not draw upon this correspondence to enliven his account.¹⁰⁶ There was scope here also for cross-referencing to corresponding discussion of seigneurial sheep-farming, wool prices, and rent movements elsewhere in the volume.¹⁰⁷ In regretting that 'no direct evidence exists to throw light on the condition of peasant farming' Bean appears to be unaware that the bulk of Chapter 7 is devoted to that subject.¹⁰⁸

This failure to weld the separate contributions to the volume into an integrated whole is most conspicuous in the case of the final chapter, an account by H E J Le Patourel and L A S Butler of 'Rural building in England and Wales'. Such chapters are a feature of all the *Agrarian History* volumes and are intended, presumably, to explore the material context of agrarian life. Housing people, animals, crops, and implements required considerable resources and the buildings thereby erected bore directly upon the quality and organization of material life. The end result can thus reveal much about rural living standards and the physical infrastructure of agriculture, as well as casting interesting light on the social and economic trends of a period. It was, after all, in terms of the purchasing power of a building-worker's wages that H Phelps Brown and S V Hopkins measured living standards in England.¹⁰⁹ In the case of the years 1348–1500 the heritage of surviving rural buildings is surprisingly substantial – within the Rape of Hastings, for instance, no fewer than 110 small medieval houses are still in occupation – so there is much here for Butler and especially Le Patourel to discuss.¹¹⁰ But their preoccupation is with the buildings *per se* and there is little attempt to relate the various categories of building described to their socio-economic context. Some interesting trends do emerge, such as improved construction methods for peasant houses, a desire for greater comfort and privacy among lords and their followers, and the tendency of lords to build

⁹⁸ Poos, *op cit*, 1991, pp 181–206; A Kusmaul, *Servants in Husbandry in Early Modern England*, Cambridge, 1981.

⁹⁹ C Dyer, *Standards of Living in the Later Middle Ages: Social Change in England c.1200–1520*, Cambridge, 1989, pp 158–60, 197–202.

¹⁰⁰ M Kowaleski, 'Town and Country in Late Medieval England: the Hide and Leather Trade', pp 57–73 in P J Corfield and D Keene, eds, *Work in Towns 850–1850*, Leicester, 1990; A R Bridbury, *Medieval English Clothmaking: an Economic Survey*, 1982, pp 47–105.

¹⁰¹ Dyer, *op cit*, 1989, pp 67–9.

¹⁰² *AHIII*, p 617.

¹⁰³ R Brenner, 'The Agrarian Roots of European Capitalism', pp 213–327 in Aston and Philpin, *op cit*, 1985, p 272.

¹⁰⁴ A more readable discussion of many of the same issues is provided by Dyer, *op cit*, 1989, pp 27–108. See also Payling, *op cit*, 1991.

¹⁰⁵ *AHIII*, p 579.

¹⁰⁶ R H Britnell, 'The Pastons and their Norfolk', *Ag Hist Rev*, 36, 1988, pp 132–44.

¹⁰⁷ *AHIII*, pp 234–5, 243–4, 264–5, 281–2, 292–7, 461–4, 512–16, 720–1.

¹⁰⁸ *AHIII*, p 583.

¹⁰⁹ H Phelps Brown and S V Hopkins, 'Seven Centuries of the Prices of Consumables Compared with Builders' Wage-Rates', *Economica*, XXIII, 1956, pp 296–314.

¹¹⁰ *AHIII*, p 854.

smaller barns, but these are left to speak for themselves.¹¹¹

There is a good case to be made for incorporating material culture within any consideration of agrarian history but that case is not made here.¹¹² Moreover, why stop at buildings? If the concern is to research and reconstruct the physical worlds of work and home why exclude discussion of tools, implements, utensils, and furnishings?¹¹³ Some of the greatest recent advances in our understanding of medieval agrarian life have come from systematic study of its material technology: ploughs, carts, and mills.¹¹⁴ Le Patourel and Butler's survey of building materials, building methods, manor houses, peasant and other small houses, farm buildings, and industrial buildings is therefore no more than a starting point. Future research needs to equip, furnish, cost, and occupy

those buildings, all of which will require much fuller use of available documentary evidence than is made here.¹¹⁵

Volume III of the *Agrarian History*, therefore, more than most other volumes in the same series, represents a beginning and not an end. Reviewers alone will read the volume from cover to cover, spotting the cracks and blemishes which this inevitably reveals. Others – local and regional historians, undergraduates, postgraduates and professional historians – will use it more selectively. All will appreciate the richness and variety of the information it contains and may trust the soundness of its scholarship. During its long gestation, advances in the technology and methodology of historical research have helped transform ways of investigating the period. Joan Thirsk's hope is that publication of this volume will further stimulate this process of enquiry, and she is unlikely to be disappointed.¹¹⁶ It may not provide a definitive view of Langland's field, once so full of folk, but it does open up many inviting new vistas and help point the way forward.

¹¹¹ *AHIII*, pp 821, 825, 867.

¹¹² For example, C Platt, *Medieval England: a Social History and Archaeology from the Conquest to 1600 AD*, 1978.

¹¹³ Cf L Weatherill, *Consumer Behavior and Material Culture in Britain 1660–1760*, 1988.

¹¹⁴ Langdon, *op cit*, 1986; *idem*, 'Agricultural Equipment', pp 86–107 in Astill and Grant, *op cit*, 1988; *idem*, 'Water-Mills and Windmills in the West Midlands, 1086–1500', *Econ Hist Rev*, 2nd ser, XLIV, 1991 pp 424–44; R Holt, *The Mills of Medieval England*, Oxford, 1988.

¹¹⁵ For example, D Yaxley, *The Prior's Manor Houses: Inventories of Eleven of the Manor-Houses of the Prior of Norwich made in the Year 1352 AD*, Dereham, 1988; Poos, *op cit*, 1991, pp 73–88.

¹¹⁶ *AHIII*, p xix.

Notes and Comments

(continued from page 43)

add a sentence to the end of the paragraph 'The retiring ordinary members shall not be eligible after eight successive years of office for immediate re-election'. (6) Paragraph 9: replace 'the consent of the nominee' with 'the signed consent of the nominee'; replace 'seven days' with 'ten days'; add to the end of the paragraph 'Those nominating candidates for the Executive Committee should provide a statement of about twenty words about each candidate at the Annual General Meeting where the election takes place'. It was agreed that the level of subscription for the category of members covered in (3) above be set at £5 per annum for 1993/94.

SPRING CONFERENCE 1993

The 1993 Spring Conference will be at Gregynog Hall, near Welshpool, from Monday 5 to Wednesday 7 April. Speakers will be include: Professor Michael Thompson; Professor P K O'Brien; Dr

David Jones, Dr E J T Collins; and Dr Charles Withers. A booking form and full details of the programme are included in this issue of the journal.

AUTUMN CONFERENCE 1993

The 1993 Autumn Conference will be held in York and will, like the previous two autumn conferences, be centred upon the region where it is held. These Conferences are intended to introduce a range of local themes and speakers to audiences that want to find out more about their local area. If you are a member of the BAHS who lives in and wants to learn more about the agricultural history of northern England, or if you know of any non-members who may be interested in this, then this conference should not be missed. Previous conferences have been held on the third Saturday in September, and full details of this one are available from Dr Richard Hoyle, 13 Parker Street, Oxford OX4 1TD.

Annual List and Brief Review of Articles on Agrarian History, 1991¹

By RAINE MORGAN

THE analysis of pollen spectra to reconstruct human activity in prehistory continues to provide valuable insights. Research at a site in the West of Ireland by Malloy and O'Connell (131), for example, has resulted in a detailed record of woodland and land use history from 9500 to 1500 BP, including the timing of clearance and types of early farming. Similarly Hall (86) combines historical, topographical, and palynological evidence from an inhospitable area of Armagh to create a picture of agricultural activity from prehistoric to modern times. The question of the elm decline is addressed in a number of studies. Day (59) has analysed pollen, sediment, and charcoal particles from two Oxfordshire sites. An interesting finding is that elm decline was associated with disease and leaf gathering for fodder rather than clearance, while the discovery of a single triticum type grain dating from c 6700 BP adds to the growing body of evidence for the occurrence of cereals in Britain prior to the elm decline. Investigations in the Pennines by Tallis and Switsur (203, 204) suggest that the replacement of upland forest and scrub with blanket peat was linked to a complex of environmental changes including forest clearance, climate, and soil deterioration that varied from region to region. Mesolithic bands contributed in a major way through controlled burning and grazing which damaged the land. Studies by Whittington *et al* (226-8) at an eastern Scottish site also demonstrate the value of palynology as a tool for evaluating landscape change; their analyses provide evidence of multiple elm declines and recent woodland planting on estates.

The transition to farming is widely discussed. McCriston and Hole (126) postulate that agriculture was first adopted 10,000 years ago in the Jordan Valley. This resulted from climatic change which made it necessary to store food and encouraged sedentism. Layton *et al* (119) also reject the theoretical framework in which the transition is conceived as an evolutionary progression and

where population growth is a critical prime mover. Instead foraging or farming are viewed merely as alternative strategies which are appropriate in different natural or social environments. In the opinion of Zvelebil and Dolukhanov (236) the transition was a slow one during which the two systems overlapped. Blumler and Byrne (24) review models of plant domestication and a number of articles demonstrate the contribution that molecular biology is now making to our understanding of the origin and evolution of crop plants: studies of legumes and the potato (23, 81) are among these. On livestock Anthony and Brown (12) have identified microscopic bit wear on equid teeth which date the beginning of horseback riding to 4000 BC. This event, they argue, became the first major innovation in transport, pre-dating the wheel and transforming Eurasian societies. On early agricultural systems Cooney (50) reviews the evidence on neolithic fields in Ireland in an attempt to discover their contemporary functions and extent, and on food. Evershed *et al* (66) show how gas chromatography and mass spectrometry can be used to detect the vegetable components of ancient diets.

On early historical source material Higham (96) draws our attention to passages in Gildas's sixth-century work on Britain. In it there are references to intensive agriculture and transhumance which are at odds with current views which associate this period with population collapse and economic dislocation. Hanawalt (89) discusses the difficulties of interpreting medieval texts which arose out of contemporary narrative, and shows from the records of coroners' inquests the importance of their cultural context. The value of records which resulted from disputes over the ownership of lands is described by Smith (189, 190). Quite apart from information on property they can provide rare insights into early life styles, customs, attitudes, and behaviour. The meaning of 'waste' in the early pipe rolls is considered by Amt (10) who defends the traditional interpretation as devastated land unable to sustain normal output because of economic disruption. Kosminsky's classic analysis of social structure in the hundred rolls is reassessed by Barg (16) who by careful linkage techniques

¹ Publications are dated 1991 unless otherwise noted. References to articles or off-prints should be sent to the Bibliographical Unit, Institute of Agricultural History, University of Reading. The Master Index containing over 40,000 classified references on British agrarian history and rural society can be consulted by appointment.

reveals the complex socio-economic identity of manorial freeholders.

On socio-political structures Crouch *et al* (55) debate the content and chronology of bastard feudalism, and Alfonso (5) provides a wide ranging study of Cistercian estates at home and abroad. Focusing upon the social relations that developed within the Cistercian economy she rejects views which have stressed its capitalistic non-manorial structure. The development of the economy in general is considered by Britnell (34) who questions why England relatively had a low level of urbanization in the fourteenth century and argues that the reason lay in the political, cultural, and economic characteristics of the cities themselves and not simply in the low rural demand for urban goods and services. Postan's thesis that there was a Malthusian crisis during the thirteenth and fourteenth centuries is challenged by Desai (60). He suggests an alternative model of the English economy in which livestock disease and harvest failures were the prime movers, rather than over-population. McCloskey (125) asks why peasants persisted tilling open fields when scattering imposed such severe problems of inefficiency, and concludes that the problems were outweighed by the buffer against risk that scattering offered. In a call for less economic theory and more history Komlos and Landers (116) dispute the thesis of McCloskey and Nash that the low level of grain storage was linked to high interest rates. Livestock as usual receives little attention, but Currie (56) in his study of fish-keeping traces the history of the carp from its introduction in the late medieval period when there was a change both in the economic climate and the attitudes to fishponds. The approach of the Toronto School to the study of society is reflected in the work of Dewindt and Olson (62, 153) who have scrutinized the manorial rolls of a fenland community to throw new light upon the social underpinnings of local government. They reveal how local people interacted with their leaders and responded to long term crises arising out of the plague.

Issues surrounding kinship, marriage patterns and the development of early rural family forms are a dominant theme in this year's periodical literature. The size and structure of the medieval family has been a matter of controversy and Moore (139) contributes to the growth of knowledge by an analysis of widely differing sources. Alderson and Sanderson's study of household patterns in early modern Europe (3) proposes that different forms were linked to the mode of labour control; complex households predominated where feudalism was the norm, simple nuclear households where capitalist labour markets were eroding

feudal bonds. The nature and role of kinship in early modern society is re-evaluated by O'Hara (151) who uses evidence of depositions in Canterbury's consistory court to show its influence on marriage decisions. The influence of the church on marriage choices is considered by Mitterauer and Sheehan (137, 184), and Bonfield (26) challenges the view that the church determined inheritance strategies through marriage law for its own financial benefit. In a detailed analysis of property transfer in Earls Colne, Sreenivasan (196) takes issue with the Macfarlane thesis on English individualism and the weakness of the land-family bond, while Collins (49) looks at the inheritance implications of parents remarrying. The belief that in early modern England the norm was for children to leave home to work as live-in servants is challenged by Mayhew and Sharpe (134, 180) whose findings show that most children stayed to learn traditional skills, while orphans were bound to craftsmen or went to large families. It has become a commonplace that economic opportunity encouraged earlier marriage but Sharpe's demographic investigation of Colyton (179) shows that although the relationship is confirmed for men, for women it is not. The theory is also challenged by Guinnane (82, 83) who analyses the census and tax records of post-famine Ireland to obtain a more complete appreciation of the role of household behaviour in historical economic development. The complex relationship between urban centres and the rural hinterland is considered by Wrigley (234) who raises questions about the validity of making exclusive divisions between town and countryside and between different classes of urban settlement. The knock-on effect of emergent urban systems during the long eighteenth century is examined by Chartres (44), who highlights the impact of provisioning needs on resource allocation in the countryside. Property law is discussed by Ward (219) who shows how developments during the seventeenth century had a considerable impact upon the ability of the peerage to survive economic problems which followed the Civil War, and Hoyle (102) demonstrates the strong support that tenants could obtain in the courts when their customary rights were threatened by an improving landlord. In an important article Clark (47) addresses the difficult question of the long term trend in national yields. Using an ingenious new approach he charts the inputs of harvest labour as a surrogate and concludes that wheat yields increased most significantly between 1600 and 1770, with little progress in either cereals or hay during the 'classic' period of the agricultural revolution.

On the source material of the modern period

Turner and Wray (213) underline the usefulness of the *House of Commons Journals* for the study of Parliamentary enclosure and provide an index of available Commissioners' working papers. The copies of Irish estate surveys and other manuscript maps held by the National Library of Ireland are described by Andrews (11) and Oliver (152) provides a guide to the Ordnance Survey. There is a growing volume of literature on information technology demonstrating its relevance to historians. Middleton and Wardley (135) now provide an invaluable annual review of developments, and articles published in *History and Computing* demonstrate the potential of information technology (76, 104, 169). Among them Kain (109) explains how computer procedures used for the tithe records have extended the questions that can be asked about the data.

An explanation for the large differences in productivity achievements between Britain and north west Europe during the period 1870 to 1914 is advanced by van Zanden (215). He argues that farm structure and institutional developments meant that French farmers were better placed than their British counterparts to exploit family labour and land saving technologies. Clark (46) questions the argument (*pace* Allen) that the economies of scale flowing from the rise in farm size in England increased labour productivity in the eighteenth and nineteenth centuries. On Ireland O'Rourke (154) constructs a computational equilibrium model of the agricultural economy to support his contention that the Great Famine hastened conversion to pasture and played a crucial role in reducing agricultural employment, and Turner (212) investigates output and productivity in Irish agriculture from the Famine to the Great War. Ignorance of Ireland's dairy industry is highlighted by Solar (193) who fills in some gaps in our knowledge with new estimates of the butter trade in the nineteenth century. The motives behind urban improvements on the Irish estates of the Duke of Devonshire are explored by Proudfoot (163) who stresses that power rather than profit was the main objective. In her regional study Hallas (88) examines the supply responsiveness of Yorkshire dairy farmers and demonstrates how market behaviour could vary greatly within a relatively small geographical area. Also on Yorkshire, Harris (90) investigates the management of gorse for fuel and fodder and with Spratt (91) uses archaeological and documentary evidence to chart the commercial exploitation of rabbits. The importance of the horse in the Welsh economy is reviewed by Moore-Colyer (141) who explores reasons behind the failure to improve breeds, and on innovation Brigden (33) documents early experimental use of

electricity in the working of farming equipment. On society in the countryside Wasson (221) charts the incidence of landed families amongst MP's from the mid-seventeenth century and detects an abrupt check to their stranglehold on the House after 1832. Thompson (207) examines the links between successful business enterprise and estate purchase, and in a separate article (208) enquires how the landed have fared this century. The pattern of land tenure since 1750 is discussed by Offer (149) who argues that social advantages of ownership underpinned the persistence of fixed rent tenancy and the low level of occupation before the wars, after which improvements in security of tenure and income caused a shift to owner occupation. Allen (6) looks critically at the revolution in enclosing and farm amalgamation, maintaining that it benefited only the large landlords and that most people would have been better off without it. The neglect by historians of enclosures carried out under the 1845 Act is noted by Chapman (40) who examines how it affected south Wales. The role of farm inheritance in modern Ireland is assessed by Kennedy (111) and Mutch (145) questions how easily farm-labourers became farmers in the north of England. The laws of settlement are discussed by Landau (117) who argues that their function, was to control inter-parochial migration. However, Snell (191) postulates an intimate and pervasive link between settlement and the Poor Law, and doubts that mobility was hindered. The growth of interest in the experience of women is reflected in the literature. King (113) dismisses the view that gleaning was a marginal activity and in a wide ranging survey shows that it was a vital component in the 'make-shift economy' of the rural poor. Reasons for the retreat of women out of agriculture and into household employment in Ireland between 1890 and 1914 are sought by Bourke (28), and Valenze (214) focuses on the withdrawal of women from dairying in England. In a study of labourers Nicholas and Steckel (146) use height data as an indication of living standards and find evidence of decline amongst English workers relative to their Irish equivalents. Ó'Gráda's study of heights (150) confirms the comparatively high nutritional status of the rural poor in Ireland. His data further reveal a striking correlation between the ability to read and write and nutrition, indicating that in poor societies literacy is a powerful proxy for income. Sharp (178) gives an account of the foul living conditions in the villages of England while Shpayer-Makov (185) reminds us that the rural idyl was largely in the minds of urban dwellers who found in the countryside eager recruits to city life. Studies of popular protest and crime are

prominent in the literature. Charlesworth and Wells (43, 222) consider the state of research, Jones (106) investigates the level of crime in nineteenth-century Wales and the evidence of criminal gangs in the rural south of England is analysed by Wells (223). The view that there was little interest in Highland emigration during the late nineteenth century as an alternative to land reform is contested by Norton (147) who describes the failed scheme of the Scottish Office to settle crofters abroad. Also on social reform Wells (224) explores the extent of support for chartism in English villages and finds that labourers were the largest category subscribing to the Land Plan.

There is a growth of interest among historians of the modern period in questions of policy and government. The work of the Agricultural Executive Committees during the First World War is considered by Chapman and Seeliger (41) using surviving papers. Cox *et al* (52) describe the process whereby the National Farmers Union acquired the organizational structure and political acumen that turned it into a powerful pressure group, and the influence of the NFU and other agrarian bodies which shaped opinion in Government and Party during the 1920s are explored by Moore (140). Sheail (181) uses Ministry of Agriculture records to follow the changing perception of the rabbit as a pest from the 1920s to the arrival of myxomatosis, and in a separate article (183) shows how the Ministry tackled the undesirable side effects of technological progress when road dressings threatened inland fisheries.

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- 2 AITCHISON, JOHN and CARTER, HAROLD, Rural Wales and the Welsh Language. *Rural Hist*, II, 1, pp 61-9.
- 3 ALDERSON, ARTHUR S and SANDERSON, STEPHEN K, Historic European Household Structures and the Capitalist World-Economy. *Jnl Family Hist*, XVI, 4, pp 419-32.
- 4 ALDRED, DAVID and DYER, CHRISTOPHER, A Medieval Cotswold Village: Roel, Gloucestershire. *Trans Br Glos Arch Soc*, CIX, pp 139-70.
- 5 ALFONSO, ISABEL, Cistercians and Feudalism. *Past & Pres*, CXXXIII, pp 3-30.
- 6 ALLEN, ROBERT C, Agrarian Fundamentalism and English Agricultural Development. *Rivista di Storia Economica* new ser, VII, 2-3 (1990) pp 153-61.
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- 11 ANDREWS, J H, The Longfield Maps [1770-1840] in the National Library of Ireland: an Agenda for Research. *Irish Geog*, XXIV, 1, pp 24-34.
- 12 ANTHONY, DAVID W and BROWN, DORCAS R, The Origins of Horseback Riding. *Antiquity*, LXV, 246, pp 22-38.
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- 14 ATKINS, P J, Sophistication Detected: Or, the Adulteration of the Milk Supply 1850-1914. *Soc Hist*, XVI, 3, pp 317-39.
- 15 BALMORI, DIANA, Architecture, Landscape and the Intermediate Structure: Eighteenth-Century Experiments in Mediation. *Jnl Soc Arch Historians*, L, 1, pp 38-56.
- 16 BARG, M A, The Social Structure of Manorial Freeholders: an Analysis of the Hundred Rolls of 1279. *Ag Hist Rev*, XXXIX, 1, pp 108-15.
- 17 BEATON, ELIZABETH, The Sutherland Technical School [Founded in 1903]. Pioneer Education for Crofters' Sons. *Rev Scot Culture*, VII, pp 35-51.
- 18 BELL, JONATHAN, Donegal Women as Migrant Workers in Scotland. *Rev Scot Culture*, VII, pp 73-80.
- 19 BENNETT, JUDITH M, Work in Progress: Myso-gyny, Popular Culture and Women's Work [1300-1700]. *Hist Workshop*, XXXI, pp 166-88.
- 20 BIRRELL, JEAN, The Forest and the Chase in Medieval Staffordshire. *Staffordshire Studies*, III, pp 23-50.
- 21 BLAISDELL, JOHN D, Andrew Snape (1644-1708) and the Beginning of Veterinary Anatomical Instruction in England. *Veterinary Hist*, VI, 4 pp 134-53.
- 22 BLOOD, KEITH and BOWDEN, MARK, Studies of Ridge and Furrow. 2. The Comby Hills at North Charlton, Northumberland. *Landscape History*, XIII, pp 65-7.
- 23 BLUMLER, MARK A, Modelling the Origins of Legume Domestication and Cultivation. *Econ Botany*, XLV, 2, pp 243-50.
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- 25 BONANNO, ALESSANDRO, From an Agrarian to an Environmental Food and Natural Resource Base for Agricultural Policy: Some Reflections on the Case of the EC. *Rural Sociology*, LVI, 4, pp 549-64.
- 26 BONFIELD, LLOYD, Canon Law and Family Law in Medieval Western Christendom. *Continuity and Change*, VI, 3, pp 361-74.
- 27 BOURKE, JOANNA, 'The Best of all Home Rulers': the Economic Power of Women in Ireland, 1880-1914. *Irish Econ Social Hist*, XVIII, pp 34-47.
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- 37 CAUNCE, STEPHEN, The Twentieth Century Farm Servants: the Horselads of the East Riding of Yorkshire. *Ag Hist Rev*, XXXIX, 2, pp 143-61.
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- 39 CHAPMAN, JOHN, Confidence Limits and Enclosure Estimates: Some Comments. *Ag Hist Rev*, XXXIX, 1, pp 48-51; Reply by J R Walton, pp 52-4.
- 40 CHAPMAN, JOHN, The Later Parliamentary Enclosures of South Wales. *Ag Hist Rev*, XXXIX, 2, pp 116-25.
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- 44 CHARTRES, JOHN, City and Towns, Farmers and Economic Change in the Eighteenth Century. *Hist Res*, LXIV, 153, pp 138-55.
- 45 CHASE, MALCOLM, Out of Radicalism: the Mid Victorian Freehold Land Movement. *Eng Hist Rev*, CVI, 419, pp 319-45.
- 46 CLARK, GREGORY, Labor Productivity and Farm Size in English Agriculture Before Mechanization: a Note. *Expl Econ Hist*, XXVIII, 2, pp 248-57.
- 47 CLARK, GREGORY, Yields Per Acre in English Agriculture, 1250-1860: Evidence from Labour Inputs. *Econ Hist Rev* 2nd ser, XLIV, 3, pp 445-60.
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- 50 COONEY, GABRIEL, Irish Neolithic Landscapes and Land Use Systems: the Implications of Field Systems. *Rural Hist*, II, 2, pp 123-39.
- 51 COUPE, MICHAEL and FAIRCLOUGH, GRAHAM, Protection for Historic and Natural Landscapes. *Landscape Design*, CCI, pp 24-30.
- 52 COX, GRAHAM *et al*, The Origins and Early Development of the National Farmers' Union. *Ag Hist Rev*, XXXIX, 1, pp 30-47.
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Notes on Contributors

DR T L RICHARDSON is a Lecturer in Economic and Social History at the University of Kent. His main research interests include movements in agricultural wages and the cost of living, and the pattern of social protest, in England during the late eighteenth and early nineteenth centuries. He has published a number of essays on the standard of living controversy. He is currently undertaking research into the Kentish labour market between 1640 and 1914 and is writing a book on the economic and social history of the town of Sandwich.

she worked on the period 1790-1900. Since then her interests have covered more general aspects of Norfolk's agricultural history as well as the development of farm buildings. She is currently working as a research associate at the Centre of East Anglian Studies, University of East Anglia, studying the agricultural landscape of East Anglia, 1650-1870. On a more practical level, she is involved in running the family's flock of sheep (which does not currently include the new Norfolk horn).

SUSANNA WADE MARTINS began her agricultural studies on the Holkham estate, Norfolk, where

(continued on page 96)

Conference Report: 'Recent Work in East Anglian Agrarian History', Autumn Conference 1992

By R W HOYLE

The second of the Society's autumn conferences was held on 19 September at the University of East Anglia by the kind invitation of Dr Richard Wilson and the Centre of East Anglian Studies. Norfolk in particular and the eastern counties in general have always featured prominently in English agricultural history. Nonetheless, the papers presented served to challenge old and easy assumptions about the agriculture of these counties whilst revealing how much more there is to be discovered.

Bruce Campbell and Mark Overton opened the day's proceedings with a paper on 'The peculiarity of Norfolk agriculture'. Ranging widely between the fourteenth and the nineteenth centuries, the rather surprising conclusion was advanced that Norfolk agriculture was at its most distinctive (when compared to England as a whole) in the earlier than the later period. Indeed, the tithe returns of the 1840s suggest that yields in Norfolk were comparable with the English average, nor was Norfolk the first English county to undergo an agricultural revolution – for the moment that accolade belongs to Hertfordshire or perhaps Oxfordshire. In the early fourteenth century demesne farming in east Norfolk had developed into a remarkable system, distinguished by the elimination of fallows, the use of legumes, high seeding rates, and enormous labour inputs in manuring, weeding and folding. The difference between earlier and later practices was not cropping – that was broadly similar – but the size of the farming unit. But Campbell and Overton concluded by asking whether the final peculiarity of medieval east Norfolk was not simply agricultural, but also social and, in a glance towards future work, suggested that attention now needed to turn from agriculture to farmers.

The presentation by Tom Williamson and Susanna Wade Martins was a foretaste of research being conducted at the Centre of East Anglian Studies with the support of the ESRC on 'Landscape and agriculture in Norfolk and Suffolk, 1650–1879'. Where Campbell and Overton sought to generalize from sources – manorial accounts,

inventories – which covered the whole county, Williamson and Wade Martins proposed the complementary approach of working intensively on six or seven sample areas scattered over the two counties in an attempt to isolate regional differences. Contrary to recent opinion, their early findings suggested that changes in crop rotations were a major factor in productivity gains, with the elimination of fallows by the end of the seventeenth century and the adoption of convertible husbandry systems utilizing improved grasses. By the 1730s most of the improved rotations known by the end of the century were already being used. But early results were pointing to the patchiness of innovation. Single estates and even individual farms were turning out to have a great variety of types of landholding, from strips and foldcourse through to new several enclosures. 'Improved' and 'unimproved' landscapes co-existed in the eighteenth century and the agricultural revolution was a long, drawn-out affair, with some aspects of improvement being underway by the early eighteenth century with others, especially those which called upon landlord capital, only taking place towards the end of the century. The project promises much, if even to dispel ready generalization by dissolving everything down to microtopographies.

The afternoon session turned on topical issues of agricultural depression. Stephen Pam spoke on nineteenth-century Essex farming, from "Golden Age" to depression, 1850–1914'. At a time when price trends suggested that the advantage lay with livestock farming, Essex farmers were slow to move towards a mixed farming regime. The commitment to wheat was, however, logical given Essex soils, climate and transport difficulties, and on many Essex farms wheat production remained profitable even at the low prices of the 1890s. Livestock and dairy farming were not options to which every farmer could turn, the latter, for instance, requiring better water supplies than many farmers possessed, and access to rail heads. Pam spent some time discussing the particular contribution of Scottish migrant farmers to Essex farm-

ing in these years. Where they differed from local farmers was in their attitude to family labour and the low level of expectation they brought to living standards; but whilst their contribution was positive, it has also been exaggerated.

The paper showed how easy it was to criticize farmers for not adapting to changing price levels without appreciating the practical and institutional difficulties which prevented them from doing so. Alec Douie, on the responses to inter-war depression in Norfolk, looked at similar problems; but where Pam argued for continuities in Essex agriculture, Douie pointed to a comprehensive break with the past. Faced with falling arable prices, Norfolk farmers were forced to reject the rigid Norfolk system. Cash cropping was the key

to survival, and every shift in the rotation had to contribute. The introduction of sugar beet was described at length, but the transformation of arable farming, Douie suggested in a rather surprising turn, was due not to new crops but a rising standard of agricultural education. Norfolk farmers were poorly equipped to deal with problems thrown up by depression because they were not only dismally ill-educated agriculturally but highly sceptical of the concept that science could bring any aid to agriculture. Hence, there was no serious attempt to analyse existing practices; most regarded diversification merely as adjuncts to the main business of farming, expedients to meet the depression. The key to change was education.

Notes and Comments

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REQUESTS FOR HELP

As part of our service to readers 'Notes and Comments' now includes a section under this heading. This is designed for all members of the BAHS, but particularly those who are not attached to an academic institution. We hope this will provide assistance for two types of problem. First, those thinking of carrying out research and who have chosen a topic, but are not too sure where to begin, or want to know who else has worked on that particular subject. And secondly, those who are well into a project but need further information to fill in gaps, or require advice on methodology. From time to time we have published lists of research in progress, but as there are intervals of some time between their appearance, it is hoped this spot will fill the gap where someone wants information in the short term. This service is open to all members and if you feel it would be of some help you are urged to send your name and address, along with your request, to the Secretary of the BAHS, Dr Richard Perren, Department of History, University of Aberdeen,

Taylor Building, King's College, Old Aberdeen, AB9 2UB.

THE VETERINARY HISTORY SOCIETY

The Veterinary History Society was founded in 1962 to foster all aspects of veterinary history and its membership is open to all and not confined to veterinary surgeons. In the 1970s the BAHS held a joint Winter Conference with the Veterinary History Society. It publishes its journal, *Veterinary History*, twice a year and is always pleased to consider historical articles on farm animals that have a veterinary content. Contributions to *Veterinary History* should be addressed to the editor, Mr Tony W Johnson BVSc, MRCVS, 140 Lovelace Drive, Pyrford, Woking, Surrey GU22 8RZ. Individual Membership of the Society is £6 a year and includes a subscription to *Veterinary History*. Subscriptions for non-members are £4 a year. Correspondence on membership and subscriptions should be addressed to Mr E Barbour-Hill, BVSc, MRCVS, Tan-y-Coed, High Street, Penlong, Bangor, Gwynedd LL57 1PX.

Conference Report: 'Rural Trade and Industry' Winter Conference 1992

By E J T COLLINS

A quiet early winter's day, overhung with rumours of bomb alerts at the main-line stations and extraordinary bargains in the pre-Christmas sales, enticed along some forty-odd members of the Society to the 17th annual meeting with the Institute of British Geographers, held at the Institute of Historical Research on 6 December, to hear four splendid papers on aspects of rural trade and industry from the mid-eighteenth century up to the Great War. The theme was a welcome one, partly because of its appeal to non-agricultural historians, but principally because, notwithstanding the large proportion of the rural workforce employed in non-agricultural occupations and the important role played by crafts and industries in sustaining and expanding the rural economy, the area has been thinly researched, a short-coming which the four speakers, each in their different ways, helped rectify.

The morning session began with a lively paper by Dr Jonathan Brown (University of Reading): 'The British agricultural machinery industry, 1850-1914'. It was concerned principally with production and marketing strategy in the later nineteenth century and the response of leading companies to declining markets at home and expanding opportunities overseas. By 1875, the industry was dominated by a handful of large steam engineering firms, either specialist manufacturers such as Marshall, Fowler, Garrett, and Clayton and Shuttleworth or, like Ransomes, general agricultural engineers with strong steam interests. For manufacturers of steam engines and barn machinery the chief limiting factor, almost from the outset, at any rate by 1860, had been the smallness of the home market. In the 1870s total numbers of engines in use in Britain may not have exceeded 20-25,000, while sales probably averaged fewer than 2000 units per annum. Even medium- and small-sized makers were obliged to look to exports to sustain, still more to expand, production. Leading companies were then exporting at least half their output and by 1900 nearer three-quarters - mainly to central and eastern Europe and the Empire. In 1907 steam engines and associated machinery accounted for c. 60 per cent of agricultural engineering output, of which over

two-thirds was sold abroad. The years immediately preceding the Great War, when a surge in exports coincided with a recovery in home demand, were especially prosperous. The late 1870s and early 1880s, on the other hand, were bad for exports as well as home business, resulting in numerous closures and obliging many smaller firms to switch from agricultural to general engineering, and from manufacturing to servicing, itself a significant development. The growth of exports, concluded Dr Brown, was not due to the Great Depression but, rather, was a High Farming strategy based on product specialization, and market-led. The relative narrowness of the British manufacturing base - the concentration on steam and barn machinery to the neglect of dairying and advanced harvesting equipment - proved, subsequently, in the inter-war period, the undoing of this highly successful nineteenth-century industry which, without the benefit of protection, had enjoyed a virtual monopoly in the home market up to the 1890s, and was a not unimportant source of foreign exchange earnings. There were questions afterwards about raw material supplies as a factor in the location of the industry in eastern England, product development, and economies of scale.

Dr Michael Sill's paper: 'An occupational geography of Northumberland in the mid-eighteenth century: some early findings from the 1762 Militia Lists', confirmed the usefulness of this little-known historical source whose possibilities as a spatial measure of economic activity in the statistically barren early Industrial Revolution period, had been pioneered by Dr Glennie. The parish lists survive for a small number of counties - Cheshire, Herts, Northants, and Northumberland - and parts of various others, and normally contain the names, occupations and place of residence of all adult males aged 18-50 (later 55) eligible for service as defined by the 1758 Militia Act. Excluded, though, are women together with occupational groups such as apprentices, and soldiers and sailors, and poor men with more than three (subsequently two or more) children. Nor do they list alternative occupations or distinguish between masters and employees. Dr Sill's analysis of the 1762 returns for Northumberland suggests

that about two-thirds of all parishes were then predominantly non-agricultural with over 50 per cent employed in other occupations – commonly over 25 per cent in crafts and trades, 4–8 per cent in domestic service, 4–10 per cent in general labouring and about 1 per cent in the professions. The importance of mining in this leading coal-producing country is confirmed. Both coal and lead mining, however, seemed geographically more widespread than previously believed, with clusters of mines in the lower carboniferous levels where coal was mined in shallow pits for sale in local towns or for lime burning. Lead mining was concentrated in the south-west where in 5 parishes it provided 35–95 per cent of employment. Rather surprising was the ubiquity and importance of weaving, and the low levels of manufacturing activity in market towns. Areas for further research included the correlation of the lists with the 1801 census to determine total populations, typological analysis of parishes, and more detailed work on agricultural employment. Questions afterwards centred on the thorny question of dual occupations.

The same analytical problems of specialization and definition of trades as between manufacturing and servicing, rural and urban, and scale of operation, reared up again after the luncheon interval, in the paper by Professor John Chartres (University of Leeds): 'Servants of agriculture: rural trades and crafts in the 18th and 19th centuries'. The central question was the effect on the rural industrial sector of the Industrial and Transport Revolutions and the growth of towns. The sole comprehensive statistical source, the occupational census returns from 1831, were analysed to show the relative importance of individual trades in employment terms. Thus numbers of wheelwrights were seen to have declined from the 1860s, of coopers from the 1870s, basket makers and saddlers from the 1890s, and carriers from the early 1900s, concurrent in most cases with a spatial shift from the countryside to the towns. A comparison between predominantly urban and rural registration districts in the East and West Ridings in 1851 revealed high concentrations of container makers in the urban centres and Hull, but a much more even distribution of saddlers and carriers and, surprisingly, a rural preponderance of smiths and wheelwrights, even though the latter were becoming increasingly concentrated in large urban workshops or, as at Beverley, in wagon factories. Occupational structures in later eighteenth-century Hertfordshire and Buckinghamshire, 1830s Norfolk and the North Riding, c 1880, were compared to suggest that over the period the retail trades grew relative to crafts and manufacturing. What Professor

Chartres termed his 'Thatcher Puzzle' – the fact that according to the 1891 census nearly half the workers in that trade resided in just four counties – exemplifies the definitional problems where a large part of the workforce was multi-occupational and trades exhibited widely varying degrees of specialization. A general problem was to reconcile the historical evidence with the conflicting ideology of reminiscence and rural idyllicism, out of which the 'craft tradition' was born.

Where the emphasis of the first paper, about agricultural machinery, had been on marketing, that of the last, by Professor Jennifer Tann (University of Birmingham): 'The adoption of roller milling in England, 1850–1914', was primarily technological. It told how, inside twenty-five years, there occurred in the milling industry a revolution in techniques, coupled with a dramatic increase in plant size and capacity, and a shift in location from inland centres to the ports. Millstones were replaced by steel or porcelain rollers, 'low-grinding' by 'gradual reduction', and 'batch' by 'continuous flow' systems. The transition from stone-grinding to fully integrated roller-milling was a complex process on account of the fact that the new systems offered numerous opportunities for experimentation and innovation by stages. In the mid-1880s there existed various hybrid and intermediate systems combining new and traditional methods. The first Hungarian roller mill, installed by Fisons of Ipswich in 1862, was used to 'hull' the grain which was then refined through stones. Many early roller systems were used for 'low-grinding'. Numbers of complete gradual reduction systems grew from 25–30 in 1882 to over 400 by 1890. Plant size increased until by 1907, 30–35 mills were estimated to produce about 30 per cent of all flour, paving the way for the structural reorganization of the industry between the wars. Questions centered upon engineering problems which may have influenced the design and construction of the rollers, and the extent to which technological and locational change were accelerated, or made possible, by the switch to imported hard wheats and demand by bakers for whiter, thriftier, flours. Where agricultural engineering had been 'export-led', roller milling was import-led, and in part a consequence of the Great Depression.

Warm thanks were given to Dr Dewey for his efficient organization, including the providing of a splendid buffet lunch, and to the Director of the Institute of Historical Research for his customary hospitality. Altogether a most stimulating day, seen through by the overwhelming majority of the original registrants up to the final whistle.

Book Reviews

ERIC KERRIDGE, *The Common Fields of England*, Manchester University Press, Manchester, 1992. viii + 216 pp. 1 map. £35.

This book joins the series of volumes devoted to various aspects of open fields that have appeared over the last twelve years. The presentation is confined to the historical data, there being no discussion of the geographical and archaeological contributions to the subject.

After a clear introduction and description of common subdivided fields, and of their ridge and furrow form, the book launches boldly into the their origin at chapter 2. It brings together, in a full and useful way, all the Saxon charter references that throw light on the existence of common fields. Whilst it is abundantly clear that intermixed holdings with intercommoning of meadow and fallow were in existence during the tenth century, it is less clear that the eighth-century laws of king Ine really prove that there were common fields at that date.

After the Saxon charter evidence there is not very much medieval material, and indeed the book does not claim to be about *medieval* common fields, but it does begin with the Saxons. It is surprising to find the statement that from 1277 by-laws 'were almost invariably entered in the court rolls' (p 89); in this writer's experience by-laws are only mentioned intermittently until c 1530. The bulk of the presented data is a very detailed analysis of by-laws, and their implications, recorded in court rolls, mainly from 1550-1750.

There is a most thorough demonstration of the amazing flexibility of cropping within common fields, and there can no longer be any doubt that individual farmers could do what they wished. Understressed, however, is the widespread existence of an underlying three-course rotation; the fallow year was only rarely flexible.

A lengthy chapter on 'overseas', mainly continental, fields (26pp out of 128pp of a book titled *English fields*) develops into the claim that common fields were an English (Saxon) invention that spread to the rest of Europe. This seems to rely on a conviction that there were no developed and permanent systems of common fields on the Continent until the thirteenth century (pp122-3), combined with a 1955 French reference that there were such permanent fields in England in the tenth century (p126; why not the Saxon charter data of chapter 2?). Recent work has provided evidence

that large-scale (and presumably regulated) planned fields were in existence on the Continent by the end of the eighth century, and probably in England too, but the English historical evidence of this date is not as good as the continental.

The footnotes are copious and detailed, the result of a lifetime's work, and there will be useful sources for everyone to pursue. It would have been helpful to have Public Record Office references given in the modern form, so saving the inexperienced student much trouble. Many of the footnotes are so composite (for example, number 496 actually gives twenty-two references) that it is not always clear which of them might be the most relevant to the point being made.

The book has no illustrations, surprising for such a photogenic subject with a welter of interesting maps and landscapes surviving. The sole line drawing is a plan dividing England into forty-two named regions which are used in the text instead of identifying places by their counties. This scheme is nowhere explained, and although interesting it would be clearer if the map had a coloured imprint of county boundaries as well, for, with regions less familiar to any particular reader, there can be uncertainty as to which area a county has been assigned.

As a whole the book forms a useful analysis and reference source for the later material, but for assertions that common fields were of unique English origin, one would have expected more discussion of the early medieval sources, of the physical layout, and of the archaeological evidence.

DAVID HALL

ROBERT C ALLEN, *Enclosure and the Yeoman: The Agricultural Development of the South Midlands 1450-1850*, Clarendon Press, Oxford, 1992. xv + 376 pp. £45.

This is a most refreshing and stimulating read. Here is a wholly different approach not only to the role of enclosure in the economic development and growth of England since the Middle Ages but also to the role of agriculture in general. Over many years through the major journals and a succession of University of British Columbia Discussion Papers we have grown used to Bob Allen's independent approach to the central questions concerning British agrarian capitalism. Now the full flower of his research blossoms before us in one volume.

In a marvellously succinct opening chapter he introduces the reader to a familiar historiography of ideas which he calls agrarian fundamentalism. The modernization of rural institutions through the dissolution of open-field peasant farming by enclosure and the transformation into large-scale capitalist farming, by which process agriculture was made more productive, is the first idea. Second, this resulting agricultural productivity is said to have given a boost to or provided a prerequisite for English industrialization (with the connected and essential point which is fundamental to English historiography that England was the *first* industrial nation). Third, the traditional story then debates from fundamentally different political poles – the Tories and the Marxists – whether this achievement, or shall we call it end product, was only possible in a society which was not simply unequal, but was made more unequal in order for it to occur in the first place. Enclosure is often characterized as the most important factor in the story. Above all other influences, did it provide the essential boost to agricultural productivity? Was one aspect of this productivity the provision of an industrial labour force? Was this the outcome of natural forces of change in which the social dislocations and income inequalities were also natural? In subsequent chapters Allen confronts these issues, but he does so in wholly novel and essentially innocent ways. He employs a mainly non-polemical, but highly empirical and statistical historical laboratory to confront the question, was enclosure necessary? Was enclosure a minor and non-essential contributor to agricultural productivity?

Allen constructs his answer by discussing two agricultural revolutions – the yeomen's and the landlords'. In the first he claims that the greatest productivity achievements were made from the Middle Ages to the eighteenth century, in particular in the seventeenth century, and by the yeoman farmer mainly in open-field agriculture. This was the case whether measured in terms of yields (especially in the seventeenth century) or labour productivity (especially in the eighteenth century). In contrast, the landlords' revolution was an adjustment in rural social institutions, the most wide-sweeping of which was enclosure, but which conclusively became an exercise in income diversion and greater income inequality rather than an exercise in income generation. The outcome of this revolution, if not the motive, was to re-direct the Ricardian surpluses acquired by the yeomen's revolution to the landlords by raising rents. If the first revolution was the productivity revolution, and the second was regressive, then Allen's conclusion is, as he says himself, 'unavoidable' – 'most

English men and women would have been better off had the landlords' revolution never occurred' (p 21) – though since this study is based on the south Midland counties there will be many other Englishmen who will feel neglected. The conclusion in these terms is forgettable, the more memorable is that 'agricultural output might have grown faster in the eighteenth century if the yeomen had retained ownership of their land: his greater proprietary interest gave the yeoman a greater incentive to increase production than tenancy at will gave the capitalist farmer' (p 311).

This study turns much of agrarian history on its head, and some of it rightly so, but in the extremes of this revision there are perhaps a number of shortcuts and over-exuberant assumptions at play. For example, Allen's use of the land tax in essentially a hitherto much criticized exercise in using acreage equivalents to establish land-ownership sizes and relative distributions will likely highly displease one well-known, but in this case ignored, critic of that source. An important empirical base is Arthur Young, though often Allen uses Young's own findings against Young himself. This will not displease those readers who are sceptical about Young's central role in the historiography, but they will still differ with Allen on other issues. Some might say that Allen is cavalier in his definition of the yeoman (used interchangeably at times with peasant farmer, meaning relatively self-sufficient farmer, where self-sufficiency refers to own-family labour). The family farmer who emerges enjoyed a variety of tenures which secured his ownership or quasi-ownership of farming decisions and property rights. These tenures included copyholds and beneficial leases as well as freeholds. Allen's perambulation over the centuries from the late Middle Ages produces a high point in this democratization of 'landownership' in the seventeenth century – the golden age of the yeoman. In a thesis which wishes to make the most of the yeoman's revolution Allen's excursion back to medieval origins is understandable and necessary. With equal certainty, however, we learn that the yeoman had largely disappeared by the end of the eighteenth century, thus giving the emerging landlords' revolution some substance on the ground before it is neutralized in subsequent analysis. Interestingly however, the yeoman disappeared before the great parliamentary enclosures, a neutralization of a different sort. His disappearance came about by adjusting tenures out of copyholds and other archaic forms into tenancies at will, by a process in which the landlords used the relatively newly-developed mortgage as a means to raise money in preference to the hitherto favoured method of

raising funds by the large entry fines associated with those old tenures. This is a large study but it does have a narrow geography and many local and regional historians will not recognize this new history which is placed before them. In addition, recent work on agricultural rents is revealing a lingering life-after-apparent-death of copyholds, beneficial leases and other otherwise moribund tenures, well into the nineteenth century.

Therefore, Allen's book will tread on many toes, but in doing so it should breathe life into otherwise smouldering embers. But the ultimate test of the plausibility of the 'two revolutions' thesis is the robustness of Bob Allen's econometric tests. But then to confound us, the first chapter which directly confronts the evidence on enclosure and productivity change (chapter 6) is a delightful demonstration that 'The open field farmers missed most of the gains to improvement' (p 129), followed in chapter 7 with the opening line that 'Enclosure did [after all] accelerate the adoption of new crops, livestock, and draining' (p 130). The opportunity to change is not yet the same as productivity, and what follows is the estimation and measurement of long-term growth in crop yields and labour productivity with startling results. For example, 'enclosure gave no boost to output and may, indeed, have resulted in a decline' (p 130). In addition, we learn that in heavy arable districts the open-field farmers 'had accomplished about three-quarters of the growth [in yields] from the late Middle Ages leaving just 25 per cent for enclosure itself' (p 149). But how many centuries did it take for open-field farming to improve, compared with the one century (or less) we usually associate with the vital period of enclosure in the eighteenth century, where improvement might have been almost an overnight event? The rate of growth might yet have a more prominent place in the argument. In addition, at times Allen could lead the reader into confusing two issues. Is the story really about the relative efficiencies of enclosure and the open fields, or is it about long-term changes? The two are obviously connected, but is it about the measurement of change in the late seventeenth and eighteenth centuries relative to the magnitude of change over the previous four or five centuries? Enclosure may well have had a marginal absolute impact, but will a rate of growth model, as distinct from the absolute growth model pursued in this book, reveal the eighteenth century as more important than Allen allows?

The sign of a successful book is revealed not only in the number of questions it raises, but also in the centrality of those questions to the big issues. I may not like everything I read here, but

on the scale of 'purpose of fit', this is a vital book, and will be a focus of debate for years to come.

MICHAEL TURNER

CHARLES F FOSTER, *Four Cheshire Townships in the Eighteenth Century: Arley, Appleton, Stockton Heath and Great Budworth*, Arley Hall Press, Northwich, 1992. 88 pp. Illus. £6.95 (incl p & p).

This book is intended to be the first in a series of publications dealing with social and economic changes in a handful of neighbouring Cheshire villages in the eighteenth and nineteenth centuries. Based upon the archives of the Arley Hall estate of the Warburton family, they promise to illustrate many themes of interest to agricultural historians. Readers, moreover, will be able form their own judgment on these issues, if the format adopted here is followed in future volumes, for the author presents a mass of information in a set of easily-digestible tables and appendices. The text itself is complemented by a number of photographs and maps.

The choice of subject for this inaugural volume, an examination of the social changes that occurred in the study area, is easily discerned. Not only does it help set the scene for the series but it also enables the author to make use of the comprehensive range of records kept by Sir Peter Warburton, a particularly enterprising landowner. Sir Peter was an active and energetic agricultural improver, modernizing tenancies, reorganizing farms and rebuilding mills and farmhouses, as well as enclosing the commons. He was also involved in transport improvements, becoming *de facto* chairman of the Weaver Navigation, a development which greatly aided the local salt industry.

Of particular value to agricultural historians is the information on tenurial change and on the fate of the small farmer, both tenant and owner-occupier. According to the author, a social revolution took place in the years between the 1740s and the 1870s. This was the period when the old lifeleasehold system, still extensive in the 1740s, was swept away and replaced by rack-renting. At the same time farms were engrossed and estates consolidated into larger units. This process, already underway by the mid-eighteenth century, accelerated thereafter. In the 1740s three-fifths of the land (by capital value) was owned by 194 families and only two-fifths by large landowners. By the 1870s five squires possessed 95 per cent of the land. Such a development clearly had a major impact upon society and social relationships and some discussion is given to the fortunes of the various groups. In this context a link between land-holding and the

industrial development of the northwest is suggested.

This is a somewhat unassuming book but one which contains much fascinating detail. It is therefore disappointing to note that little attempt has been made to fit local events into the general context of the time. In a number of areas of social and economic life the experience of the communities being studied reflects national trends, and the connection needs to be brought out with greater force. In places, too, the narrative becomes too dense (as in the section on representative property-owners) and tends to hinder the flow of the argument. Similarly, a tighter analytical framework ought to have been established, though a number of important conclusions are put forward in the final chapter. Nonetheless, in spite of these reservations, the book does provide agricultural historians with valuable insights into the course of agrarian change during a critical period and I, for one, shall certainly look out for the second volume in the series.

PETER EDWARDS

RICHARD LAWTON and COLIN G POOLEY, *Britain 1740-1950: An Historical Geography*, Edward Arnold, 1992. xiv + 338 pp. 78 figs; 52 tables. £14.99.

This volume represents a bold and ambitious attempt to provide students of geography 'and related subjects' with a survey of the transformation of Britain from a pre-modern to a modern economy and society. The two-century time-span of the text is deemed essential because it was not until the mid-twentieth century that the processes which had begun to shape the geography of modern Britain from the early eighteenth century were fully diffused through the nation and its regions. The basic structure of the text is chronological. Three separate sections survey the country from the 1740s to the 1830s, the 1830s to the 1890s, and the 1890s to the 1940s. Within each chronological section, five thematic chapters explore the political, economic and social context, demographic change, the countryside, industry and industrialization, and urbanization and urban life. Introductory and concluding chapters bracket the main body of the text.

The richness and density of the empirical content and the coherence and clarity of its presentation are the strengths of the book. Readers who feel ill at ease in a sea of words will welcome the fact that in this volume they are never far from some statistical *terra firma*. Not only is the text itself densely larded with facts and figures, but the authors make generous use of statistical tables and statistical maps and diagrams. It has to be said that

this treatment largely rules out serious consideration of the past as an arena of present debate, and it is for this reason that the book, necessarily light on ideas and their evolution, seems more likely to inform than to inspire. But perhaps it is unreasonable to expect in a textbook qualities to which textbooks generally do not aspire.

A more admissible complaint concerns the book's system of referencing. Sources are not provided for much of the material, and the few references given cannot always be traced to the short bibliographies which appear at the end of each chapter. This draconian solution to a considerable bibliographical problem impairs the book's value as a starting point for further exploration of its themes, and leaves the dimensions of the massive programme of reading which was clearly the prelude to the composition of the text a matter of surmise rather than record. This is a pity.

JOHN R WALTON

ROGER SCOLA, *Feeding the Victorian City: The Food Supply of Manchester, 1770-1870*, Manchester University Press, Manchester, 1992. xx + 347 pp. £29.95.

In view of the large amount now published about the standard of living during the industrial revolution, it is remarkable that Roger Scola's is the first book on the food supply of the major industrial city. The introductory chapter details the sources used, while the second outlines the growth of the city in the hundred years after 1770 and its expanding demand for food. The next four chapters examine the changing supply patterns of the major components. These deal with meat, dairy products, fruit and vegetables, and fish. Then another four chapters look at various features of the distribution system. These include a study of the markets and fairs, the marketing of fresh foods, the distribution of bread and groceries, and the changing pattern of food retailing. The concluding chapter draws all these threads together, relating the study's main themes to the general debate on living standards. Because Roger Scola died of Hodgkin's disease in 1988 the book had to be seen through to its final state for publication by his widow, Pauline Scola, and his colleague Alan Armstrong. The substantial body of the work is Roger Scola's, but Alan Armstrong has revised and expanded the second chapter to take account of recent research, and he has added the concluding chapter.

Sections of particular value to agricultural historians are those dealing with the marketing of farm produce. It has often been lamented that we lose sight of agricultural output once it has passed the farm gate. But Scola has an abundance of

material explaining which areas Manchester drew upon for its foodstuffs, and the changes these underwent as the city expanded and transport changes enabled the area it drew on to increase. In the case of meat supplies this introduced a greater seasonal stability to prices after 1850, even though the long term demand tended to run ahead of supply (pp 65–70). But the pressures the Manchester market also exerted on the farm sector are revealed as well, causing some farms to abandon cheese-making in preference for the regular income from fresh milk. To some extent the picture of supplies is uneven. There is certainly more information on Manchester's fish, meat, dairy products, fresh vegetables and fruit than there is about the corn and flour which would have provided the major part of the calorific intake of its inhabitants. This was because a significant amount cereal requirements were supplied via Liverpool – also the regional corn milling centre – and the fact that up to 1870 the baking trade in Manchester, as elsewhere, was dominated by small businesses.

In the past historians of the food trades have perhaps relied too heavily on generalizations drawn from London. Scola's book provides a valuable counterbalance to this because it reveals that in some important respects the experience of Manchester was different. For instance, the capital relied heavily on town dairies for its milk, whereas Manchester had few of these establishments, because it could be supplied from the surrounding farms in the dairying districts of Lancashire and Cheshire (pp 71–6). The author also points out that the distinction between the wholesale and retail butchers in Manchester was by no means as sharp in 1850 as has been suggested by Jeffreys and myself (pp 183–7). Other generalizations, such as Mathias's belief that nineteenth-century housewives would cross a town to save a halfpenny or farthing, are challenged. Using the customer lists of some of Manchester's early nineteenth-century traders summoned for debt, Scola finds that a high proportion of them lived very close to the shop (pp 235–6).

The whole book stands as a remarkable piece of work, combining the better known published and national sources with the local records of Manchester to produce a comprehensive and well documented picture of its food supplies and distribution system. The problems that the author faced in undertaking this type of study were considerable. In effect there were numerous separate trades and networks each catering for a different food product. Most of the enterprises engaged in food production and its distribution, at least until after the railways appeared, were small in scale and not particularly well documented. This meant that a

wide range of source material had to be used, some of it only offering up the occasional 'nugget of gold' (p 8), so that the author had to tease out much of the material. This patience and industry has been well rewarded. The final result is a handsome volume with an abundance of statistical material, several appendices, and some good contemporary illustrations that should be of great use to a wide range of readers.

RICHARD PERREN

IAN DYCK, *William Cobbett and Rural Popular Culture*, CUP, 1992. xvi + 312 pp. £35.

William Cobbett will be remembered as the champion of the labourer and, more widely, of the rural way of life. But he came late, almost naively, to the cause of the rural worker. He lurched from right to left, from reactionary to radical, almost as if he was not from a rural farming background. He had spent nearly all of the crises years of the 1790s in North America. He missed that vital decade and therefore he was slow to grasp the growing alienation both between agriculture and commerce, and within agriculture between labourer and farmer. He returned to England in much the same spirit of thinking as he had left – very English, very anti-Jacobin and anti-revolutionary, a God, King and Country man through and through. But the consequences of commercialism, brought to a focus in the 1790s, eventually hit him squarely in the eyes – economic relationships had changed and the country was threatened with invasion, thus bringing together the newly discovered emotion, involving the labourer and the rural way of life, with his always strong love of country.

The agricultural changes compared with the golden age he remembered (the tail end of the period 1720–85) had dealt the labourer particularly a savage blow. Already a prolific writer in both America and Britain, he became extravagantly prolific, especially in the pages of the *Political Register*. His was an act of politics even if he did not reach Parliament until the early 1830s. He wished to project the economic betterment of the labourer through political representation. In a property-owning democracy he maintained that they also held property – it was in their labour – and they required representation. Yet Cobbett was not an advocate of true equality and, dare we say it, of classlessness. Rather he believed in a traditional social order. He recognized that 'all relations in English rural society were class relations' (p 73), but they should not be overlain with benevolence, charity, servitude or inferiority, but by fairness and mutual respect. He appeared to spend much of his active political life in deep

frustration – he foretold the Swing riots, and supported them, and he could see more dramatic revolution on the horizon. He was pleased at the widening of the franchise in the Reform Act, but felt betrayed on behalf of the labourer with the New Poor Law.

This book, therefore, is a fascinating biography of at times an enigmatic man. Yet it is meant to be other than a biography; it is meant to set Cobbett's cause and imagination in the context of rural popular culture. This culture is demonstrated in abundance, especially through songs and other verse, but whether Cobbett swims in unison with that popular culture, whether it was a device to project his political stand for the rural way of life is a different issue. At times it is as if there are two stories. They share the same time and place, but they do not always coincide. The dust jacket declares that this is a novel approach. For this reviewer the bravado of the approach is not always sustained in the telling of the story or, as I see it, in the two stories that are presented. That need not matter – the themes may not connect, but they are still both full of richness. Yet there is a way in which they do draw together. Inevitably this is through the narrow reductionism of economics. The culture had been shocked by changed relationships, inequality of income distribution, and the rise of industrial society. These are threads in the popular culture, but also in Cobbett's observations and his political projections, and intentionally or not this is an important focus in this study.

MICHAEL TURNER

MOWBRAY PEARSON, ed, *Flitting the Flakes: The Diary of J Badenach a Stonehaven Farmer 1789–1797*, Aberdeen University Press and National Museums of Scotland, Edinburgh, 1992. viii + 325 pp. £25.

James Badenach, a doctor of medicine and a member of the Philosophical Society of Edinburgh, acquired the estate of Whiteriggs (Kincardineshire) in 1788. He farmed part of the estate and leased some land to tenants. From 1789 to 1797 he maintained a daily diary, Sundays excepted, of his farming activity. The diary survived in the archives of Glenbervie House and has now been transcribed and analysed by Mowbray Pearson, a geographer at Edinburgh University. Diaries for this period are rare and this, presumably, justified publication. Rarity, alas, does not necessarily guarantee interesting contents. Pearson stoically tries to squeeze some significance from an extraordinarily dull journal by collating the material under several headings: weather, agricultural practice, livestock, servants, markets, mills

and distilleries, prices, building, planting, garden, and transport.

Badenach apparently had a reputation as an improver, and here and there the diary records some of the practices associated with that important breed: liming, tree planting (as many as 25,000 seedlings in December, 1789), and new farm buildings. There are glimpses too of the wider forces which propelled or checked improvement: an 'uncommon demand for cattle in England' in 1794, the stoppage of the distilleries in 1795 with a consequent fall in barley, and import competition from Ireland in 1797. What there is no sign of is the sense of excitement or of dramatic change so evident in other contemporary accounts. That may, perhaps, be the diary's value for it is largely an account of the labour-intensive grind of late eighteenth-century farm work. Fickleness of climate determined the daily tasks. Little wonder then that every entry records the weather, though not in a consistent enough form for quantitative analysis. Pearson's interest was prompted by this possibility but it is permissible to wonder if different issues are not posed even by the slender pickings of this diary: why does so little produce appear to have been sold off the farm, what was the nature of the local labour market that it generated Badenach's outburst against the 'accursed' hiring fair, and where did Badenach obtain his information about 'the late Derangement of the London & other Banks'? A little more speculation might have produced a greater yield.

RON WEIR

R B MACCARTHY, *The Trinity College Estates 1800–1923: Corporate Management in an Age of Reform*, Dun Dalgan Press (W Tempest) Ltd, 1992. x + 273 pp. IR£19.50.

In the nineteenth century Trinity College Dublin owned 195,573 acres spread across sixteen of the thirty-two Irish counties. It was one of the largest landowners in the British Isles, and at the same time one of the least efficient or effective landlords. The college governors were reluctant to appoint proper agents, preferring to do the business themselves through a bursarship which rotated among the seven senior fellows on a two-year cycle. Since by 1897 the average age of the board was seventy-six this was hardly a recipe for good stewardship, and so it proved. Robert MacCarthy's tale is one of inefficiency, incompetence, and rank bad management, with the college pulling itself together at the beginning of the twentieth century, just in time to sell off most of its property after 1903.

Sorry tale it certainly is, but there are several compensations for the historian. TCD estates included examples of just about every type of

landholder in Ireland, across a broad swathe of the country, so that the book offers an insight into land management and tenancies. As with Oxbridge colleges, TCD preferred a system of 'beneficial leases' giving the tenants maximum freedom and the landlord as little trouble as possible (at least in theory). The college resisted as long as possible any moves towards converting its leases, eventually having its hand forced by legislation. The middleman structure covered much of the estate, and appropriately Dr MacCarthy pays it considerable attention, but other estates were differently managed, as he shows with case studies of the directly managed properties of Rusheen and Iveragh. In neither case did the college distinguish itself in land management.

In some respects this book is a detailed labour of love, but insofar as it throws light on the wider operation of corporate estates, it represents a significant addition to what remains – by comparison with private estates – a relatively thin literature. At the same time it provides valuable insights into the Irish land wars, and the religious tensions which inevitably affected the position of a Protestant college landlord. As a result, it merits close attention from historians of all aspects of late nineteenth-century Ireland.

J V BECKETT

DOMINIQUE ZUMKELLER, *Le Paysan et la Terre. Agriculture et Structure Agraire à Genève au XVIIIe Siècle*, Editions Passé Présent, Geneva, 1992.

376pp. 12 plates; 7 maps; 36 graphs. Swiss Fr 52. This handsome volume has its methodological antecedents in the rural monographs produced by several generations of francophone historians, geographers and other social scientists. But whereas they concentrated on analysing rural conditions and socio-economic changes across whole provinces or *pays*, Zumkeller focuses sharply on 10,000 ha of farmland which comprise the immediate surroundings of Geneva, a detached area slightly to the east, and a third district alongside the Rhône a few kilometres west of the city. A wealth of literary, statistical and cartographic evidence, in the form of censuses, cadastral registers and maps, and surveys of properties held by the *hôpital général* of Geneva enable many aspects of rural life to be investigated and patterns of landholding and land use to be reconstructed.

Flanked by mountains to the east and west, washed by the waters of Lac Léman, and traversed by the river Rhône, the 'Geneva basin' was described by eighteenth-century travellers as a veritable 'pays de cocagne'. Despite its mountainous surroundings, it belonged to the broad realm of 'southern' farming systems, rather than to the

northerly domain of communal arable fields, and thus supported irrigated meadows, enclosed pastures, gardens, orchards and vineyards, as well as stretches of cropland. Of particular distinction were its suspended vines (*hautins*) which flourished amidst groups of fruit trees. Villages clustered around Protestant temples or extended along roads, and smaller hamlets flourished in the midst of their fields. These prosperous landscapes contrasted with surrounding high pastures and intermediate stretches of woodland and rough terrain. Countryside was linked to town in terms of producing food, supplying labour, and making clocks, cloth, shoes and other handicrafts for distribution by urban merchants. Cattle rearing for meat and milk became increasingly profitable as the eighteenth century progressed and land-use patterns were reorientated to pastoral pursuits rather than cereal cropping. Indeed, the city of Geneva (which housed 25,000 inhabitants in the 1790s) called on supplies from well beyond the study area, with wheat, livestock, firewood and building timber being brought from Savoy, the Pays de Gex and the Bresse. Supplies of labour included many religious 'refugees' and came not only from these districts but also from more distant portions of France and the German and Swiss lands.

Zumkeller organizes the discussion around the key themes of rural population, land, farming activities, and prices and wages. Parish registers are analysed meticulously to identify trends of births, marriages and deaths in the villages surrounding Geneva from 1700 to 1797. Chapter 4 will be of particular interest to many readers since it provides a detailed review of the suite of cadastral maps and registers which were prepared by dynasties of land surveyors between 1670 and 1797. Early eighteenth-century cadastral plans were richly decorated with drawings of farmhouses and other rural buildings but toward the end of the century Geneva's cartographers produced less elegant but nonetheless highly informative maps. Taken together, plans and accompanying registers enable the story of changing landholding and land use to be reconstructed accurately. New crops (clover, lucerne, maize and potatoes), improved strains of livestock and better implements were adopted gradually in the Geneva basin but innovations were diffused neither widely nor rapidly, despite the copious agronomic writings of the Lullin de Châteauevieux family and others. Zumkeller advises against any notion of there having been an agricultural revolution around Geneva at this time. However, the introduction of fodder crops enabled more livestock to be kept and cereal yields to rise. Rapidly growing urban demands for animal products favoured that section

of the rural economy and made it particularly profitable for farmers in this prosperous and visually attractive stretch of countryside which was already appealing to travellers and affluent 'tourists' at the time of the French Revolution.

Le Paysan et la Terre is illustrated by a large number of maps and graphs, and a cluster of illustrations reproduced from eighteenth-century sources, showing vines, ploughs, field patterns, farmhouses and livestock. A minor irritation is the absence of scales on the various maps of the surroundings of Geneva. A statistical appendix on commodity prices and landholding, a copious list of archival sources, and a lengthy bibliography complete this very attractive volume which will be of interest to all concerned with eighteenth-century rural life.

HUGH CLOUT

ANTHONY H GALT, *Far From the Church Bells. Settlement and Society in an Apulian Town*, CUP, 1991. xiii + 276 pp £30.

'If you want to eat bread, stay far from the church bells' says the proverb from Locorotondo in Apulia, which gives this book its title. In the Murgia dei Trulli, in sharp contrast to other areas of southern Italy where landless proletarians inhabit agro-towns, independent peasants ('post peasants' in Galt's terminology) farm small acreages and live in stone-built *trulli*, conical dry-stone houses of primitive appearance sited on their holdings. These dispersed small farms are inhabited by a people whose way of life and values distinguish them both from the town-dwellers of nearby Locorotondo and the agricultural proletariat of southern Italy and Sicily. They are, and have long been, committed 'to work until their bones ached so as to make a step ahead for their children'. Work forms the centre of their lives and neither it nor the land is regarded (as they are by many rural labourers in the *Mezzogiorno*) as a curse. Values and family structure service the commitment to work and to the maintenance and improvement of the family holding, which in turn provides a measure of security and independence. If this sounds the picture of an ideal or idealized peasantry it is interesting to note that emphyteusis, the tenurial basis of Locorotondese farming, was recommended by eighteenth-century liberals such as Genovesi for its ability to produce good farming and an industrious, contented and quiescent peasantry.

Galt's aim, an ambitious one, is to determine 'why a dispersed pattern and small holding agriculture had developed and how these are related to social structure and values'. This quest takes him

beyond ethnography to oral and local history, economic history, and historical geography. These form about half the book. Galt's approach, highly empirical and economic for an ethnographer, uses John Bennett's concept of 'adaptive strategy' as an organizing heuristic device. Social reality is seen as the outcome of purposive adaptive behaviour by individuals or groups, as they encounter changing circumstances. This is a framework many historians might think says too much and too little, but it does not hamper Galt unduly. In Locorotondo, he suggests, social reality is the product of the interplay of adaptive strategies by landlords and peasants in an economic situation, favouring wine growing in the eighteenth and nineteenth centuries, on land agriculturally too marginal to invite estate exploitation. Emphyteutic (implanting) leases required peasants to make vineyards in return for security of tenure and, in many cases, the opportunity to purchase the improved land. Enhanced rents benefited landlords who avoided development costs and who, because of the marginality of the land, had no interest in breaking the theoretically perpetual leases as those in more favoured regions did. Social values serviced these realities.

Galt's account is elegant, if rather overschematic, and in its historical sections ignores a number of key historiographical issues going back to Marx and beyond. His approach does not encourage a tendency either to linger in the bywaters of the past or, oddly in an ethnographer, to explore the *mentalités* of past and present Locorotondese to any extent. This is nevertheless a most welcome book. Any scholar with such an ambitious interdisciplinary mission deserves our encouragement at a time when a workable methodology for local studies is badly needed. Galt has made a useful start here as well as writing a valuable and enjoyable study of a region still neglected in the English language literature.

A P DONAJGRODZKI

Noticiario de Historia Agraria, Boletín del Seminario de Historia Agraria (SEHA), 1 (2), 1991, Universidad de Murcia, twice yearly. \$50 to individual members, \$60 to institutional members.

Agricultural history is alive and kicking south of the Pyrenees. Witness the number of scholarly publications over the last decade or so. Avid readers of the review sections of this journal will be aware of the valiant contribution of such periodicals as *Agricultura y Sociedad* and *Estudis d'Història Agraria* to our detailed understanding of Spain's rural past. Moreover, institutions such as the Bank of Spain, the Ministry of Agriculture

and the Barcelona publishing house Crítica have played an active role in making available to scholars and a wider public the fruits of much recent research. Since its foundation in 1982, the *Revista de Historia Económica*, organ of the Spanish Economic History Association, has included a large and diverse body of material on agricultural history. Then at the beginning of the present decade a group of enthusiasts set up what they preferred to call an agricultural history seminar, with the acronym SEHA.

SEHA's objectives, set out in its statutes, are 'the encouragement of research, teaching and publication of all work related to the historical analysis of agriculture'. Geographers, economists and social anthropologists are also welcome to contribute, while the SEHA invites collaboration from interested parties outside the Iberian Peninsula. To further its aims, the group have produced a bulletin entitled *Seminario de Historia Agraria*. The latter, however, is not intended to be just another conventional journal, building up a stock of articles for everyone's reading list. In a 'dummy' issue, sent to known sympathizers, a format was established for the future. There would be short pithy articles on problems of methodology, information on the current state of research, with particular reference to regional historiography, a bibliographical section spelling out to new researchers the amount of material available on given topics, book reviews, research in progress, and details of theses submitted.

Now we have issue number two, a bit thicker in size than anticipated and consequently a little late in appearing. It also contains a new section in which a distinguished practitioner (María Teresa Pérez Picazo) summarizes part of the debate at last year's annual meeting. Otherwise there are tightly-written pieces on, among other topics, public forests, agro-ecology and agricultural prices in early twentieth-century Spain. The historiographical sections evaluate recent research on Navarre, Galicia, the País Valenciano and Andalusia. Rural credit merits a bibliographical approach while Italy and France are also featured in short articles. A 'review of reviews' section focuses on material contained in the Italian periodical *Annali dell'Istituto 'Alcide Cervi'*. Finally, the book review section is, by Spanish standards, lengthy, objective and very informative.

For my part, I found this new journal highly readable, remarkably jargon-free, enormously valuable as a source of research and reading materials, and most useful as a source of what is going on across the peninsula. Agricultural historians in this country should welcome its appearance.

JOSEPH HARRISON

MATTI PELTONEN, *Talolliset ja Torpparit: Vuosisadan vaihteen maatalous-kysymys Suomessa*, Suomen Historiallinen Seura, Helsinki, 1992. 429 pp. Illus. No price stated.

This monograph is the 154th volume in the research series of the Historical Society of Finland. The Finnish text, with its striking historical photographs and 400 items of bibliography, has an English summary and English captions to its maps. The social crisis in rural early twentieth-century Finland is analysed in both its international and domestic settings.

Internationally, the opening-up of New World grain supplies, the intensification of trading through speedier transport and the rise in demand for forest products all forced on the commercialization of the Finnish economy. Peltonen discusses the consequent structural adjustments. In 1900, some 90 per cent of Finland's 2.7 million inhabitants were classified as rural. Landowning families accounted for 40 per cent, though two-thirds of them had less than ten hectares of arable land and only the larger properties derived a significant income from forestry. Twenty per cent were tenants, often paying a part of their rent in labour. The remainder consisted of a mixed group of crofters, day labourers and annual hirelings, male and female. There was no organized labour movement. Divisive landlord-tenant relationships were aggravated by the effects of international forces. Modest land reforms only slowly redressed the situation.

Excellent social surveys and the inspection reports of the Land Mortgage Bank are among other primary sources. Peltonen's authoritative monograph underlies the remarkable transformation of the Finnish farming system that has taken place since his grandparents' days.

W R MEAD

Shorter Notices

FRANK MOORE and JOHN HYNAM, *The Horses Knew the Way: Memories of a Lincolnshire Life*, Alan Sutton, Stroud, 1991. ix + 149 pp. £12.99.

Born around the turn of the century, Frank Moore was the son of a Norfolk farm horseman of unusual skill. His father was widely consulted about sick or difficult horses, and locally there seems to have been more than a suspicion of magical powers about his abilities. The family moved to the Lincolnshire fens when Frank was in his teens, where he in turn went to work with horses. Some time before 1970 John Hynam tape recorded his recollections, and reworked them. The result is a series of anecdotal chapters giving a personal view of what community meant in isolated rural areas in the first half of this century, and embedded in the stories are many illustrations of the incorporation of folk beliefs into the changing lives of twentieth-century farmworkers. It is not an account of farming with horses, though there is one chapter on breaking horses, nor is it a biography, since it covers only a part of his life. Even the basic details on his age, family, and the places they lived in are very incomplete and have to be derived incidentally.

It makes a pleasant read and there are many points of interest in what seems to have been a contented and emotionally satisfying life. Unfortunately, though it is clearly intended as oral history, there is no indication of how far Hynam altered or edited the recordings. The very personal nature of the account gives it much of its interest, but this does also detract from its value to a historian, because it is entirely lacking in context and in any other points of view. As a view from the inside it stimulates thought about the way villages functioned, and suggests lines for others to follow up. There is, however, absolutely no way of knowing from this how far Frank Moore believed that the ability to control and cure horses was in fact based on magical abilities, and how far this has been played up for publication. Compared to George Ewart Evans' masterful development and dissection of similar hints in his Suffolk research, this leaves the reader wondering.

STEPHEN CAUNCE

VALERIE PORTER, *The Southdown Sheep*, Weald and Downland Open Air Museum, Chichester, for the Southdown Sheep Society, 1991. xii + 177 pp. Illus. £12.75 (incl p&p).

This attractively produced and illustrated book has been published in celebration of the centenary of the Southdown Sheep Society and the bicentenary of the Southdown as an improved breed. It begins with brief but enthusiastic descriptions of the downlands and of the breed which originated there. This is followed by a description of agricultural practices of the early eighteenth century, and the changes which subsequently took place. Whilst it cannot be denied that unenclosed farming systems were not ideal environments for breed improvement, the assertion that the poverty of winter keep necessitated the slaughter of 'most livestock' in autumn is no longer credible. An 'heroic' agricultural revolution is introduced as a suitable context for an anecdotal account of the role of John Ellman, Thomas Coke, and Jonas and Henry Webb. Whilst these men were undoubtedly very influential as publicists, and as suppliers of stock to 'model' farmers and enthusiastic gentry, (many of whom are named in the book), it is regrettable that the more widespread market-responsive developments in sheep management which owed much to numerous long-forgotten ordinary farmers and shepherds are not accorded the recognition they deserve. The emphasis upon the role of individual breeders is of necessity less evident in the author's description of the gradual decline of the breed (in numerical terms at least) from the closing years of the nineteenth century to the present day. The remainder of the book, deals with the history of the breed society, the influence of the breed – both within Britain and overseas – flock management, shepherds, and sheep fairs. This is undoubtedly a book for the breed enthusiast rather than the agricultural historian, who will find little which is new, either in fact or in interpretation.

ANDREW K COPUS

THE ROYAL BATH AND WEST OF ENGLAND SOCIETY, *Catalogue of the Library and Archives, 1990*, Royal Bath and West of England Society, Shepton Mallet, 1991. 218 pp. £5. (+ £2 p&p).

The 1990 catalogue of the Royal Bath and West Society's library, which supersedes the 1964 edition, consists of two main parts: a library catalogue and an archives catalogue. There is also an inventory of the Society's pictures and other artefacts.

The library catalogue is divided into an author sequence of books, reports, pamphlets, and miscel-

laneous material (103 pages) followed by a listing of titles (57 pages). The catalogue is not differentiated chronologically and contains a number of items which predate the Society's foundation (1777) while other works relate to the 1970s and 1980s. Although the library has much material which reflects the interests of the Royal Bath and West's past and present spheres of influence in the west of England and southern counties, such as dairying, cider manufacturing, and cheese making, this is a fully representative collection of British agricultural history. It contains some fascinating and rare items and is particularly strong in late-eighteenth and early-nineteenth century agricultural pamphlets.

While the archives catalogue has perhaps less general interest, especially since the publication of Kenneth Hudson's bicentennial history of the Society (*The Bath and West*, 1976), the various minute books are accompanied by some useful notes which are indicative of their contents.

The Society's library is now housed at Bath University and the archives are deposited at the Guildhall, Bath. Both have been made available by the Society for use by students or researchers on application to the Society's honorary librarian or chief executive, or Bath Records Office archivist in the case of the archives. The catalogue deserves to be purchased, however, as a valuable study guide in its own right and the Royal Bath and West Society and John Davis, chairman of the Library and Archives Committee, are to be congratulated for putting their rich historical resources so readily at the disposal of the agricultural historian.

NICHOLAS GODDARD

DOUGLAS WILLIS, *The Story of Crofting*, John Donald, Edinburgh, 1991. 168 pp. Illus. £8.50.

Picking up a short book on a complex subject – with no footnote references – is bound to induce misgivings in a reviewer for this journal, misgivings which in this instance proved to be at least partially justified. On the plus side, the author adopts a multi-disciplinary approach, concerned as much with physical landscape and material culture as with written history, and this approach works well for the subject. On the minus side is the populist style of writing. Men and women are always 'folk', and the historical perspective is assumed to be unfamiliar to the reader.

The historical background of crofting is well presented, but Willis betrays his own lack of historical knowledge when he asserts that the right to buy their crofts (which came about in 1976) was the culmination of the crofters' struggle (p 94). In fact the notion of having a legal title to the land was always alien to the Highland mentality, and many crofters did not avail themselves of the offer, much to the dismay of the Department of Agriculture. In his discussion of the contemporary scene Willis does not even mention one of its most disquieting aspects, absenteeism (if a crofting tenant chooses to live elsewhere, the croft might well not be worked by anyone). The omission of such a serious concern is curious in any story of crofting in Scotland. Willis seemed to me far more at home in geography than in history (but was that because I am so much more at home in history than geography?).

In spite of its failings, the book fills a gap. Secondary school pupils (and also some adults), looking for an easy introduction to a subject they know little or nothing about, will find that *The Story of Crofting* does very nicely.

LEAH LENEMAN

Notes and Contributors

(continued from page 81)

JOHN SHEAIL is a Senior Principal Scientific Officer in the Institute of Terrestrial Ecology (Natural Environment Research Council), at Monks Wood, Huntingdon, Cambridgeshire. He was awarded a higher doctorate by the University of London in 1988, and is External Professor of Geography in the Loughborough University of Technology. His hundred or so papers, books, and commissioned reports have focused largely on the development of policies for managing the natural environment, and the contribution made by science to those policies.

DR KOSMAS TSOKHAS is Senior Research Fellow, Economic History Program, Research School of Social Sciences, Australian National University. His publications include *A Class Apart? Businessmen and Australian Politics 1960–1980*, Oxford, 1984, *Beyond Dependence. Companies, Labour Processes and Australian Mining* Oxford, 1986, and *Markets, Money and Empire, The Political Economy of the Australian Wool Industry*, Melbourne, 1990.

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EDITORS: J A CHARTRES and A D M PHILLIPS

DEPARTMENT OF GEOGRAPHY, UNIVERSITY OF KEELE, KEELE
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VOLUME 41 1993

PART II

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Marling in British Agriculture: A Case of Partial Identity*

By W M MATHEW

There is strong evidence of the utility of chemical knowledge in the investigation of fossil manures.
(William Marshall, 1788)**

Abstract

Marling has usually been viewed by British historians either as a practice of no clearly identifiable purpose, or as an exercise designed to add body to light soils. It has also been presented as a crude, ancient affair, largely irrelevant to modern farming. The suggestion here is that it performed important chemical functions, and that these – most notably the reduction of soil acidity and the attendant liberation of plant nutrients – gave it an important role in improved farming through to the nineteenth century, terminal obsolescence only setting in as supplies of cheaply transportable lime became increasingly available.

HISTORIANS wishing to understand the role of marling in British farming confront at least three awkward considerations. These, to date, have served to deter any general evaluation. First, there is the apparently indeterminate nature of the substance, with attendant uncertainties over function. Second, there is the seeming lack of relevance of a very ancient practice to the increasingly sophisticated ways of enclosed, diversified, rotation agriculture, with its ever-widening range of specialized fertilizing agents. Third, there are quantitative problems in determining the scale of marl's application, the changes in its popularity, and the regional patterns of its use.

We shall attempt, by conceptual and circumstantial means, to clarify the first, query the second, and reassure on the third. It will be shown in the process that marling is an ill-interpreted and underestimated category of improvement. Its use had much to do with the neutralization of land acidity, as distinct from the traditionally-stressed thickening of light soils. This is not to say that its structural effects were insignificant: rather that these may have

been comparatively overrated. Writing in 1855, Augustus Voelcker of the Royal Agricultural College had little doubt that the 'chemical effects which marls are capable of producing, when applied to land, are of greater importance than their physical effects'.¹

Such relief of acidity has been extensively practised for centuries, and it is an oddity of British agricultural historiography that it bypasses any notable documentation or analysis on the issue. This cannot be explained by inconsequence. Soil scientists have pointed out that the amelioration of sour land is 'a fundamental and essential practice', and 'vital to successful agriculture in most humid regions'.² Nothing 'affects soils as a plant medium as much as liming acid soils', such work being the critical 'first step' in raising fertility.³ However, a succession of agricultural revolutions, *pace* Kerridge, Chambers & Mingay, and Thompson, seems to have taken place without anyone bothering much about it.

¹ In John C Morton, ed, *A Cyclopaedia of Agriculture*, Glasgow, Edinburgh, and London, VII, p 380.

² C E Millar, L M Turk, and H D Foth, *Fundamentals of Soil Science*, New York and London, 1974, p 146; Nyle C Brady, *The Nature and Properties of Soils*, New York and London, 1974, p 404.

³ Robert S Whitney, foreword to Robert W Pearson and Fred Adams, eds, *Soil Acidity and Liming*, Madison, 1967, p vii; Firman Edward Bear, *Chemistry of the Soil*, New York, 1955, p 237.

* I am grateful to Dr R G Wilson of the University of East Anglia for reading an earlier draft and offering helpful comment.

** William Marshall, *The Rural Economy of Norfolk*, 1786, I, p 18.

I

On the matter of indeterminacy, Sir William Ashley sets the tone when he asks 'just what that mysterious thing marling really was'⁴ – and quite fails to answer. Some decades earlier, the American soil scientist Edmund Ruffin noted it to be 'of old and frequent use in English books, with very different meanings', cautioning that those of his compatriots who tried to learn from British experience would be 'more apt to be deceived and misled than enlightened'.⁵ Fortunately, however, ambiguity is not universal. There exist in fact two quite separate streams of writing, with only very occasional overlaps: one historical, documentary, and semantically confused; but the other scientific, educative, and conceptually precise.

In the latter – broadening in the nineteenth-century, and displacing pre-modern, vernacular listing – marl appears clearly as a means of adding calcium carbonate to sour soils, thereby relieving acidity. Morton's *Cyclopedia of Agriculture*, 1855, describes it as 'an unctuous, clayey, chalky, or sandy earth, of calcareous nature'. Marls, though of 'variable character', had to possess 'some portions of lime in their composition' before they merited the name. 'The substances which determine the fertilizing value of marls', wrote Augustus Voelcker in the same publication, 'are exactly the same which affect the value of limestone'. In the 1870s, John Wrightson called it 'a mixture of clay and lime', in which the latter could range from eight to eighty per cent of the whole. 'True marls', however, had to be predominantly calcareous. The 1894 edition of Johnston's *Elements of Agricultural Chemistry* has them 'more or less rich and valuable for agricultural purposes as the proportion of lime increases'. Herbert Ingle, in 1908, classified

it with lime, slaked lime, limestone, and chalk as an acidity-reducing application. 'A true marl', wrote Sir Daniel Hall in 1909, 'is a clay containing a variable percentage of calcium carbonate', of especial value on sandy and peaty soils for a mix of chemical and textural reasons. *Fream's Elements of Agriculture* in 1920 said marl 'might be called a calcareous clay', being 'put on land chiefly for the sake of the lime it brings with it'.⁶

Such usage is carried over into dictionaries and encyclopedias,⁷ and is also in accord with defining in the United States. Edmund Ruffin set out a clear semantic precedent there in the 1830s and 1840s. Marling, he emphasized, had the purpose of 'simply making a soil calcareous'.⁸ He set about identifying extensive deposits throughout the southeastern states, offering them as the principal basis for soil improvement and diversified farming on the predominantly acid lands there.⁹ Other American commentators, in government or college employ, refined the minimum calcareous percentage to around twenty, while also accepting the possibility of accompanying structural benefits.¹⁰ In France, M Puvis employed simple chemical criteria, writing that the 'object of marling, is to give a soil the qualities and advantages of a calcareous soil'.¹¹

⁶ Morton, *op cit*, VII, pp 370–1, 382, 385; John Wrightson, *Agricultural Text-Book*, London and Glasgow, 1877, p 184; Sir Charles A Cameron, ed, and C M Aikman, reviser, *Johnston's Elements of Agricultural Chemistry*, 17th edn, Edinburgh and London, 1894, pp 201–2; Herbert Ingle, *Elementary Agricultural Chemistry*, 1908, p 114; Sir Daniel Hall, *Fertilizers and Manures*, 1909, p 217; W Fream, *Elements of Agriculture*, 1920 edn, p 42.

⁷ The first entry of vol II of the *Shorter Oxford English Dictionary* has: 'Marl...A kind of soil consisting principally of clay mixed with carbonate of lime, valuable as a fertilizer'. *Chambers's Encyclopaedia* declares: 'the presence of a notable proportion of carbonate of lime is essential to marls, properly so called'.

⁸ Ruffin, *op cit*, pp 169–70.

⁹ W M Mathew, *Edmund Ruffin and the Crisis of Slavery in the Old South. The Failure of Agricultural Reform*, Athens and London, 1988, chs 3,5; ed, *Agriculture, Geology, and Society in Antebellum South Carolina. The Private Diary of Edmund Ruffin, 1843*, Athens and London, 1992, pts I–III.

¹⁰ Mathew, *Ruffin*, pp 76–7. An extreme 'calcareous' position is that of A Gustafson, who writes: 'Marl is unconsolidated limestone'. *Soils and Soil Management*, New York and London, 1941, p 233.

¹¹ Quoted in *Farmers' Register*, III, 12, April 1836, p 705.

⁴ Sir William Ashley, *The Bread of our Forefathers*, Oxford, 1928, p 138.

⁵ Edmund Ruffin, *An Essay on Calcareous Manures*, (ed J Carlyle Sitterson), Cambridge, Mass, 1961, p 170. See also Marshall, *op cit*, I, p 16.

Historical texts, in sharp contrast, tend either to stress the physical or to avoid analysis of function. Elementary science is largely ignored. Marling and liming, when explained, appear not as similar but as opposing categories: the first adding body to soils, the second lightening them. Lord Ernle – whose *English Farming Past and Present* is described by Eric Jones as ‘the chief source of the agricultural content of general histories ever since’¹² – has no comment whatever on marl as a chemical agent, though he does usually term it a manure. His contemporary, W H R Curtler, makes numerous references to it in his *Short History of English Agriculture*, and at one point writes of ‘the practice of liming and marling’, but this quite proper pairing is nowhere elucidated. Sir William Ashley quotes a passage from a farming dictionary in which possible calcareous content is acknowledged, but ignores any inference therefrom. Medieval use is cited in the manner of Ernle, but only as an unspecified ‘improvement’. M E Seebohm gives information on changes in popularity, on costs, and on the ‘wonders’ of its work in Norfolk, confining chemical hints, however, to a single use of the verb ‘enrich’ and a linking with chalk in a brief citation of Pliny. Ralph Whitlock identifies it as both a manure of unspecified value and as a non-manurial stiffener of thin soils. G E Fussell suggests it was used ‘to improve the texture of light land’. Eric Kerridge notes the importance of combining marl with organic matter and manures, as well as its common purpose to increase clover crops, but the chemistry is not explained. When he refers to lime as in part a ‘natural successor to marl’, being an application that ‘sweetened acid soil’, the notion is one of temporal sequence rather than of like replacing like. And although Lancashire and Cheshire marl in 1560–90

was ‘esteemed in direct proportion to its calcareosity’, Kerridge adds no more than that it ‘gave body and retentiveness to light soils, and made heavy ones workable and permeable’. David Chambers and Gordon Mingay cite no fertilizing effect whatever from marl, and posit a clear distinction from liming. ‘The action of chalk and lime’, they write, ‘was to break down heavy clay soils to a finer texture and make their natural fertility more readily absorbed by plants; ...Marl had the contrary effect of binding thin and sandy soils...’ Mingay himself has little to say on the matter in his 1650–1880 survey: the emphasis, however, is again physical, marl having the possible disadvantage of thickening to excess, ‘making light soils too tenacious and awkward to work’. It apparently could ‘enrich’ as well, but the means are not indicated. Christabel Orwin and Edith Whetham likewise offer only scant comment, and define marling as merely ‘the mixing of the underlying clay with light soils’. Jonathan Brown and H A Beecham again contrast lime and marl, the latter being directed ‘to light soils to give them body’. Hugh Prince, in H C Darby’s *New Historical Geography of England*, does pair the two improvements, usually discussing them together in his text, but without any clarification of the similarities. Acidity-correction is mentioned, but only generally, and as a function of ‘mineral manures’. With great succinctness, he writes in 1989 of marl being used ‘to improve soil textures and correct acidity’.¹³

¹² Eric Jones, *The Development of English Agriculture, 1815–1873*, 1968, p 55.

¹³ Lord Ernle, *English Farming Past and Present*, 5th edn, 1936, pp 10, 31, 51, 94, 100, 109, 174, 192, 369; W H R Curtler, *A Short History of English Agriculture*, Oxford, 1909, p 251; Ashley, *op cit*, pp 137–48; M E Seebohm, *The Evolution of the English Farm*, 2nd edn, 1952, pp 51, 83, 105, 161, 183, 215, 249, 300, 336; Ralph Whitlock, *A Short History of Farming in Britain*, 1968, pp 68, 92; G E Fussell, ‘Crop Nutrition in Tudor and Early Stuart England’, *Ag Hist Rev*, 3, 1955, pp 99–101 (the same author’s *Farming Technique from Prehistoric to Modern Times*, Oxford etc, 1965, being equally uninformative on functional matters); Eric Kerridge, *The Agricultural Revolution*, 1967, pp 246–9; J D Chambers and G E Mingay, *The Agricultural Revolution 1750–1880*, 1966, p 62; G E Mingay, ed, *The Agricultural Revolution, 1777*, pp 22, 35; Christabel S Orwin and Edith H Whetham, *History of British Agriculture*, Newton Abbott, 1971, p 382; Brown and Beecham in G E

In regional and non-English studies, Prince, again, in a paper on pits and depressions in the Norfolk landscape, briefly remarks that there are variations in meaning from calcareous to non-calcareous. R A C Parker's *Coke of Norfolk* – potentially an informative study, given the fame of marling at Holkham – has much detail on its tenancy aspects and costs, but on function the author suggests it to be a question of 'claying...a process involving digging up certain useful types of subsoil and mingling it with the topsoil. The effect, especially on poor light land, was highly beneficial, one application fertilized and strengthened the topsoil for a period of some years'. The notion of a partly manurial function is there, but without specificity. The contributors to the fourth volume of *The Agrarian History of England and Wales*, covering 1500 to 1640, make odd references to marling in different counties, but only as something that vaguely improved soils, increased harvests, and cost a lot to apply. The subsequent volume, 1640–1750, is much the same by style of comment, with an occasional emphasis on marl's usefulness on sands and gravels. Brian Short, a geographer, gets closest to some chemical evaluation in his essay on southeastern England when he writes: 'The use of marl is widely documented, although much non-calcareous clay was undoubtedly applied, since the chemical composition was not understood'. The comment, however, reveals only by inflection. David Grigg and David Thomas, in their respective books on South Lincolnshire and Wales, mention it as an undefined practice in other parts of the country. Ian Whyte, writing of seventeenth-century Scotland, has an unusually generous two paragraphs on the subject, but the detail is thoroughly structural in

emphasis. James Handley, using contemporary reports on eighteenth-century Scottish farming, lists the use of clay marl in Berwickshire and shell marl in a number of eastern and southwestern counties: the first doing 'much to improve', and the second representing a 'valuable preparation'. J A Symon, in another study of Scottish farming, has the interesting index reference: 'liming...use of marl for', but the text has no comment whatever on chemical matters.¹⁴

There are two notable exceptions to this tendency either to ignore marl's functions or to cast it as largely structural in importance. Michael Havinden, in a chapter on Devon liming for W G Hoskins's 1974 *festschrift*, makes it clear that 'lime...ground chalk, marl and calcareous seasand' all have the same purpose of neutralizing soil acidity, and takes the trouble to set out the general manurial implications of that acidity, historians having 'not always fully grasped' their significance. Of all calcareous agents, 'chalk and marl have been historically by far the most common...' Robert A Dodgshon, writing of the Scottish Borders, is similarly clear and explicit on marl's chemical functions. It certainly had textural effects, but it also, with lime, 'corrected any tendency towards calcium deficiency, and thereby acidity' as well as 'making available for plant growth a wider range of nutrients like phosphate'. Dodgshon's remarks along these lines, however, are very abbreviated; and

Mingay ed, *The Agrarian History of England and Wales*, VI, 1750–1850, Cambridge, 1989, p 280; Hugh Prince, 'England circa 1800', in H C Darby, ed, *A New Historical Geography of England*, Cambridge, 1973, pp 413–6; Prince in Thirsk, *op cit*, p 45.

¹⁴ Hugh Prince, 'The Origins of Pits and Depressions in Norfolk', *Geography*, XLIV, 1964, *passim*; R A C Parker, *Coke of Norfolk. A Financial and Agricultural Study 1707–1842*, Oxford, 1975, p 8; Joan Thirsk, ed, *The Agrarian History of England and Wales*, IV, 1500–1640, Cambridge, 1967, pp 42, 61, 68, 75, 159–60, 167, 659; *ibid*, V, 1640–1750 (*1 Regional Farming Systems*), Cambridge, 1984, pp 64–5, 70, 146, 213, 258, 271, 274, 286, 299, 395; David Grigg, *The Agricultural Revolution in South Lincolnshire*, Cambridge, 1966, p 63; David Thomas, *Agriculture in Wales During the Napoleonic Wars*, Cardiff, 1963, p 177; Ian Whyte, *Agriculture and Society in Seventeenth Century Scotland*, Edinburgh, 1979, pp 208–9; James E Handley, *Scottish Farming in the Eighteenth Century*, 1953, p 206; J A Symon, *Scottish Farming Past and Present*, Edinburgh, 1959, pp 147, 149, 471.

Havinden's, while admirably full, precede an analysis of liming rather than marling.¹⁵

II

Can the historian's neglect of chemical aspects of marling be attributed, in part at least, to the bias of the contemporary commentators so often used as sources? Early farming reporters, after all, had little access to, or understanding of, such disinterested science as existed – chemistry being a particularly late developer in its alliance with magic, astrology, and alchemy. There seems little point in documenting the deficit for John Evelyn, John Fitzherbert, Francis Home, and others so liberally quoted in historical texts. Matters improved somewhat towards the end of the eighteenth century, but before Humphry Davy there were no articulated notions of acidity or amelioration.¹⁶ Nathaniel Kent, reporting on Norfolk in 1796, noted that there were two main sorts of marl, but his evaluation got no further than declaring it 'a treasure'. William Pitt, writing of Staffordshire in 1813, mentioned an unspecified 'true marl', but gave no chemistry. Thomas Batchelor, in the same year, commented on marl's benefits on light sandy soils in Bedford, but although saying it was a clay with a small quantity of chalky material, offered no appraisal of the calcareous component. In Kent, John Boys witnessed a large chalk trade along the Thames and across to Essex, but the resultant 'immense improvements' were undefined. In Northumberland and Westmorland, shell and rock marls were

used with 'advantage', according to J Bailey & G Culley and A Pringle respectively. Even James Caird, as late as 1850–51, ignored chemical purpose – retrospectively acknowledging the 'firmness' imparted to the light soils of Holkham, and judging marl to be out-of-step with 'the modern system of agriculture' in Staffordshire. Marling and liming, he observed, could be critical in the reclamation of Lancashire peat bogs, but the acute acidity of such lands in their original condition was obviously not understood.¹⁷

Scottish reports, however, have much mention of shell marl and a notable appreciation that these were – anticipating the title of Edmund Ruffin's pioneering American study¹⁸ – 'calcareous manures'. Shell marls were very popular in Dumfries, said Dr Singer, and were viewed as being more durable than lime. In Galloway, the Rev Samuel Smith observed that shell marl caused an 'astonishing luxuriance of the crops', this creating 'an universal eagerness to procure it'. Marl had 'vast benefit' in Argyll, according to the Rev John Smith; and shell sand there greatly helped corn and meadow land. Robert Kerr, for Berwick, considered shell marl slower, but more permanent, in its effects than lime. In Nairn and Moray, wrote the Rev William Leslie, it had notable 'fertilizing influence'. In Caithness, John Henderson commented on its usefulness on thin soils. James Robertson, reporting on Perthshire in 1813, noted that shell marl not only pulverized the soil (in the manner historians usually attribute to lime), but that it also prepared the vegetable food for

¹⁵ Michael Havinden, 'Lime as a means of Agricultural improvement: the Devon example', in C W Chalkin and M A Havinden, *Rural Change and Urban Growth 1500–1800. Essays in English Regional History in Honour of W G Hoskins*, 1974, pp 104, 109; Robert A Dodgshon, 'Land Improvement in Scottish Farming: Marl and Lime in Roxburghshire and Berwickshire in the Eighteenth Century', *Ag Hist Rev*, 26, 1978, p 2.

¹⁶ For extensive review, see G E Fussell, *The Old English Farming Books, from Fitzherbert to Tull 1523 to 1730*, 1947; *More Old English Farming Books, from Tull to the Board of Agriculture 1731 to 1793*, 1950; *The Old English Farming Books, III 1793–1839*, 1983.

¹⁷ Nathaniel Kent, *General View of the Agriculture of the County of Kent*, 1796, pp 22–3; William Pitt, *General View of the Agriculture of the County of Stafford*, 1813, p 168; Thomas Batchelor, *General View of the Agriculture of the County of Bedford*, 1813, pp 494, 500; John Boys, *General View of the Agriculture of the County of Kent*, 1813, pp 158–9; J Bailey and G Culley, *General View of the Agriculture of the County of Northumberland*, 1813, p 184; A Pringle, *General View of the Agriculture of the County of Westmorland*, nd, p 324; James Caird, *English Agriculture in 1850–51*, 1852, pp 165, 229, 274, 276.

¹⁸ Ruffin, *op cit*.

absorption by the roots of plants. He also noted its power on light soils, warning at the same time – and thereby anticipating future pedological science – that very heavy doses could lay waste the land. Sir George Stewart Mackenzie was even more specific on this important point for Ross and Cromarty: 'The benefit or mischief to be expected from the use of marl, seems to depend upon the quantity of vegetable matter in the soil'.¹⁹ Scanty organic resources, now rapidly released by the action of calcium carbonate, could be depleted to the point of premature soil exhaustion.

Among English commentators observing, if not necessarily comprehending, the chemical effects of marling, Arthur Young and William Marshall were the most notable. Young's 1804 *General View of Norfolk* contained numerous remarks indicative of calcareous purpose. He wrote of 'marl and chalk' as a pair, specifying white marls, chalky marls, and white chalky marls. The principal ones that lay along the rivers, and were therefore available for transport, were decidedly white and chalky. There was also 'claying', which Young said was a common synonym for marling: but 'clay' was really 'clay marle' – 'from the quantity of calcareous earth it contains'. Clay marls of different colours at Besthorpe and Snetterton all fermented when tested with acid, proving calcareous content. And marling was guaranteed to dispose of sorrel – the classic indicator of soil acidity. Corn marigolds, also common on sour soils, were

removed as well. The improvements that had won Norfolk most fame, between 1730 and 1760, were, he recorded, the enclosing and marling of thin-soil wastes, heaths, sheep-runs, and rabbit warrens – all, as we now know, open, heavily-leached lands of marked acidity. Marl, Young noted, could also be used to advantage on strong soils – hardly in need of thickening. Its occasional application in repeated doses, in combination with farm manure, as well as its contribution to good leguminous crops at Holkham, likewise signalled chemical function.²⁰

Marshall's observations for Norfolk in the 1780s are the most decidedly chemical of all. Marl, he pointed out, was applied because of its 'fertilizing quality'. Structural effects were not mentioned. There were two sorts: chalk marl from the centre and north, and clay marl from the eastern coastal areas. It is clear, from modern geological study, that the first was dug from Cretaceous chalk *in situ*, and that the second came from the so-called 'Marly Drift' or 'Chalky Boulder Clay', of glacial origin.²¹ Marshall examined samples of the chalk marl from the Whitlingham pits near Norwich, pronouncing them 'the purest calcareous earth I have yet analysed'; and from the Swaffham area, where he found 'nearly pure' calcium carbonate. Clay marls were analysed from Thorp village in the north-east of the county and Hemsby on the coast north of Yarmouth. Of the former, he wrote: 'it is highly probable, that the soluble matter of this marl is a pure, or nearly pure, *calcareous earth*'; and for the latter, he estimated a composition of roughly forty-five per cent chalk, with the remainder largely clay. Of the two categories, chalk marl was in the wider use, dug from field pits all over west and

¹⁹ Dr Singer, *General View of the Agriculture, State of Property and Improvements in the County of Dumfries*, 1812, p. 331; Rev Samuel Smith, *General View of the Agriculture of Galloway*, 1813, pp. 45–7, 209–10, 213; Rev John Smith, *General View of the Agriculture of the County of Argyle*, 1813, pp. 210–11, 215 (also mentioning, p. 217n, an extensive trade in sea-shells around the Solway coast, and over to the Isle of Man, their effect being 'great on barren heathy land'); Robert Kerr, *General View of the Agriculture of the County of Berwick*, 1813, p. 374; Rev William Leslie, *General View of the Agriculture of the Counties of Nairn and Moray*, 1813, p. 281; Cpt John Henderson, *General View of the Agriculture of the County of Caithness*, 1812, p. 179; James Robertson, *General View of the Agriculture of the County of Perth*, Perth, 1813, p. 317; Sir George Stewart Mackenzie, *General View of the Agriculture of the Counties of Ross and Cromarty*, 1813, p. 208.

²⁰ Arthur Young, *General View of the Agriculture of the County of Norfolk*, 1804 (1969 reprint), pp. 2–3, 10, 12, 341, 364–5, 406–7, 409–10, 411.

²¹ See, for example, Horace B Woodward, *The Geology of the Country Around Norwich*, 1881, pp. 115–28; B W Sparks, *The Ice Age in Britain*, 1972, pp. 146–9.

central Norfolk and traded down-river from the great excavations along the eastern exposures of the Cretaceous in the vicinity of Norwich. Like Young, Marshall noted that acid-loving plants such as corn-marigolds – and smart-weed and couch-grass as well – were the best indication of ground in need of attention; and that the repetition of marling was found to ‘generally answer’. Marl, indeed, seems to have the *principal* method of liming the soil, lime proper being ‘in good repute, though not in general use...’²² A lot of the lime that was applied probably came from the kilns that old maps and geological reports show were located at marl pits. It is, therefore, clear from Young, and very clear from Marshall, that in this most famous of English improving counties marl was a calcareous application with acidity-reducing effects. It is odd that historians have failed to relay this fact.

The solution to the conceptual problem is simple. Scientific literature and the often-differing resources observed in farming reports suggest a two-part subdivision, structural and chemical. ‘Structural’ concerns the lightening as well as the thickening of soils, by sand and shell marls for the first, and by clay marls for the second. ‘Chemical’ has mainly to do with acidity-relieving functions, and the diverse, important benefits that will be set out in the fourth section below. They can also extend to directly nutritional purposes, calcium being a minor plant food.

The historiographical problem to date, apart from that of crude listing, has been not so much that of wholly erroneous attribution of function as one of strangely blinkered partiality. Historians have too often fused the different sorts of marl into one category, according it the single and comparatively uninteresting purpose (and *that* only partial even in structural terms) of adding mass to thin soils. In conse-

quence, a very large body of farm improvement – itself, as we shall see, underlying so many accompanying advances – has been disregarded.

No reservations, incidentally, are necessary concerning the imposition of abstract scientific usage on the real world of the farmer. Not only was calcareous manuring a concrete fact, but scientists were for the most part engaged in the study of the practical world around them: experimenting with crops and soils, and instructing farmers and agricultural students in better methods and understanding. Their terminology was not devised in closed laboratories.

III

The literature on agricultural history abounds with reference to marling’s obsolescence. This, however, has a good deal to do with the partial identity discussed above. Clearly, ideas of relevance and modernity are heavily dependent on assumptions of function. Soil-thickening is not a very momentous agricultural issue, the bulk transfer of soils having an elementary crudity that contrasts ill with most recent farm improvements. There is mere digging, rather than production; laborious transport; little evident science; no obvious institutional or social import; and no parliamentary curiosity. In addition, structural marling has a built-in obsolescence, being – in contrast to acidity-reduction – a possible once-and-for-all job.

Ernle, while noting the continuation of marling into the nineteenth century, tends to characterize it as an essentially medieval improvement: ‘obsolete’ in the fifteenth century; ‘ancient but almost obsolete’ in the eighteenth; its use in both centuries being limited and revivalist. ‘It is surely a remarkable fact’, says Ashley, ‘that the practice of marling was for a time adopted in England, and then given up for centuries’. References to it, he suggests, were already

²² Marshall, *op cit*, I, pp 16, 22–4, 26–7, 150, 154, 156; II, p 99.

rare by the late Middle Ages. Renewed popularity came with extended grain production in the seventeenth century, but by the twentieth it was again 'pretty generally abandoned'. Kerridge comments on widespread use in seventeenth-century Lancashire and Cheshire, though, by 1630 or so 'the vales had largely been cleared, the basic marling completed, and the second phase of chalking and liming entered'. Chambers and Mingay write: 'Marling had died out and been revived more than once since its earliest known use in prehistoric times'. They observe its patchy reappearance in the seventeenth and eighteenth centuries, and subsequent decline in the nineteenth. Thompson accords it no place whatever in his manure-related 'second agricultural revolution' of 1815-80.²³

In the United States, by contrast, marling has been given a role of great importance along the eastern seaboard as lately as the nineteenth century. American farm historians write variously (if exaggeratedly) of marl-based revitalization, renaissance, and revolution in the Upper South.²⁴ Marling was a modish practice, and – by physical circumstance and documented result – well worthy of implementation.²⁵ Comparisons with Britain are not rendered invalid by environmental and economic dissimilarities. Both the Upper South and Britain had cool-temperate climates, a proclivity towards soil acidity, and mixed grain-and-livestock farming regimes. Slavery presents no problems, since marling and liming were most common in states with a high

proportion of free labour, and common practice as well in non-slave states farther up the eastern seaboard. Virginia and Maryland, the main marling areas, were also the states where Peruvian guano, the most advanced application of the mid-nineteenth century, found its liveliest Southern markets.²⁶ Edmund Ruffin, the planter who promoted the calcareous question, was no primitive backwoodsman. His book, pamphlets, reports, and diaries, as well as his distinguished *Farmers' Register*, show him to have been a subtle scientist of great literacy and sophistication: 'the father of soil chemistry in America', as Gilbert Collings has termed him.²⁷ And it is of interest that he learned much from British experience, attributing his main ideas to Humphry Davy, and reproducing hundreds of fragments from Scottish and English farming journals in his *Register*.²⁸

Britain was in at least one respect a more suitable place for marling improvement than the American South by the nineteenth century. It had a much better transport infrastructure, thereby – after centuries of acute haulage difficulties – rendering marling and similar onerous practices feasible well away from sources of supply. In the United States, the natural river system along the Atlantic seaboard was only impressive for communications purposes in the border states and north to New York, and was weakly supplemented by man-made waterways.²⁹ Many in Britain took advantage of the superior facilities. A huge chalk trade was conducted across the Thames estuary from the cliffs of North

²³ Ernle, *op cit*, pp 51, 94-5, 174, 369; Ashley, *op cit*, pp 138-9, 141-2; Kerridge, *op cit*, pp 247-8; Chambers and Mingay, *op cit*, pp 62-3; F M L Thompson, 'The Second Agricultural Revolution, 1815-1880', *Econ Hist Rev*, 2nd ser, XXI, i, April 1968, pp 62-77.

²⁴ Kathleen Bruce, 'Virginian Agricultural Decline to 1860: A Fallacy', *Agr Hist*, VI, 1932, p 3; Avery O Craven, *Edmund Ruffin, Southerner*, Baton Rouge, 1932, p 64; Clement Eaton, *The Growth of Southern Civilization, 1790-1860*, New York, 1963, p 179; Ruffin, *op cit*, introduction by J Carlyle Sitterson, pp vii, ix; William Kauffman Scarborough, introduction to *The Diary of Edmund Ruffin*, I, Baton Rouge, 1972, p xvi; Avery O Craven foreword to *ibid*, p xiii.

²⁵ Mathew, *Edmund Ruffin*, chs 5, 6.

²⁶ *Ibid*, pp 114-7, 165, 212; Weymouth T Jordan, 'The Peruvian Guano Gospel in the Old South', *Ag Hist*, XXIV, 1950.

²⁷ Gilbert H Collings, *Commercial Fertilizers*, 1947, p 337, fig 119.

²⁸ Ruffin, *op cit*, pp 35, 40-1, 52-3, 61, 71, 124, 159, 161; David F Allmendinger Jr, *Ruffin, Family and Reform in the Old South*, New York and Oxford, 1990, p 29; *ibid* (ed), *Incidents of My Life. Edmund Ruffin's Autobiographical Essays*, Charlottesville and London, 1990, pp 171, 194-6, 202-3; W M Mathew, 'Edmund Ruffin and the Demise of the *Farmers' Register*', *Virginia Magazine of History and Biography*, 94, i, 1986, pp 1-24.

²⁹ Mathew, *Ruffin*, pp 157-9; 'Agricultural Adaptation and Race Control in the American South. The Failure of the Ruffin Reforms', *Slavery and Abolition*, VII, 1986, pp 136-7.

Kent to Essex.³⁰ William Marshall and Arthur Young documented the river trades in Norfolk, distances of over forty miles often being covered between marl pit and farm.³¹ The diggings at Horstead on the Bure, in the same county, have left a landscape known as Little Switzerland, with deep, curved cuttings channelling back from the river.³² The very large excavation at Whitlingham has been recorded in a striking John Sell Cotman painting of 1808.³³ The marl was wherried around a useful system of rivers, broads, and inshore waters, coming, in R N Bacon's words of 1844, 'in some places to the door of the farmer, while at other points...laid up on staithes or wharves until required for use'. The Peak Forest canal, running from Derbyshire into Cheshire and Lancashire, was welcomed by Henry Holland in 1813 for 'the opportunity which is afforded of conveying marl at a slight expense to places where that valuable article is not met with'. Towards the end of the eighteenth century, a canal was constructed from Carlingwark Lock to the River Dee in Kirkcudbrightshire, and marl from the loch boated to farms up to twenty miles away.³⁴ Marl also was shipped around the French countryside. A recent study of the Canal de la Sauldre south of Orleans shows that the waterway was primarily intended for marl transport, and that as late as 1874 marls made up to ninety per cent of the tonnage transported.³⁵ In the United States, it was no accident that marling was

largely confined to the few tidewater areas where freight costs were low.³⁶ In the sense, therefore, that extensive intra-regional and inter-regional transport improvement was a feature of advanced capitalist economies, and that widespread marling depended on cheap carriage, the practice, in any geographically generalized sense, could only be a modern one.

Adding to this the *perennial* need to attend to soil acidity, we can dismiss any idea of marling as an intrinsically pre-modern affair, of no interest to historians of recent British agriculture. It only diminished in relevance as the growth of a manufacturing lime industry offered the farmer an alternative abundance of cheap, easily transportable calcium carbonate. Soil neutralization, as we shall see below, was an essential component of advanced mixed farming with fertilizers and legume-break rotations. It was no accident that one of Norfolk's greatest nineteenth-century marlers, John Hudson of Castleacre, was also one of the leaders of a deputation to Downing Street in 1852 to plead the case for larger, cheaper supplies of imported Peruvian guano.³⁷ Hugh Prince draws attention to the successes of mid-nineteenth-century agriculture on sandy soils where 'repeated applications of large quantities of marl and lime' were combined with 'regular dressings of farmyard manure and imported fertilizers'.³⁸

An important consequence of dismissiveness towards marling has been the lack of quantification for amounts applied and for regional patterns of use. There are, of course, fundamental problems to do with the absence of official or production statistics for a non-imported, dug commodity. Historians, however, have probably been more deterred by lack of interest through category ambiguity and allegedly marginal

³⁰ Daniel Defoe, *A Tour Through the Whole Island of Great Britain*, 1927 edn (first pub 1724), pp 99-100; Boys, *op cit*, p 149.

³¹ Marshall, *op cit*, II, p 99; Young, *op cit*, pp 406-8.

³² Robert Malster, *Wherries and Waterways*, Lavenham, 1971, pp 72-3.

³³ Reproduced in Prince, 'Norfolk Pits', plate 4.

³⁴ Henry Holland, *General View of the Agriculture of Cheshire*, 1808, p 312; Jean Lindsay, *The Canals of Scotland*, Newton Abbott, 1968, p 179; R N Bacon, *The Report on the Agriculture of Norfolk*, 1844, pp 6-7 (evidence of use on a farm-by-farm basis also appearing in answers to the questionnaires on which Bacon based his study: MSS Richard Noverre Bacon, 2 vols, 1844, Norfolk and Norwich Record Office).

³⁵ Keith Sutton, 'A French Agricultural Canal - the Canal de la Sauldre and the Nineteenth-Century Improvement of the Sologne', *Ag Hist Rev*, 21, 1973, pp 54-55.

³⁶ Mathew, *Ruffin*, chs 7, 10.

³⁷ W M Mathew, *The House of Gibbs and the Peruvian Guano Monopoly*, 1981, p 159; see also Caird, *op cit*, p 168.

³⁸ In Thirsk, *op cit*, 1989, p 80.

modern importance. If, by a different view of the practice, research is deemed worthwhile then much progress can be made. Robert Dodgshon, pointing to a 'serious' historiographical 'neglect' of marling and liming³⁹, has shown how effectively the evidence from reports and farm records can be aggregated into intelligible generality. My own American work, combining the use of similar sources with speculation from local geological and pedological circumstance, has permitted some quite confident conclusions on popularity and function. Canal, river, and railway toll data can yield much additional information, given marl's necessary dependence on low-cost transport.

IV

Mistaken or partial ideas of function not only contribute to restricting notions of marginality and obsolescence; they also result in the wrong issues, or an unduly narrow range of issues, being analysed. Indeed, so 'structural' have been the preoccupations of historians that even lime's well-known chemical functions have tended to be subordinated to notions of soil-lightening. This might be rectified in future research, and the calcareous question related in practical agricultural terms to the particularities of local climates, soils, and crops.

Acidity, being an intrinsic feature of farmland in damp, temperate climates, is widespread in Britain.⁴⁰ Agriculture has been affected in a variety of ways.⁴¹ Direct effects, from hydrogen-ion concentration, are of no account. Indirect effects, however – through the reduction of nutrient availability and the increase of toxicity – can be very serious. Supplies of nitrogen and

phosphorous, two of the three main plant foods, are curtailed. Available soil nitrogen depends on microbial activity in the ground, converting organic matter into nitrites – the soluble form in which they are most easily taken up. The required bacteria, however, are highly sensitive to acidity, even at moderate levels. Their restriction or absence not only affects the breakdown, and therefore efficiency, of farmyard manure and nitrogenous fertilizers, but the operation of nitrogen-fixing as well. The latter deficiency means that leguminous crops, such as peas or clovers, cannot easily flourish, depending as they do on bacterial activity on their roots. 'Nitrification and nitrogen-fixing', observes Nyle Brady, 'take place vigorously in mineral soils only at pH values well above 5.5'.⁴² Anything worse than slight acidity, therefore, can impede two vital categories of farm improvement: fertilizing and leguminous rotation, with obvious implications for livestock production and internal manure supplies.

As for phosphorous, the problem arises from the common presence in acid soils of aluminium and iron in solution. These combine with phosphorous to form particular phosphates whose solubility is so low that plants can use them only very slowly or not at all. Phosphorous in the soil, therefore, gets trapped, and additions of fertilizers such as bones, superphosphate, and phosphatic guano, can be wasted expenditure. 'If', writes Emil Truog, 'lime produced no other benefit than its favourable influence on phosphate availability, it would usually pay to use it'.⁴³ When elements such as calcium are in abundance, as in neutralized soils, other, highly soluble phosphate compounds are formed that present no problems for plants. Calcium itself is usually accorded an inconsequential

³⁹ Dodgshon, *op cit*, p 1.

⁴⁰ See, for example, Havinden, *op cit*, pp 105–6.

⁴¹ The remarks here are based on a number of agricultural chemistry and soil-science texts. These will only be named individually when directly quoted.

⁴² Brady, *op cit*, p 390.

⁴³ Emil Truog, 'Lime in Relation to Availability of Plant Nutrients', *Soil Science*, LXV, 1948, pp 2–3.

nutritional role, though some chemists argue that it can be useful for legumes.⁴⁴

The other problem, that of toxicity, again has to do with soluble aluminium. Manganese has similar effects. Aluminium gathers in plant roots and interferes with nutrition. Manganese penetrates plant tissue and damages metabolism. Other possible offenders include sodium thiocyanate, sodium chlorate, sodium borate, sodium arsenite, ammonium thiocyanate, and ammonium sulphamate. Many fungi and other disease organisms also do well in acid conditions, causing, for example, finger-and-toe in turnips, swedes, and cabbages. Toxicity, however, only seems to be a major factor in conditions of pronounced acidity, combining with nutrition unavailability to inflict a potentially disastrous double blow on plants. Where the sourness is slight or moderate, the latter difficulty is usually the sole cause for concern.

Acidity itself is related less to underlying geological conditions than to climate and soil structure. The main cause is rain and its passage through the soil, meaning that it is perfectly possible to have acid soils on limestone and other calcareous bedrocks. 'Soils', observes A R Midgely, 'are influenced by climate...to such an extent that they can be regarded as a product of it'.⁴⁵ Water assists the production of 'acid' hydrogen ions, and leaches away the 'alkaline' ions in solution. The most damaging loss is that of calcium carbonate. Relatively free-draining soils in damp climates, therefore, are most at risk – especially where cultivation has removed their former natural vegetal protection. An annual rainfall of twenty-five inches is usually enough to set

the process in motion, with lower levels sufficing on thin soils.

Where, in Britain, was the need likely to be the greatest? The whole of the country lies within the twenty-inch isohyet, and large areas of the north and west record averages of at least double that level. Pedological circumstances are especially interesting, given the historiographical equation of marling with the needs of sandy soils. This reveals perhaps the largest of all the misunderstandings with which historians have been labouring. Calcareous marls may well have added body to thin soils, and they may have been applied for that purpose alone, with visible, tangible effect. But as these were likely to have been highly leached soils, with consequent acidity – for the reasons outlined – it is very likely that the main benefit was chemical rather than structural. Structural gains, in so far as these resulted from the use of a heavy marl, may *also* have been partly chemical in that they delayed further leaching. They would not prevent leaching altogether, though; and both the chemical and structural/chemical interpretations are consistent with the much-cited tendency to repeat marling after a number of years. An entirely structural exercise, successfully completed, would not have required such repetition. Light soils, moreover, were also the sorts where rotation farming was winning as a means of overcoming the forage deficit in drier parts of the country. They suited turnips by being open; but they only accommodated clovers, other legumes, and most grains, if their acidity was reduced or neutralized. The Holkham estate perhaps gives us the most precise example of the 'structural' misunderstanding. The thin, sandy soils of that part of Norfolk – as Arthur Young hinted, but could not understand – were the beneficiaries of acidity-reduction as well as simple soil-thickening. Had they remained acid, they could not have supported the celebrated rotations practised upon them.

⁴⁴ Frank Moser, 'Calcium Nutrition at Respective pH Levels', *Proceedings of the Soil Science Society of America*, VII, 1942, p 339; C B Harston and W A Albrecht, 'Plant Nutrition and Hydrogen Ion: IV. Soil Acidity for Improved Nutrient Delivery and Nitrogen Fixation', *Proceedings of the Soil Science Society of America*, VIII, 1943, p 247.

⁴⁵ A R Midgely, 'Lime – Its Importance and Efficient Use in Soils', *Proceedings of the Soil Science Society of America*, VIII, 1943, p 329.

The fact that the wettest, most leaching-prone areas were also the parts of the country best protected by grassy turf, and least in need of leguminous crops to provide nitrogen for wheat and food supplements for cattle, helped restrict the geographical extent of the acidity problem. But the west was not all pasture; natural grassland could also be damaged by sourness; and the centre and east were wet enough, and many of their lands free-draining enough, to experience the debilitating effects of acidity and the benefits of calcareous manuring.

V

Illustrative material apart, it is not our purpose here to give historical documentation of the pattern and fluctuation of marl consumption in Britain, nor shall we attempt direct, as distinct from circumstantial, analysis of its impact on agriculture. This has been mainly an exercise in preliminary identification. Careful regional studies are required to add to Dodgshon's work on Roxburgh and Berwick. These might follow some of the pointers suggested. They will, almost certainly, run up against awkward specificities concerning local soils, climatic conditions, and variations in crop tolerance of acidity. It might be useful for any such investigation if, by way of conclusion, some of the principal factors likely to explain the popularity and success of marling are briefly set out. Environmental and crop considerations have already been discussed. Beyond these, the important variables were costs of excavation and transport, difficulties of application, and competition from other ameliorative agents.

All costs were in major part a function of the quantities used, and these in turn largely depended on the constitution of the marl. Bulky clays, with a low calcareous content and high freight charges, were the most troublesome. Lighter, limier earths,

such as shell marls were, value for value, cheaper to move.⁴⁶ Marling generally was always regarded as a costly undertaking. John Fitzherbert in the sixteenth century called it an 'exceeding chargeable' improvement;⁴⁷ M E Seebohm in the twentieth said it had been 'discontinued as too costly'.⁴⁸ To minimize outlay, pits and other sources were usually close by the areas of application⁴⁹, and the common landscape feature today is one of overgrown hollows in the middle of fields.⁵⁰ Henry Holland, estimating costs for Cheshire in 1813, supposed a maximum haulage distance of only a hundred to a hundred-and-fifty yards.⁵¹ The processes, however, were fairly simple, with the labour heaviest for initial 'callow' clearance. Expenses – which in part have to be measured in 'opportunity' terms, related to diversions of existing farm labour forces – were modest. There are cost figures in virtually all the county reports cited above: disparate overall, and difficult to average.⁵² Unit digging costs were probably lower in the larger commercial excavations, where there was specialization of labour, continuity of work, and perhaps a more common use of equipment. The severest expenses undoubtedly came from transport. Away from the rivers and the newer arteries, these could be hopelessly high, given the bulk of the commodity and the slowness of cart carriage along country tracks. William Marshall noted in Norfolk in the 1780s that marl selling at 1s a load at Norwich pits cost up to 3s 6d to carry six miles overland to Woodbastwick. Farmers there often preferred to have their supplies shipped by river and sea through

⁴⁶ For some comment, see Dodgshon, *op cit*, pp 4, 7.

⁴⁷ Quoted in Ernle, *op cit*, p 10.

⁴⁸ Seebohm, *op cit*, p 336.

⁴⁹ See Prince, 'Norfolk Pits', p 21.

⁵⁰ See, for example, photograph in Herbert L Edlin, *East Anglian Forests*, London, 1972, plate 20.

⁵¹ Holland, *op cit*, p 223.

⁵² In particular, works cited above of Batchelor, Boys, Kerr, Leslie, Pitt, Robertson, Singer, Smith (John), Smith (Samuel); also Arthur Young, *General View of the Agriculture of Herefordshire*, 1804.

Yarmouth – a journey of over forty miles.⁵³ The rough ton-mile cost was about 1s for the first, and 2d for the second. Dodgshon observes, from 1798 Scottish Borders estimates, that at distances of eight miles, 'transport costs per cart could be as much as twice the value of the marl'.⁵⁴ Water carriage was usually the only means by which extended exchanges could take place. The restricting difficulty, of course, was that the marl had to be exposed right by the waterways, so that cargoes could be loaded with minimal land transfer.

There were major practical problems as well concerning the application of marl. It had the inconveniences of claying at the structural extreme, through heavy labours of spreading and ploughing-in; and of liming at the chemical extreme, through dangers of quick soil exhaustion on land low in organic matter – nutrient availability being accelerated to a pace often greater than poor soils could tolerate. It was probably this latter chemical difficulty that led to the much-cited notion that marl was good for the first generation, but bad for the second. In Barnabe Googe's version of 1577, it could bring 'the ground to be starke nought, whereby the common people have a speache, that ground enriched with chalke makes a riche father and a beggarly sonne'.⁵⁵ There were also problems to do with the slowness of marl's effects, this producing the quite contrary saying that 'a man doth sande for himself, lyme for his sonne, and marle for his graunde child'.⁵⁶ It was very confusing for the farmer. Additionally, marl, as defined over different parts of the country, had a varying constitution, especially by bulk and by proportions of lime, thereby precluding clear, general advice on use. And the pro-

cesses it set in motion were for the most part not understood.

As for competition, the main challenge came from lime – and not from fertilizers generally. Good marlers, working on thin soils, had to be good manurers as well. Ameliorators and manurers were complementary, as our case of John Hudson of Castleacre shows. Historians who document marl's local losses of popularity usually connect this with the increased use of lime (itself, as suggested, sometimes made from marl). This, being lighter in its processed 'quick' form, was cheaper to transport, and it was also of more precise chemical identity. In the words of J Home, writing of Berwickshire in 1797: 'Lime, portable to all distances, quick and instant in its action, unlocked at once on all soils the dormant powers of reproduction'. According to another 1790s observer in the same county, 'marl was deadstock after the general introduction of lime'.⁵⁷ Industrialization and increased domestic, factory, and public building stimulated a wide, if uncharted, growth of lime manufacture – first in rough kilns in rural areas and, as Havinden documents for Devon,⁵⁸ along the coasts and waterways at points of limestone importation; and then, increasingly, in larger-scale quarry and urban enterprises, sometimes as an industrial by-product. Norfolk farmers got much of their lime earlier this century from the refuse of sugar-refining at Cantley in the south of the county.⁵⁹ And the relative ease and cheapness of its transport meant that the consumer could draw on a wide range of distant supplies. Dodgshon's Borders farmers were purchasing from Midlothian, East Lothian, and Northumberland in the last decades of the eighteenth century.⁶⁰

⁵³ Marshall, *op cit*, p 99.

⁵⁴ Dodgshon, *op cit*, p 7.

⁵⁵ Quoted in Ernle, *op cit*, p 99.

⁵⁶ Quoted in H E Hallam, ed, *The Agrarian History of England and Wales*, II, 1042–1350, Cambridge etc, 1988, p 440.

⁵⁷ Both quoted in Dodgshon, *op cit*, pp 2, 10.

⁵⁸ Havinden, *op cit*, pp 107–8, 113–25.

⁵⁹ L Dudley Stamp, *The Land of Britain. The Report of the Land Utilisation Survey of Britain. Part 70. Norfolk*, 1938, p 96.

⁶⁰ Dodgshon, *op cit*, p 7.

Among the principal areas for the application of marl and related bulky calcareous materials in the eighteenth and nineteenth centuries were – as the various examples above indicate – the Thames estuary, Norfolk and Suffolk, Staffordshire and the neighbouring Cheshire-Lancashire plain, the coasts around the Solway Firth, and the border counties of southeast Scotland. Other parts at all extremities of the country used it as well,⁶¹ though it would be premature, in the present state of knowledge, to draw clear, period-by-period distribution maps. Suffice to say that a practice that had begun more than two thousand years ago was still vigorously pursued into modern times. It was, by William Marshall's designation, Norfolk's 'grand fossil manure'. John Holt in 1795 saw it as 'the foundation of all improvements in the agriculture' of Lancashire. The Rev Samuel Smith declared in 1815 that the 'most

material change' that had taken place in Galloway 'since the inclosing of farms, has risen from the introduction of *calcareous manure*. In Argyll, around the same time, the Rev John Smith insisted: 'marl...excels all other manures'. The last diggings at Little Switzerland on the Bure in Norfolk were not closed until the 1870s.⁶²

If marling was indeed as popular as these and other comments suggest, and if its main consequence – however misunderstood by farmers – was the alleviation of soil acidity, it must be given its place as both a major and a modern agricultural improvement, bearing on the whole spectrum of advanced mixed farming. When it faded, the reason was not that its calcareous functions had become redundant but that they were more easily and cheaply performed by other agents.

⁶¹ For England, see Prince in Darby, *op cit*, p 416.

⁶² Marshall, *op cit*, I, p 16; John Holt, *General View of the Agriculture of the County of Lancaster*, 1795 (1969 reprint), p 120; Smith (Samuel), *op cit*, p 45; Smith (John), *op cit*, p 211; Maltster, *op cit*, p 73.

Hauling Away in Late Medieval Bavaria: The Economics of Inland Transport in an Agrarian Market¹

By MICHAEL TOCH

Abstract

Using the mid-fourteenth-century accounts of the Bavarian monastery of Scheyern (to the north of Munich), the article scrutinizes the way late medieval landlords went about the organization of transport. Most intricate were the arrangements for the yearly recurring ventures sent into the Southern Tyrol to purchase, cart, and ship home the excellent vintages of *Latin wine*. For most of the relay route, hired carriers were employed, but one stage was turned over to tenants owing the monastery carting services. Other transport needs nearer home made for less complicated arrangements, using a mix of hired labour, permanent servants, and the monastery's own rolling stock and beasts. No attempts were made to improve the technological level of transport, relying instead on a very flexible organization of monetary and labour resources attuned to local circumstances.

THE economic history of later medieval Bavaria is still largely uncharted. This period of decisive political and social development, most of which has been very thoroughly researched, has yet to find its proper treatment for the economy.² Despite the existence of a sizeable number of systematically edited sources³, the main economic developments are left stranded between the purely agrarian treatment accorded by Philippe Dollinger, and the mainly mercantile and industrial interest of Eckhart Schremmer.⁴ The former

did not go further than the thirteenth century and was primarily concerned with the early medieval genesis of social divisions within the rural population. The latter has only a cursory chapter on late medieval developments, and wholly left out the agrarian sector, the one making up the largest part of the Bavarian economy as late as the early twentieth century. The important monograph of Friedrich Lütge on Bavarian landlordship again starts only with the sixteenth century and deals solely with legal matters.⁵ There is thus a gap which is only barely filled by two short chapters on the rural and urban economy in the otherwise magisterial *Handbuch der Bayerischen Geschichte*.⁶

Such a state of research cannot be remedied in a single blow. This paper aims at one sector only, transport, which has however often been credited with a key function in both the traditional and the modern economy.⁷ We shall ask what goods late medieval Bavarians, living in an almost

¹ Some of the ideas developed here were first expressed in a paper delivered in July 1989 in Brussels at a conference on 'Inland Transport and Communication in the Pre-Industrial Period'.

² For an excellent overview on the formation of the Bavarian duchy see M. Spindler, ed., *Handbuch der bayerischen Geschichte*, vol. II, Munich 1969, 2nd ed., 1977. The political and social development of the countryside is amply documented in the series *Historischer Atlas von Bayern*, Munich 1950ff. See Erwin Riedenauer, 'Der Historische Atlas von Bayern', in: *Jahrbuch für fränkische Landesforschung* 43, 1983, 21–58.

³ By now close to forty volumes of sources mainly of monastic origin, edited since 1952 in the series 'Quellen und Erörterungen zur bayerischen Geschichte' under the auspices of the Kommission für bayerische Landesgeschichte at the Bavarian Academy of Sciences, Munich.

⁴ Philippe Dollinger, *L'évolution des classes rurales en Bavière depuis la fin de l'époque carolingienne jusqu'au milieu du XIII^e siècle*, Paris, 1949, henceforth cited in the updated German translation edited by Franz Irsigler, *Der bayerische Bauernstand vom 9. bis zum 13. Jahrhundert*, Munich, 1982; Eckhart Schremmer, *Die Wirtschaft Bayerns. Vom hohen Mittelalter bis zum Beginn der Industrialisierung. Bergbau, Gewerbe, Handel*, Munich, 1970.

⁵ Friedrich Lütge, *Die bayerische Grundherrschaft. Untersuchungen über die Agrarverfassung Altbayerns im 16.–18. Jahrhundert*, Stuttgart, 1949.

⁶ *Handbuch der bayerischen Geschichte*, II, Ch 5, 6.

⁷ For a bibliographical orientation see A. Simon, *Bibliographie zur Verkehrsgeschichte Deutschlands im Mittelalter*, Trier, 1984.

purely agricultural country nevertheless crossed by routes of international commerce, carried hauled and shipped from place to place, and why they did so. What functions did such activities possess in the wider framework of economic needs?⁸ We shall follow a simple procedure, checking first the research literature and edited sources for information on the workings and organization of transport. We shall then attempt to supplement the deficiencies of the fragmented general record by recourse to an especially well documented case study.

I

Transport is mentioned here and there in Bavarian sources as early as the Carolingian period, but most documents belong to the time from the twelfth century onwards. The type of transport emerging from them is part and parcel of the manorial system, involving the tenants in periodical ventures of *corvée* labour where they hauled their own taxes in kind or tithe returns to the lord's manorial centre. Very little direct evidence has survived on such local short range missions.⁹ We are a little better served by the spate of rentals, listing the tenants' duties and dues, of the thirteenth and early fourteenth centuries.¹⁰ Yet even in this better documented period only rarely is there direct evidence for actual transport activities on the local level. But then we

are probably misled by the prevalent legal character of the surviving documentation, which leaves out the manifold forms of free association. Thus a rare sharecropping contract of 1395 specifies also the respective duties of lord and tenant concerning hauling and transport.¹¹ Judging by the surviving bulk of the record, the lords' administrators and scribes paid much more attention to the wide-ranging expeditions aimed at providing the great households with staple goods and especially wine. This was available in good quality only in far away Southern Tyrol (Italian Alto Adige) or in the even more remote Danube region of Lower Austria. Other articles such as salt and cheese too had to be transported over significant distances. Here again the operative principle was the forced participation of tenants in a system of transport along routes lined by stations in which the landlord possessed privileges of toll exemption. These features are nicely brought together in the mid-fourteenth-century evidence of the monastery of Osterhofen.¹² The abbey cooperated with a number of tenements to equip a *currus expeditionis* to be sent to Austria, evidently to collect the wine cultivated there on its holdings and convey it via tax-exempt stages back home. A similar organization is attested as early as the eleventh century for the great Ratisbon monastery, St Emmeram. Its tenants in sub-Alpine Vogtareuth were charged with transporting wine from Bolzano in the Southern Tyrol.¹³ Identical or similar arrangements are found for a sizable number of Bavarian landlords of the twelfth

⁸ In a similar way I have attempted to supply some evidence for another key sector of the medieval rural economy, credit. See my 'Geld und Kredit in einer spätmittelalterlichen Landschaft' in: *Deutsches Archiv für Erforschung des Mittelalters*, 38, 1982, pp 499–550; and my forthcoming 'Local Credit in an Agrarian Economy: The Case of Bavaria (14th to 15th Centuries)' in: P.-J. Schuler, ed, *Local and International Credit*, 1994.

⁹ Dollinger, *Der bayerische Bauernstand*, 153–8.

¹⁰ See in general Robert Fossier, *Polyptiques et censiers* (Typologie des sources du moyen âge occidental 28), Tournhout 1978. On the German *Urbare* see K Th v Inama-Sternegg, Über Urbaren und Urbarialaufzeichnungen, in: *Archivalische Zeitschrift*, 2, 1877, pp 26–52. For the Bavarian ecclesiastical ones see Johannes Wetzell, *Die Urbare der bayerischen Klöster und Hochstifte vom Anfang des 11. Jahrhunderts bis 1350*, unpublished doctoral thesis, University of Munich, 1976. For the ducal *Urbare* see now Ingrid Heeg-Engelhardt, ed, *Das älteste bayerische Herzogsurbare. Analyse und Edition*, Munich, 1990.

¹¹ O Engels – M. Thiel, eds, *Die Traditionen, Urkunden und Urbare des Klosters Münchsmünster*, Munich, 1961, 208.

¹² Johann Gruber, ed, *Die Urkunden und das älteste Urbare des Stiftes Osterhofen*, Munich, 1983, entries 467, 470, 474, 730, 1650, 1653, 1663, 1666, 1669, 1671–1766.

¹³ Ernst Klebel, Aus der Verfassungs-, Wirtschafts- und Siedlungsgeschichte der Hofmark Vogtareuth bei Rosenheim, in: *Zeitschrift für bayerische Landesgeschichte* 6, 1933, pp 27–59, 177–216.

to fourteenth centuries, and even as late as the fifteenth century.¹⁴

Yet already by the turn from the thirteenth to the fourteenth century this sort of manorial organization often seems a thing of the past, as evidenced by cash payments indicating in the rentals the commutation of transport duties.¹⁵ This fits in with the general development as manorial corvées were increasingly whittled away by the inroads of the money economy.¹⁶ And indeed, looking back from the early modern period to the thirteenth century, Schremmer sees transport already organized solely along commercial lines, with professional carriers active on the land routes connecting Bavaria with Alpine Tyrol and through it with the high-density economy of Italy.¹⁷ By the same opinion at a later date, to all appearances by the fifteenth century, this system was being supplemented and extended by shipping services on the connecting river routes of the Inn, Lech, Isar, and Salzach.¹⁸ There was also a parallel although less extensive system of transport catering solely for the trade radiating outwards from the salt-mines of Reichenhall.¹⁹

What was this then: a system of manorial transport including far-ranging ventures, which was slowly decaying towards the close of the Middle Ages; or a much more modern 'commercial' one existing already in the thirteenth century? Or was it both? Let us look at the problem from below,

from the local level of a case study. In contrast to the literature and our previous exposition, both based on the prevalent legal sources, this case study uses accounts, a rare type of evidence in medieval Germany which informs us however of things that have actually been done.²⁰ On the other hand a case study, instructive as it might be, has a limited capacity for generalization. Luckily, in our case ecclesiastical aggrandizement has assembled a lordship with possessions in different regions typical of a wider area. This is the lordship of the Benedictine monastery of Scheyern: founded in 1087 in the wilderness of an Alpine valley, it moved a few years later to another Alpine site; relocated again in 1104 to the already settled lowland area to the northwest of Munich; and moved finally in 1112 to Scheyern in the hilly country south of the Danube.²¹ Its main claim to fame lay in the close connections to the counts of Dachau and Wittelsbach, the later dukes of Bavaria, who chose to be buried in Scheyern and had their family history drawn up by the abbey's scribes.²²

II

Of the 650 holdings accumulated by the abbey up to the early fourteenth century, three-quarters were situated in the hilly and woody country bounded by the rivers Lech, Danube, and Isar. This thinly populated and purely agricultural region is structured into tiny areas of settlement and

¹⁴ Herbert Klein, *Die Weinsaumdienste in Nordtirol und Bayern*, in *Tiroler Heimat*, 13/14, 1949/50, pp 65-77. For the fifteenth century see Friedrich Merzbacher, *Tegernsee und der Südtiroler Wein im ausgehenden Spätmittelalter*, in *Aus Wirtschaft und Gesellschaft. Festschrift für Universitätsprofessor Ferdinand Ulmer*, Innsbruck, 1963, pp 199-213.

¹⁵ For instance in Dießen: Schlögl, *Die älteste Besitzliste*, 51: XXXVI *denarios pro curru*. The instances in the thirteenth- and fourteenth-century rentals are too numerous to be detailed.

¹⁶ Dollinger, *Der bayerische Bauernstand*, pp 140-146.

¹⁷ Schremmer, *Die Wirtschaft Bayerns*, pp 179.

¹⁸ Schremmer, *Die Wirtschaft Bayerns*, pp 181f.

¹⁹ Schremmer, *Die Wirtschaft Bayerns*, pp 178-9; Klein, *Weinsaumdienste*, pp 77-9; Heinrich Wanderwitz, *Studien zum mittelalterlichen Salzwesen in Bayern*, Munich, 1984; for an overview see now Rudolf Palme, *Alpine salt mining in the Middle Ages*, in: *Journal of European Economic History*, 19, 1990, pp 117-136.

²⁰ Although a number of accounts have been published, there is yet no overview available. But see the introduction to my forthcoming edition of the fourteenth-century account-books of the monastery of Scheyern, from which the greater part of the material for the present study has been drawn. I wish to thank the Alexander von Humboldt-Stiftung, Bonn, whose support has made possible my work on Scheyern.

²¹ Michael Toch, *Voralpine Grundherrschaft und alpine Bauern im Spätmittelalter*, in M. Markmüller, ed, *Economies et sociétés de montagne*, Itinera 5/6, 1986, pp 30-37.

²² Jean-Marie Moeglin, *La généalogie des Wittelsbach*, These Univ. Paris, 1982; Wilhelm Störmer, *Die Hausklöster der Wittelsbacher*, in: Hubert Glaser, ed, *Wittelsbach und Bayern. Die Zeit der frühen Herzöge*, Munich, 1980, pp 139-150.

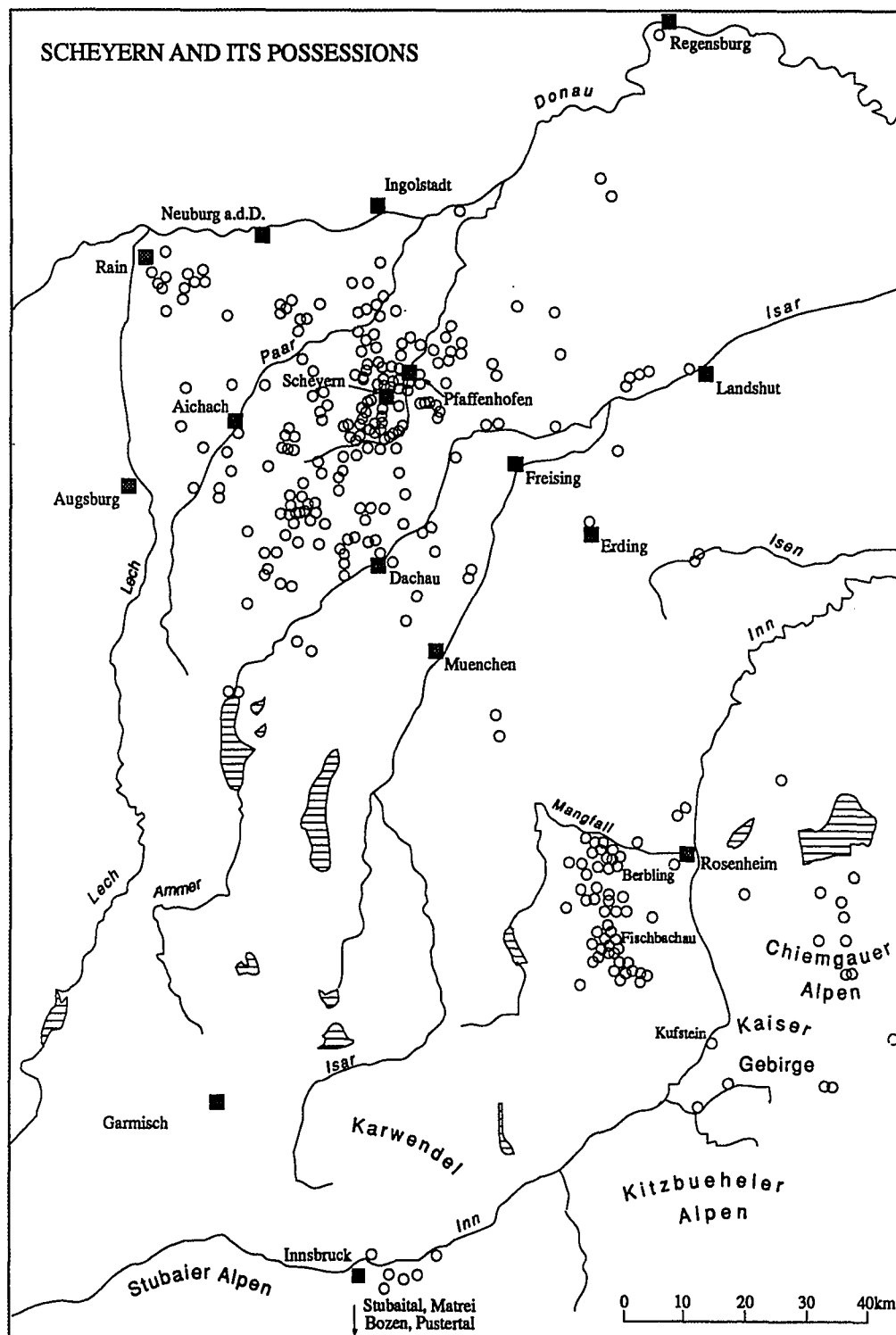


FIGURE 1

cultivation by a number of smaller rivers, low hills and the prevalence of woodland.²³ The inner valleys and relatively short distances of up to forty kilometres from the monastic centre made for easy communication within the lordship of Scheyern. On the other hand this region as a whole was and to this very day still is bypassed by the major routes of trade and transport. Near the site of the abbey there grew up the market-township of Pfaffenhofen an der Ilm. This and similar places (Rain, Neuburg an der Donau, Aichach and Dachau) served as manorial and market centers for the five offices (*officia*) into which the main bulk of Scheyern's lands was divided.²⁴ More sizeable were the towns of Freising and Ingolstadt, situated at similar distances of twenty to forty kilometers 'as the crow flies'. The peasants engaged in the traditional grain-husbandry of the region and fared quite well. In fact, no traces of an adversity of the fourteenth century have been found, nothing to suggest a demographic and agricultural crisis of the later Middle Ages.²⁵ Quite the contrary, the region appears to have enjoyed a moderate demographic growth which by c 1400 led to the division of some of the larger holdings into homesteads for cottagers engaged in agricultural labour and village crafts. This main bulk of the lordship of Scheyern was made up of a knot of small economic areas interconnected by mutual ties of credit, wage-labour, buying and selling.²⁶ This was a region of a low-intensity economy, of the husbandry, rural crafts and small trade normally associated with agrarian inland areas.

The remaining quarter of the abbey's land, administered by three more bailiffs (*prepositus*), was located farther away.²⁷ Of these two lay in the foothills of the Bavarian Alps, eighty to one hundred and ten kilometres from the abbey 'as the crow flies'. One office called Fischbachau was located in an elevated and isolated valley with a harsh climate, in fact the very spot abandoned by the first monks of Scheyern. Its tenants were mainly engaged in Alpine dairy husbandry, yearly producing great quantities of cheese. The second office (Berbling) was situated in the more open country to the west of the river Inn, its tenements straddling the major road from the river to Munich, the political centre of Bavaria. The peasants there produced grains, mainly the oats fitting the rough climate and the traffic location of their region. The last of Scheyern's offices was quite appropriately designated by the vague name 'in montibus' or 'transmontana'. It covered the abbey's spare possessions in the Bavarian and Tyrolian Alps proper. These holdings were widely spread over a huge area: a few in winegrowing Bolzano (Bozen) in the Southern Tyrol, and the rest along the main route leading over the Brenner pass towards Innsbruck and along the river Inn into Bavaria. Most of them had originally been bound to render wine dues but by the fourteenth century such obligations had mostly been commuted to money payments.

This then is the setting for the transport needs of Scheyern. Once again, the duality of economic regions needs stressing: on one hand there was the grain-producing lowland core around the abbey, shot through with a thick web of economic and social connections. On the other hand there was the Alpine appendix, made up of three different groups of possessions each with a different function, far away but of great importance for the consumption

²³ E Meyen - J. Schmithüsen, *Handbuch der naturräumlichen Gliederung Deutschlands*, 1953-1962, pp 72-73, 92-93, 97-99, 107-108, 112-113, 124-127, 131-133, corroborated by a cycling tour of the region.

²⁴ The offices are respectively called Pfaffenhofen, Aichach, Rain, 'in inferiori terra' and Dachau. On their genesis in the thirteenth century see Michael Stephan, *Die Urkunden und die ältesten Urbare des Klosters Scheyern*, Munich, 1988, pp 18*-23*.

²⁵ A preliminary finding to be published in the introduction to my forthcoming edition of the Scheyern accounts.

²⁶ For an analysis of these structures see my forthcoming 'Local Credit'.

²⁷ On these possessions see my 'Voralpine Grundherrschaft'.

needs of the Benedictine monks. Bearing this basic set-up in mind, let us turn to the different forms of transport as evidenced in the sources.

III

In the thirteenth century, Scheyern had arranged for the more elaborate of its transport needs to be met by *corvée* labour. A rental dated to the very beginning of this century and a second one of 1216–1220 define the responsibilities for the transport to the monastery of the already mentioned southern vintages (*Welschwein, vinum latinum*).²⁸ The official in charge was the *prepositus officii in montanis*, who resided in Berbling near the river Inn. His living expenses were to be met from two tenements there, and those of his two sergeants-at-arms as well as fodder for their horses from another holding. There was a bailiff responsible for collecting the dues, who too had a claim to fodder for his horse. One assumes that between them these four organized the wine transports. The whole distance was divided into relays manned by tenants of the monastery supplying both their work and equipment. Near Bozen (Bolzano) and Brixen (Bressanone) in Southern Tyrol, Scheyern owned wine-growing holdings which had to supply the carts and presumably all or some of their product. An additional and probably larger part of the vintage was purchased on the Bozen market. The first relay was located somewhere around Brixen, where four tenants from the adjoining Pustertal should take over, supplying carts, casks and horse-fodder. The next stop was at the holding of Trins, just over the Brenner pass. Its tenant was bound to provide another wine-cart of his own and to guide the expedition

to the relay at the tenement of Volders on the river Inn. There a neighbouring holding had to supply each year the wood for a raft, on which the wine was then to be shipped to Rosenheim. Incidentally, this is the earliest evidence for the regular transport navigation of the upper Inn river.²⁹ In or near Rosenheim the tenants of the office of Berbling, all of which were bound to perform carting services, took over and drove the wine on carts (*in plaustris*) to Munich. The fodder for their horses was to be supplied from the lord's granary at Berbling. There is no indication as to who was supposed to carry the wine on the last leg from Munich to Scheyern. It has to be stressed that such wide-ranging ventures were very much a matter of routine. They are attested in similar terms for some other Bavarian landlords in the eleventh and twelfth centuries, for a greater number in the thirteenth century and for a single one as late as the fifteenth century.³⁰

In contrast, there is no direct information on the organization of low-level transport ventures performed by the peasants themselves, be it in the course of their daily work or in the recurring task of carting their dues to the lords' granaries. This routine traffic must have been especially dense in the core region around the monastery, where tenants frequently went to work with their equipment on the (admittedly small-scale) demesne land and at the lord's granaries. One minor clue is provided by the legal arrangements of tenure. This was a region of short-term leases, ranging (in theory) from one year

²⁸ The manuscript sources for the following are Bayerische Staatsbibliothek, clm 1052 ff. 61^v–63^v; clm 17401, ff. 13va–13vb; edited by Stephan, *Urkunden*, pp 157–161, 189–193, entries 64–89, 353–389. I follow the analysis of the editor on pp 22*–23*.

²⁹ O Stolz, Zur Geschichte der Organisation des Transportwesens in Tirol im Mittelalter, in *Vierteljahrsschrift für Sozial- und Wirtschaftsgeschichte*, 8, 1908, p 203. On rafts and river-transport on the Inn see H Gritsch, *Schiffahrt auf Etsch und Inn*, in U. Lindgren, ed, *Alpenübergänge vor 1850. Landkarten – Strassen – Verkehr*, Stuttgart, 1987, pp 47–63.

³⁰ Stephan, *Urkunden*, p 22* note 14; Klein, *Weinsaumdienste*, pp 67–76; Stolz, *Zur Geschichte*, p 204; Merzbacher, *Tegernsee*, pp 199–213. For an overview see Dietmar Stutzer, *Weingüter bayerischer Prälatenklöster in Südtirol*, Rosenheim, 1980.

to a life-time at most.³¹ Scheyern like other landlords did equip its tenants not only with the land and buildings making up a holding. It was also bound by custom and self-interest to guarantee them a whole inventory of implements needed for its running, mainly seed grains and agricultural equipment.³² On the larger tenements situated on the bulk of the monastery's land, this would include also draught animals (oxen and/or horses), different carts and wagons with their ladders and boards, and harnessing gear.

All this sounds very much like the *Naturalwirtschaft* so dear to earlier generations of historians. The evidence, to state the case again, stems from two rentals of the early thirteenth century, which note what ought to be. When we come to the fourteenth century, things look quite different. In place of the earlier wine dues and transport corvées, a rental of around 1300 mentions for the Tyrol mainly cash payments.³³ Only the office Berbling near the river Inn remained burdened with transport duties, which could however be commuted to yearly cash payments.³⁴ In that form they appear again in a rental as late as 1430.³⁵ So here too it seems as if things were going the normal late-medieval way, with the money economy encroaching on, and finally replacing an economy of exchange.

Was this really so or is this yet another interpretation inherited from more positiv-

istic days? Thanks to the account books of Scheyern, this issue can for once be addressed with safety. We are using the accounts of the years 1339, 1347, 1349, 1352-1355, 1358, 1363, the only ones out of a larger number extant from the fourteenth century.³⁶ They contain for each accounting year the expenses occurred and income received by the bailiffs of the monastery's offices, as well as expenses in money and kind of some of the officials stationed at the abbey itself, such as the cellarer and steward. The purpose of the accounts was not to get a full picture of the economic state of the abbey, but rather to exercise control over both the monastery's servants and its rent-paying tenants. The account-books extant from the fifteenth century possess a different structure and contain only little of the information we are here looking for.³⁷

The complex ventures into the Southern Tyrol envisioned in the rentals of the early thirteenth century did indeed take place, at least in the fourteenth century. For this we have consistent evidence from the account-books for the years 1339, 1347, and 1349, and in a fragmentary way for the years 1352 and 1358. This information is combined and presented in the following listing. A closer sense of the evidence can be derived from the appendix. The stages and elements of these yearly recurring expeditions were thus the following:

1. at Bozen purchase of wine, payments to watchmen at the vineyards, toll-duties and gratuities to the toll-officials³⁸
2. on the Brenner route running from Bozen to Innsbruck, toll-duties at two customs points (Lurx vor dem Brenner and Lueg), gratuities to the customs officials, wages of carriers³⁹

³¹ H. Lieberich, *Die Rechtsformen des bäuerlichen Besitzes in Altbaier, in Mitteilungen für die Archivpflege in Oberbayern*, 6, 1941, pp. 159-176; L. Holzfurtner, *Die Grundleihepraxis oberbayerischer Grundherren im späten Mittelalter*, in *Zeitschrift für bayerische Landesgeschichte*, 48, 1985, pp. 647-75. For the actual practice see the following reference, and in full my forthcoming book on the late medieval Bavarian peasantry.

³² Michael Toch, 'Lords and Peasants: A Reappraisal of Medieval Economic Relationships', *Jnl Eur Econ Hist*, 15, 1986, pp. 167-173. On the broader social and political implications of such arrangements see Michael Toch, 'Ethics, Emotions and Self-Interest: Rural Bavaria in the later Middle Ages', *Journal of Medieval History*, 17, 1991, pp. 135-147.

³³ Hauptstaatsarchiv München, KL Scheyern 54, edited by Stephan, *Urkunden*, pp. 195-271. The relevant entries are 738-796.

³⁴ Stephan, *Urkunden*, pp. 253-257, entries 662-683.

³⁵ Hauptstaatsarchiv München, KL Scheyern 56.

³⁶ Hauptstaatsarchiv München, KL Scheyern 77. For fuller details on the source see the introduction to my forthcoming edition of the Scheyern accounts.

³⁷ Hauptstaatsarchiv München, KL Scheyern 78-82, for the years 1413-1420, 1436-1448, 1450-1466, 1467-1483, 1484-1489.

³⁸ Appendix, entries 10-16, 30-1; 1670, 1678, 1684-8.

³⁹ Appendix, entries 17-19; 1671, 1677, 1679.

3. at Innsbruck expenses for casks, toll-duties and gratuities to the toll-officials, payments to an innkeeper and his dependents, as well as to a Jew and his servant⁴⁰

4. at nearby Hall on the river Inn, expenses for the unloading of the carts, the chartering and loading of a ship (not a raft anymore!), the purchase, repair and filling of casks, and the provisioning (of the ship's crew?) with wine⁴¹

5. at the stops along the river (Hall, Rattenberg, Kufstein) outlays for safe-keeping and custom dues⁴²

6. at an unidentified place called Roetenuelt (possibly Rott am Inn) expenses for the unloading and guarding of the cargo.⁴³

Up to this point the whole venture was a distinctively commercial one, involving, besides the abbey's official in the Tyrol, carriers chartered for the land-route over the Brenner pass and the navigation of the Inn, carters and porters, toll-officials, an innkeeper and his dependents, watchmen, and a cooper. In Bozen and Innsbruck there is also mention of a Jew to whom wine is sold, and of his servant who got a gratuity.⁴⁴ The role of both is yet far from clear, but the connection appears again to be a commercial one. Latin wine was occasionally also purchased at Hall on the river Inn (1347)⁴⁵ and at Kufstein (1352)⁴⁶, thus saving transport costs. In conclusion, each of the stages of the journey was directed and paid for by the monastery's official in charge, the actual work being carried out by paid personnel. There is only one stage missing from the evidence, the one leading after the discharge of the wine-ship to the north of Kufstein by land-route via Munich to Scheyern. The solu-

tion to this difficulty appears to lie in a number of entries located elsewhere in the accounts. There is yet another person found spending money and natural produce for the transport of the Scheyern wine, namely the monastery's bailiff of the Alpine offices Fischbachau and Berbling.⁴⁷ His outlays are accounted for in phrases like *de vectura vasorum*; *ad vecturas vini*; *ad currus vini* and are thus clearly connected to the wine-expedition. But unlike the previous stages, the one under his direction was carried out by the tenants of the Berbling office who had featured so prominently in the manorial set-up of the thirteenth century. Most of them had indeed commuted their corvée services by cash payments. But a number of tenements actually did convey wine as well as the cheese dues rendered by some Tyrolian tenements: *vecturam expeditit vehendo vinum*⁴⁸, *duxit caseos decimales de Chufstain*.⁴⁹ One holding was even permanently assigned to the route: *hec curia pertinet ad viam*.⁵⁰ However, their labour seems to have been supplemented by the one of paid carriers.⁵¹

So there were peasant transport services in the fourteenth century. But clearly they fulfilled only a minor role. Along the greater part of the Tyrolean wine route transport was a matter for paid carriers, not for the amateur peasant. But who were these 'professionals' if not peasants? We have known for long that in the Tyrol peasants earned an additional income by catering on a rota basis for the trade passing through or near their villages.⁵² Why not

⁴⁰ Appendix, entries 20-23, 30, 37; 1683.

⁴¹ Appendix, entries 24-28; 1672, 1675, 1680-1, 1687; 2801-2, 2805-8, 2812.

⁴² Appendix, entries 32-34; 1673-4, 1676; 2803-4, 2809-10.

⁴³ Appendix, entries 35-36, 39; 2811.

⁴⁴ Appendix, entries 12, 21, 30, 31, 34.

⁴⁵ Appendix, entry 1669.

⁴⁶ Appendix, entry 3336.

⁴⁷ Appendix, entries 571, 594, 636-7, 1914, 1933, 1956, 2477, 6732.

⁴⁸ Toch, Scheyern accounts entries 121 (1339); 1922 (1347); 2390 (1349); 5383-5 (1355), 6747-9, 6758, 6770, 6772 (1358).

⁴⁹ Toch, Scheyern accounts, entries 3321 (1352), 4035 (1353), 4487 (1354), 7151, 7162 (1363).

⁵⁰ Toch, Scheyern accounts, entries 115, 1297, 2383, 4026, 4479, 5394, 6760, 7147.

⁵¹ Appendix, entry 1922: *Item pro vectura vini nomine colonorum in Germaningen V solidos II denarios*.

⁵² On the *Rodivesen*, the rotation amongst the members of rural communities of commercial transport ventures along clearly marked relay routes see Stolz, *Zur Geschichte*, pp 224-245; idem, *Rechtsgeschichte des Bauernstandes und der Landwirtschaft in Tirol und Vorarlberg*, Bozen, 1949, pp 356-7.

the Scheyern peasants too, situated as they were along a major trade route from the Tyrol into Bavaria, and used for centuries to trek the country roads? The only difference, but a substantial one for those concerned, appears to have been the fact that by the fourteenth century they did so for their own gain rather than at their lord's command. The wages paid them by the abbey of Scheyern seem to have been indirect ones, possibly taking the form of cancellation of arrears of rent due for tenements held from the monastery.⁵³

IV

So much for the areas concerned directly with long-distance operations. What about the inner core, the monastic centre and the offices situated at varying distances around it? In the offices based on the market-towns of Aichach in the west, Rain in the north-west, and Dachau in the south, there were a number of recurring transport ventures, the most important being the carting of tithe-grains for which tolls had to be paid at the market town of Pöttmes.⁵⁴ There were no direct outlays for transport, but the accounts list expenses for the shoeing of draught-horses and the building and repair of wagons.⁵⁵ So evidently the officials used a local 'car park' belonging to the monastery. At the abbey itself there is more evidence for this feature. Excluding the abbot's stable there were the usual horses and equipment, to be exact twelve draught-horses, five wagons, and one cart, but harnessing gear for much more.⁵⁶ The quantities are roughly com-

parable with the ones found during the later fourteenth century in the possession of a knight living not far away.⁵⁷ They were much lower than the amount of equipment held at the beginning of the century by a Bavarian Cistercian abbey, a monastic order here as elsewhere in the forefront of agrarian progress.⁵⁸ But then Scheyern was merely a middling landlord with only one holding under direct cultivation, and this had draught-animals of its own. Whatever the size of transport gear available at the abbey, it seems to have been much used by the officials. One task was getting yearly, on certain feast-days, gifts of sizable number of cheeses to influential people in Freising, Munich, Illmünster and other centres of ecclesiastical and lay power. Another recurring task was the purchase and transport of the local wine, a task carried out by the central bailiff of the monastery stationed at the nearby town of Pfaffenhofen an der Ilm. Such purchases were made in the towns of Ingolstadt and Schrobenhausen, and at the market-place of Pöttmes.⁵⁹ For these tasks there is no mention of peasant corvée services or of payments to hired carriers. But again, there are outlays for repairs and horsefodder.⁶⁰ So use must have been made of the monastery's own rolling stock. Indeed, during the fourteenth century the abbey had on its payroll one to three permanently employed servants of the stable.⁶¹ Sometimes such person is expressively called *auriga*.⁶² In the more orderly accounts of the fifteenth century the head carter took first place amongst the domestic

⁵³ For the system of evening out mutual obligations between landlord and tenant see Toch, *Credit*.

⁵⁴ Toch, Scheyern accounts, entries 1534, 2584, 4643, 5604, 6457.

⁵⁵ Toch, Scheyern accounts, entries 1444, 1845, 3372, 3570, 4081, 4579, 4580, 5607, 6456.

⁵⁶ Toch, Scheyern accounts, entry 1588 (1347), a lengthy inventory taken down at the occasion of a new steward taking office: *Anno domini MoCCCXLVIIo in die penthecostes claves dispensacionis commisse sunt dicto Lepori cum rebus inventis in officinis ut subscribitur ... Item XII equos plauts (rales). Item III garslaußel. Item V curris. Item I charren. Item XLVIII silsail. Item VI haesail. Item XXX parvos.*

⁵⁷ M. Piendl, *Hab und Gut eines bayerischen Ritters im 14. Jahrhundert*, in D. Albrecht et alia, eds, *Festschrift für Max Spindler*, Munich, 1969, pp. 193–213.

⁵⁸ The Cistercian abbey of Schönbald kept 44 to 82 horses and 21 to 42 oxen to service the monastery and its nine granges: B. Griesser, *Jahresberichte über die Wirtschaftsführung im Kloster Stams*, in: *Cistercienser-Chronik*, 62, 1955, p. 18.

⁵⁹ Toch, Scheyern accounts, entries 777, 1796–1808, 3517–8, 3521–4, 3531–3, 3537–8, 3545–7, 3549.

⁶⁰ Toch, Scheyern accounts, entries 1763, 1799, 3551, 7076–9.

⁶¹ Toch, Scheyern accounts, entries 714, 722, 808 (1339); 1140, 1740, 1754 (1347); 2206, 3062, 3082 (1349); 7028, 7106 (1363).

⁶² Toch, Scheyern accounts, entries 7079, 7093.

servants of the monastery.⁶³ It was he who now carted home the Latin wine bought solely on the Munich market.⁶⁴ Such a shift of purchasing policies, which must have taken place between c 1370 and 1410, explains the total disappearance of the Tyrolian wine ventures from the accounts.

We are left with one last office designated 'in inferiori terra'. Its holdings were more thinly spread over a wide area to the east and north-east of Scheyern. This office carried the bulk of the transport needs of the abbey. There was grain, salt and wine to be carted from Freising; salt from Dorfen; grain and cheese from the tithe-returns at Landshut; wine from Gündelkofen; wine and tithes from Kelheim, Weltenburg, Neustadt on the Danube and Vohburg.⁶⁵ These ventures were usually entrusted to hired carters, with costs much lower than the ones incurred in the wine-expeditions to the Tyrol.⁶⁶

So we have come full circle: from the expensive transport venture organized in the Tyrol and using hired carriers; to its occasional extension by *corvée* labour from the Inn river to Munich; to the journeys organized in the vicinity of the monastery by local officials basing themselves on locally available beasts and equipment; and back to hired carriers in the wider area to the east of Scheyern. Exactly like the evidence from rural England of the period 1200 to 1500, our Bavaria case too demonstrates 'how customary, demesne and contractual carriage could be integrated'.⁶⁷

Behind this locally differentiated structure there was sound economic sense and rationality. The transport of southern quality wine from far-away Tyrol, dependent as it was on distant costs and weather conditions, could not be planned, directed and executed from the monastic centre, but had to rely on organization and manpower on the spot.⁶⁸ There was little reason not to use the expertise of the tenants in the Inn valley for the last leg of the journey which anyway had to be organized in relays. By contrast, in the immediate core of Scheyern's possessions, on the short distances running along inner lines of communication, transport needs could be satisfied by relying on the abbey's own stock and personnel. And finally, it did make sense to leave the frequent transports from the eastern trade arteries of the Danube and Isar rivers to a hired and possibly already professional work force. Like the carriers of the Tyrol they connected the low-intensity region of Scheyern to areas of higher economic pressure linked together by navigable rivers.

One would suspect that this last feature of transport, functioning as a valve between regions of different economic intensity, was not particular to Scheyern. The prevalence of foreign wine transports among the total transport needs of so many Bavarian lords, whether ecclesiastical or lay ones, would indeed support such a proposition.⁶⁹ As to its overall economic impact, one must ask how typical or important was this type of transport geared towards the needs of a handful of Benedictine monks. Hektor Ammann, who possessed an intimate knowledge of the late medieval commercial economy, thought very highly of the monasteries' power as consumers and employers.⁷⁰ Our own research into the

⁶³ Hauptstaatsarchiv München, KL Scheyern 78, ff. 126 (1418); 172 (1419); 230 (1419); Lit. 79 ff. 112' (1439), 154' (1441), 155', 156 (1440), 158 (1443).

⁶⁴ Hauptstaatsarchiv München, KL Scheyern 78 f. 127'; KL Scheyern 79 f. 29 (1436).

⁶⁵ Toch, Scheyern accounts, entries 652-3, 657-9, 663, 1852-1871, 1880-1, 2638, 2644-7, 2654, 4708-18, 4730-2, 5666, 6513-9, 6531, 6534-5.

⁶⁶ Toch, Scheyern accounts, entries 653, 667 (1339); 1856-7, 1859, 1861, 1867-7, 1878 (1347); 2638, 2644-6 (1349); 4712, 4717 (1354); 6516, 6534 (1358).

⁶⁷ David L Farmer, 'Marketing the Produce of the Countryside, 1200-1500' in Edward Miller, ed. *The Agrarian History of England and Wales, volume III 1348-1500*, Cambridge, 1991, pp 347-358, here p 355.

⁶⁸ For a sober evaluation of such problems by another Bavarian landlord of the period see Merzbacher, Tegernsee, 211.

⁶⁹ Klein, Weinsaumdienste, 67-76.

⁷⁰ Hektor Ammann, Klöster in der städtischen Wirtschaft des ausgehenden Mittelalters, in *Argovia*, 72, 1960, pp 102-33.

economic history of Scheyern and other Bavarian abbeys indicates in detail the overwhelming weight possessed by even a middle-sized monastic establishment in an agrarian and small-town surrounding.⁷¹ In a similar vein, one might ask how typical was the recurring appearance of bulky and relatively cheap articles, the grains, cheese, and wines, we have found to be the staple transport goods? Similar consumption and thus transport needs can be found in the accounts of some Southern-German lords.⁷² Yet other lords again had no demand for such transport ventures, by simple virtue of their location at or very near a sizable market place. The great monastery of St Emmeram at Ratisbon for instance incurred almost no expenses for transport. The only outlays mentioned in its early fourteenth century account books are on one hand for the lord abbot's travels to the papal court at Avignon and the sending back of barrels of books purchased there, and on the other hand for the humble carting of humus soil and manure to the abbey's vineyards in the neighbourhood of the town.⁷³ All the rest, actually tremendous amounts of produce needed to feed and sustain this huge establishment, must have been purchased and conveyed locally on the great market place of Ratisbon.

V

Thus there is no clear-cut chronology of a closed manorial system of transport decaying and then being replaced by a commercial one. Still less is there a definite

dichotomy between a natural economy based on exchanges in kind and a monetary one. The change from one to the other, which did indeed occur during the later Middle Ages, was a very much gradual and uneven one. Our findings indicate a high degree of local specialization, with variations in transport needs and solutions attuned to varying local circumstances. Such skilful management of resources, born of necessity rather than of choice, seems to have been a general feature of the period. It is characteristic of the way Scheyern and indeed many other lords had to balance their limited monetary resources against what little remained of their ancient power of command over the work of their tenants.⁷⁴ Unlike their shipbuilding Hanse contemporaries of the urbanized German North, rural Bavarians of the later Middle Ages did not yet attempt to overcome the limitations and constraints put upon productivity (here transport) by raising the level of technology. Rather, they put their faith in organization. One might therefore conclude, as has been stated for late medieval rural England, that communications were indeed still adequate for the needs of the parties concerned.⁷⁵ As for so many other aspects of economic development, the driving forces for a better system of road transport were not to be generated from below, from the manorial and agrarian level treated here. As witnessed by the sixteenth-century history of the Fugger enterprises in mining, commerce, and communication, or the still later post-system built by the Thurn-Taxis, such impetus developed only after the close of the Middle Ages, from above, from the needs of warfare, early-capitalistic trade and the extensions of dynastic concerns stretched all over Europe. In this sense the

⁷¹ I have outlined these preliminary results in my forthcoming 'Local Credit'. They are to be published in full in a larger work in progress.

⁷² Emil von Ottenbach, *Die ältesten Rechnungen der Herren von Schlaudersberg*, in *Mitteilungen des Instituts für österreichische Geschichtsschreibung*, 2, 1881, p 610; Franz Bastian, *Das älteste Aldersbacher Rechnungsbuch und die Verwendung der klösterlichen Zollfreiheiten im bürgerlichen Handel*, in: *Staat und Volkstum, Festgabe für K. A. v. Müller*, 1933, pp 31-33.

⁷³ A preliminary result of my reading of St Emmeram's accounts for the years 1325, 1327 to 1333, the manuscript sources of which are located in Hauptstaatsarchiv Munich, KL St Emmeram 19 1/2.

⁷⁴ Gero Kirchner, *Probleme der spätmittelalterlichen Klostergrundherrschaft in Bayern. Landflucht und bäuerliches Erbrecht*, in: *Zeitschrift für bayerische Landesgeschichte*, 19, 1956, S 1-94.

⁷⁵ Farmer, *Marketing*, p 358.

generalizations drawn exactly forty years ago by Roberto Lopez from the highly developed economy of medieval Italy hold true even for the case of agrarian landlocked Bavaria.⁷⁶

Appendix

Expenses of the monastery of Scheyern for the purchase and transport of South-Tyrolian wine (1339, 1347, 1349, 1352, 1358).

Source: Hauptstaatsarchiv München, Kl.-Lit. 77; ed. by Michael Toch, *Die ältesten Rechnungsbücher des Klosters Scheyern (1339-1363)*, Bayerische Akademie der Wissenschaften München, forthcoming.

1339

- 9 Distribucio predictorum denariorum.
- 10 Primo Bozani XXXII libras ad prohibitionem aque.
- 11 Item IIII libras Veronensium saltneriis vindemiatoribus.
- 12 Item emit iudeo IIII urnas et III pacidas pro XVIII libris Veronensium, quibus inclusis dedit iudeo III carradas vini et dimidiam urnam.
- 13 Item pro I urna vini infusi ad vasa dominorum IIII libras Veronensium.
- 14 Item pro trunco et recessu I libram Veronensium Bozani.
- 15 Ibidem XIX grossos pro theloneo et honoranciis thelonei.
- 16 Item pro letteris thelon(ei) IIII libras cum dimidia.
- 17 Item in thelon(eo) episcopi Aug(ustinensis) XVIII grossos.
- 18 Item in dem Lu\og pro thelon(eo) et honoranciis IIII libras II grossos.
- 19 Item vectoribus XLI libras III grossos.
- 20 Item in Insprugga pro vasis dominorum III libras minus II grossis.
- 21 Item pro vasis iudei III libras.

22 Item pro thel(oneo) et honoranciis thel(onei) I libram Veronensium.

23 Item pro thelon(eo) minuto ibidem VIII grossos.

24 Item pro eductione vini et pro depositione ad navim XVI grossos, et IIII\or grossos de anno preterito pro dominis in Wiltina.

25 Item curribus de vectura ad navim VIII grossos.

26 Item vasifici II grossos pro debito sui vini.

27 Item naute VIII 1/2 libras Veronensium.

28 Item pro vino ad navigium X grossos et pro arra.

30 Item familie hospitis in Insprugga VI grossos, pro recessu ex parte iudei III grossos.

31 Item servo iudei III libras Veronensium pro honorancia et IIII grossos pro sumptibus et IX grossos Bozani.

32 Item in Ratenberch XVI grossos pro thel(oneo).

33 Item de custodia nocturnali II grossos in Hall(e) et Cufstein.

34 Item iudici in Chufstein I grossum pro gustacione vini iudei.

35 Item in Ro\etenuelt II grossos de custodia et vigilia vini.

36 Item famulo petenti currus ibidem II grossos.

37 Item hospiti Insprugge in debitis suis X libras Veronensium et V grossos.

39 Item de exempcione vasorum a navi IIII grossos.

42 Summa distribucionis XXIII marce VII libre VI grossi.

571 Anno domini millesimo CCC\oXXXVIII magister Celle, prepositus in Vischpach, distribuit recepta per eum ut subscribitur.

594 Item de vectura vasorum I libram denariorum.

636 Item X caseos ad vecturas vini.

637 Item in Roetenuelt Ruedlini II caseos.

⁷⁶R. Lopez, 'The evolution of land transport in the Middle Ages', *Past & Pres*, 9, 1955, pp 17-29.

1347

1668 Anno domini ut supra hec est distribucio facta per Gopold(um) prepositum in montibus.

1669 Item dedi in Hall XI marcas IIIIor libras IIII grossos, pro quibus comparavi vinum.

1670 Item in Bozano emi duas legenas pro III grossis.

1671 Item dedi pro vectura de Bozano omnibus computatis LIII libras Veronensium.

1672 Item dedi appositoribus in Hall III libras Veronensium.

1673 Item theloniatori ibidem IIII libras.

1674 Item pro thelonio in Ratenberch XX grossos.

1675 Item pro V vasis VII libras minus IIII grossis.

1676 Item vmb zolbrief in Tiral IIII libras et IIII grossos.

1677 Item pro caseis stratoribus IIII grossos.

1678 Item pro II pacinis vini I libram et VI grossos.

1679 Item stratoribus X libras.

1680 Item nautis pro valet VI grossos.

1681 Item portatoribus vinorum XV grossos.

1682 Item Perchtoldo dicto Stainpoch pro runcacione VI libras I 1/2 grossos.

1683 Item fur Wazzerphennig X libras.

1684 Item saeltnaeriis I libram.

1685 Item fur wimerlon X grossos.

1686 Item de orto pro vectura in civitatem XIII grossos.

1687 Item dimidiam libram Veronensium pro infusione vasorum.

1688 Item pro V urnis vini XXV libras Veronensium in Bozano.

1692 Item in primo introitu expendi XII libras.

1693 Item pro introitu et exitu secunda vice IIII libras.

1914 Item XXVI denarios pro vectura unius legene de Roetenuelt et pro expensis Gopoldi.

1922 Item pro vectura vini nomine colonorum in Germaningen V solidos II denarios.

1933 Item I modium pro pane ad currus vini.

1956 Item XII caseos ad currus vini.

1349

2477 Item pro caseis ad vinum in Roetenueld XII denarios.

2801 Item dedit vasatori in Hall VIII libras Veronensium.

2802 Item nautis pro precio VII 1/2 libras Veronensium.

2803 Item pro honorancia thelon(ei) Hallis I libram Veronensium.

2804 Item pro minori thelon(eo) Hallis VIII Veronenses.

2805 Item pro vino ad replenda vasa XLVI Veronenses.

2806 Item portatori I Veronensem.

2807 Item pro vectura vini ad aquam VI Veronenses.

2808 Item appositoribus et depositoribus VI Veronenses.

2809 Item in Ratenberch pro thelon(eo) VIII Veronenses.

2810 Item custodi II Veronenses.

2811 Item in Rotenuelt II Veronenses.

2812 Item dedit III pro arra dum convenit nauta.

2813 Item pro expensis IIII libras Veronensium.

1352

3336 Item pro vino latino de Chofstain II libras denariorum et pro expensis.

1358

6727 Nota prepositus in Vischpahaw, caseorum in Osterhofen per ipsum receptorem dedit plebano in Vischpahaw C caseos.

6732 Item ductoribus vini latini dedit XIII caseos.

Rural Settlement Contraction in the East Riding of Yorkshire between the mid-seventeenth and mid-eighteenth Centuries

By SUSAN NEAVE

Abstract

Evidence of settlement contraction in the form of earthworks marking abandoned house sites is to be found throughout England, yet the timing and causes of village shrinkage have received only limited attention from historians. This article explores the extent of settlement contraction in the East Riding of Yorkshire between the mid-seventeenth and mid-eighteenth centuries. Nationally this was a period when population stagnation coincided with urban expansion suggesting widespread rural depopulation. Using detailed documentary material relating to individual settlements, the possible causes of contraction are explored, and a link between landownership patterns and contraction is established.

IN the Introduction to *Deserted Medieval Villages*, first published in 1971, Beresford and Hurst drew attention to another type of settlement, the shrunken village. They wrote:

The 'shrunken' village is a phenomenon full of historical and archaeological interest. Its living portion resembles any normal English village, while its grass-covered houses and streets resemble the deserted sites. Its mysteries are open to the archaeologist without trespassing into cottage gardens and under cottage floors. *For the historian the variety of causes and periods which could produce a shrunken village present a major challenge to the intelligent use of documentary evidence.*¹

Historians and archaeologists alike have been slow to accept this challenge. Housing developments are gradually eroding many shrunken village earthworks, yet the shrunken village continues to be one of the most common features of the English landscape. Indeed, as Christopher Taylor has commented 'It is probably safe to say that there is hardly a village in England which does not have at least one or two empty plots where houses once stood'.² In *Village and Farmstead*, Taylor provides examples of shrinkage at many different

periods but stresses that 'a lack of detailed documentation from medieval times ... usually prevents the accurate identification of many presumed examples of shrinkage of that period'.³ This cannot be said of the seventeenth and eighteenth centuries, yet little research has focused on the shrunken village during this later period. One of the few exceptions is the work of Stuart Wrathmell, an archaeologist, on post-medieval depopulation in Northumberland, which demonstrated that the dating of certain deserted or shrunken village earthworks should be reconsidered.⁴ Other studies, for example Mary Dobson's examination of south-east England, have drawn attention to general population decline in the late seventeenth and eighteenth centuries, but not to its impact on the physical size of individual settlements.⁵

In response to the challenge posed by Beresford and Hurst some twenty years ago, a study was made of post-medieval settlement contraction in the East Riding

¹ M W Beresford and J G Hurst, eds, *Deserted Medieval Villages*, 1971, p xviii (emphasis added).

² C Taylor, *Village and Farmstead*, 1983, paperback edn 1984, p 165.

³ Taylor, *Village and Farmstead*, p 166.

⁴ S Wrathmell, 'Village Depopulation in the 17th and 18th Centuries: Examples from Northumberland', *Post-Medieval Archaeology*, 14, 1980, pp 113-26.

⁵ M J Dobson, 'The last hiccup of the old regime: population stagnation and decline in late seventeenth and early eighteenth century south-east England', *Continuity and Change*, 4, 3, 1989, pp 395-428.

of Yorkshire.⁶ This is an area where considerable work has been carried out by Beresford and others on medieval depopulation, and where documentary and cartographic evidence suggested that the century after the Restoration was likely to be a key period in the history of the shrunken village.

I

Two sources provided the basis for a study of settlement contraction in the rural East Riding between the mid-seventeenth and mid-eighteenth centuries, a set of hearth tax returns for 1672, and returns made in response to an archiepiscopal visitation questionnaire of 1743.⁷

The hearth tax, levied between 1662 and 1689, was paid according to the number of hearths per household. Those who were already exempt from paying church and poor rates, and others who could obtain a certificate confirming that they lived in a house worth £1 or less a year, did not occupy land worth more than £1 a year, and did not possess goods, chattels, lands or tenements in excess of £10 in value, were also exempt. The tax was levied at two shillings per hearth, payable in half-yearly instalments. Under the original act, collection was to be made by the constables of each township, but in 1664 this responsibility was transferred to specifically appointed officials. From 1666-9, and again from 1674-84, the collection of the tax was farmed out, and from 1684 until its termination in 1689 it was collected through a special commission. Since assessments were only returned to the Exchequer during the periods when the tax was not farmed out or dealt with by the special commission, few

records survive except for these limited periods.⁸

For the East Riding, the earliest surviving assessment is for Michaelmas 1670, but the document is in poor condition. Of those East Riding assessments which are more or less complete, 1672 was chosen for this study as it appears to give the fullest and most legible lists of both tax payers and exempt householders.⁹ Other hearth tax assessments from the early 1670s were substituted where necessary.

Although often used to estimate total population, the hearth tax is most reliable as a source for assessing the number of households in a settlement, since no multiplier is required. If anything, it is likely that the hearth tax under-represents the number of households, since the lists of those exempt from payment are sometimes incomplete.

The archiepiscopal visitation returns of 1743, available for the diocese of York, provide information on, amongst other things, the number of families in each parish.¹⁰ Returns survive for most East Riding parishes. For a handful of larger parishes, the number of families is obviously an estimate, but in the majority of cases a precise figure is given. There were sufficient single-township parishes within the East Riding to enable comparison with the hearth tax figures to be made for individual settlements. In parishes which comprised two or more townships, changes in the number of households/families in the parish, rather than in each of the constituent townships had to be examined.

In order to use the above sources to examine physical changes in settlement size, it is necessary to consider whether

⁶ See the author's unpublished PhD thesis 'Rural Settlement Contraction in the East Riding of Yorkshire c 1660-1760', Univ of Hull, 1990, on which this article is based.

⁷ PRO, 179/205/504; S L Ollard and P C Walker, eds, *Archbishop Herring's Visitation Returns 1743*, i-v, Yorks Archaeol Soc Record Series (hereafter YASRS), 71, 72, 75, 77, 79, 1927-37.

⁸ For further information on the hearth tax see C D Chandaman, *The English Public Revenue 1660-1688*, Oxford, 1975, pp 77-109; J D Purdy, *Yorkshire Hearth Tax Returns*, Centre for Regional and Local History, University of Hull, 1991, pp 1-18.

⁹ PRO, E179/205/504.

¹⁰ Ollard & Walker, *Herring's Visit*, i-v. The original returns are at the Borthwick Institute of Historical Research, York (hereafter BIHR), BpV.1743/Ret.

'household' and 'family' represent what Laslett has termed 'houseful', that is, 'all persons inhabiting the same set of premises'.¹¹

A number of historians studying rural areas have assumed that each head of household mentioned in the hearth tax lists occupied a separate dwelling, in other words, a tax-payer assessed for one hearth lived in a one-hearthed cottage. Spufford, for example, in *Contrasting Communities*, maps the distribution of one- and two-hearthed houses in Cambridgeshire from the hearth tax returns.¹² In the East Riding other sources, for example rentals taken by 'house row', indicate that it was uncommon for more than one household to occupy a property. Where a property was in joint occupation, this was made clear in the hearth tax returns by bracketing the names of the householders.

The comments of the clergy in their responses to the visitation questionnaire in 1743 suggest that 'family' was generally interpreted to mean a person or group of people living under one roof. The incumbent at Cottingham near Hull noted that 'There are about 277 families in this parish, reckoning in every house inhabited a family; although in 20 of these houses there is but one inhabitant'.¹³ Similarly at Burythorpe in Buckrose deanery the incumbent reckoned a family to every house inhabited although again he was careful to point out that some of these 'families' comprised only one or two people.¹⁴

This suggests that in the rural East Riding the visitation returns are a fairly reliable indicator of the number of occupied houses in a settlement. If, however, several families did share accommodation, the estimated number of houses in 1743

will be falsely inflated. The hearth tax returns probably give an under-estimate of number of households; thus where there is a decrease between 1672 and 1743 this may be even greater than the figures indicate. It can therefore be argued that 'household' as used in the hearth tax returns and 'family' as used in the visitation returns are comparable units and provide an acceptable basis on which to study settlement contraction. The validity of this argument can be tested by examining a settlement where cartographic evidence of shrinkage is also available.

II

The East Riding village of Watton lies some eight miles north of Beverley, in the valley of the river Hull. The settlement is split into two sections by the Beverley-Driffeld road. To the west of this road is the core of the modern village, comprising a single street built up with houses on both sides. On the eastern side of the main road, and some distance from it, stand the remnants of a Gilbertine priory (Watton Abbey, now a private house), the village church, and a handful of cottages. It is clear, especially when viewed from the air, that Watton was once a much larger village, for running north-south alongside the road to Driffeld lie a series of house platforms – a classic example of a shrunken medieval village. Or is it? The documentary evidence tells a different story.

Three early maps of Watton survive: one dating from the mid-seventeenth century; a second drawn in 1707 but based on an earlier survey; and another dated 1761 (see Figure 1).¹⁵

The two earlier maps show cottages where the empty platforms now stand. By 1761 only one building remained in this

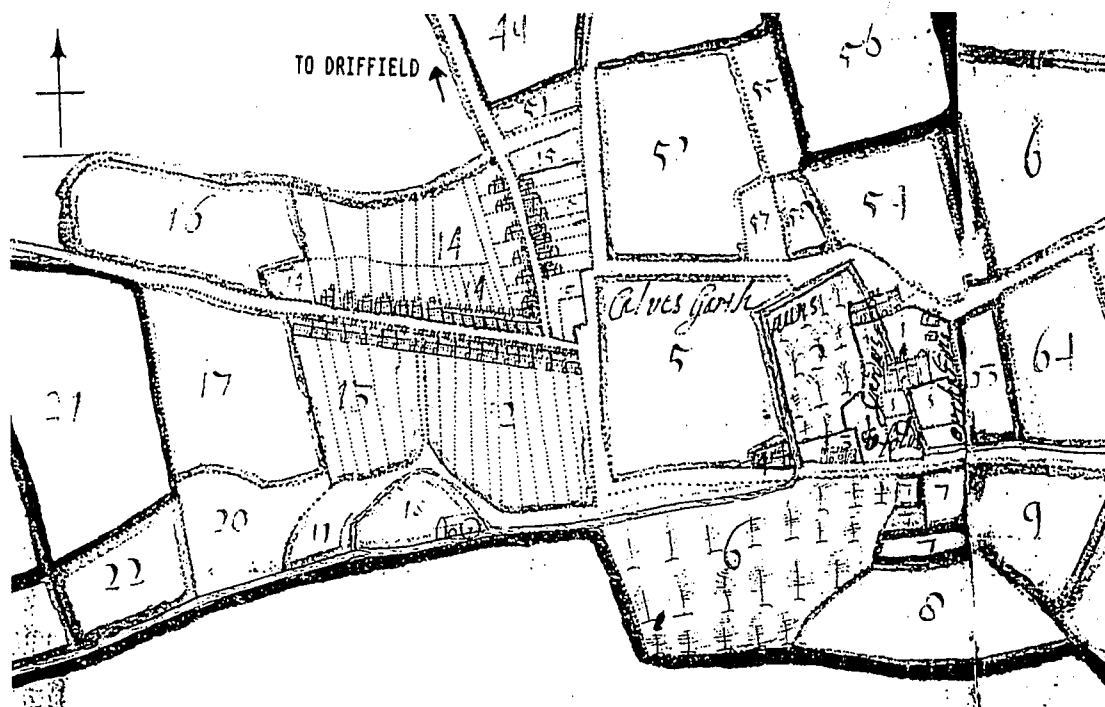
¹¹ P Laslett and R Wall, eds, *Household and Family in Past Time*, Cambridge, 1972, p 36.

¹² M Spufford, *Contrasting Communities*, Cambridge, 1974, pp 39–45.

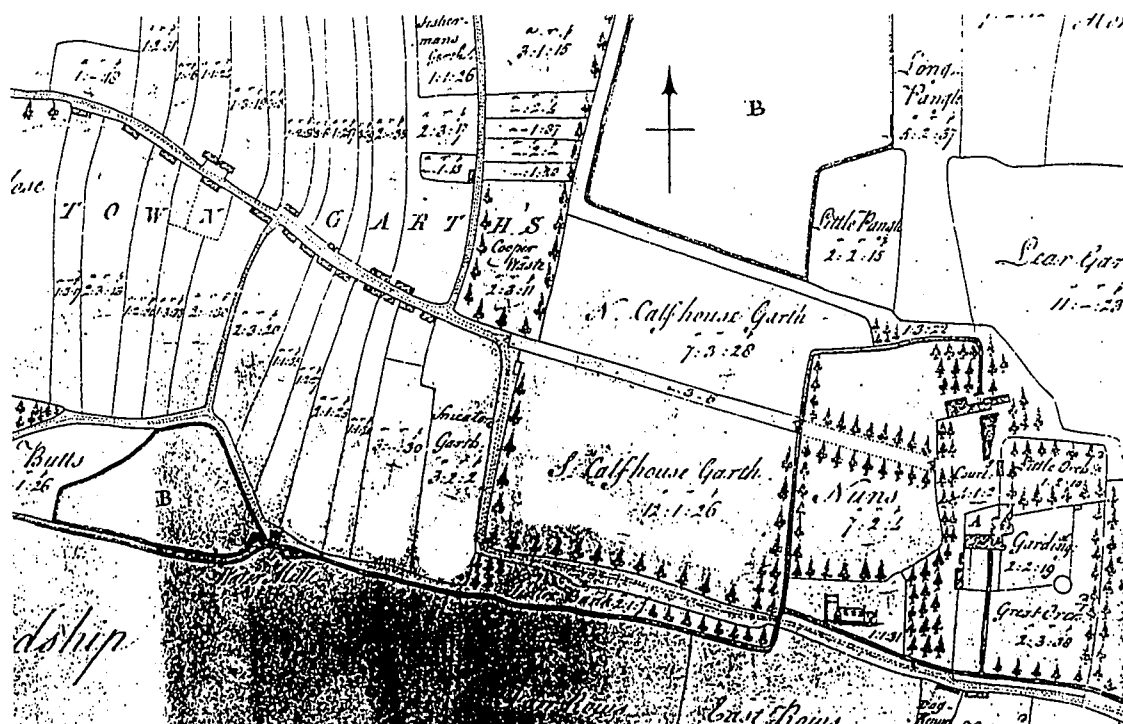
¹³ Ollard & Walker, *Herring's Visit*, i, p 150.

¹⁴ Ollard & Walker, *Herring's Visit*, i, p 106.

¹⁵ The mid-seventeenth century map is in Humberside County Archive Office (hereafter HCAO), DDX/128/3. Both eighteenth-century maps are in private hands. The Beverley-Driffeld road has been straightened in the present century.



(a)



(b)

FIGURE 1

Settlement contraction at Watton

(a) Map of 1707, 'drawn from an old survey'

(b) The village in 1761

TABLE 1
Change in number of households/families in the rural East Riding between 1672 and 1743*
(by wapentake)

Wapentake**	1672 (Households)	1743 (Families)	Change 1672/1743	% Decrease
Howdenshire	729	528	-201	27.57
Buckrose	1313	961	-352	26.81
Holderness - South	1004	757	-247	24.60
Holderness - Middle	1238	950	-288	23.26
Harthill - Bainton Beacon	838	655	-183	21.84
Harthill - Holme Beacon	1005	790	-215	21.39
Dickering	2058	1691	-367	17.83
Hullshire***	275	226	-49	17.82
Holderness - North	1099	920	-179	16.29
Ouse and Derwent	1066	905	-161	15.10
Harthill - Wilton Beacon	943	852	-91	9.65
Harthill - Hunsley Beacon	1360	1251	-109	8.01
All wapentakes	12,928	10,486	-2442	18.89

* excluding the principal towns of Hull and Beverley. A handful of rural settlements, where 1743 figures were not available, were also excluded.

** the wapentakes of Holderness and Harthill are subdivided into several divisions.

*** the townships surrounding Hull which (together with the town of Hull), formed the county of Hull or 'Hullshire' have been treated as a wapentake.

Sources: see note 7.

area, and the number of houses lining the main street had almost halved. Population figures for the village support the map evidence; in 1673 [sic] there were 71 households at Watton, but by 1743 only 34 families lived there.¹⁶ The empty house sites in this particular settlement clearly represent a post-medieval shrinkage.

Using the hearth tax returns and visitation returns, an analysis of settlement contraction for the whole of the rural East Riding, subdivided by wapentake, was made. The results are given in Table 1.

A more specific list was drawn up of those East Riding townships where the 1672 and 1743 figures were unambiguous - primarily where a parish comprised a single township, or where the visitation figures were subdivided into townships. Eighty-four townships met these criteria. The selection was made irrespective of

whether the 1743 figures were lower or higher than those for 1672. The total decrease in number of households/families between 1672 and 1743 for these 84 townships was 19.26 per cent, comparing favourably with the figure of 18.89 per cent for the whole riding. From this list individual settlements where contraction was particularly marked could be identified and more detailed case studies made.

For the study to be valid it was, of course, necessary to compare and contrast settlements which shrank with those which remained more or less stable in size. For this purpose one particular area of the East Riding, the Bainton Beacon division of Harthill wapentake, was examined. In the seventeenth and eighteenth centuries the division comprised fourteen ecclesiastical parishes, containing twenty-five townships: Bainton (including the townships of Bainton and Neswick), North Dalton, Great Driffeld (Great Driffeld, Little Driffeld and Elmswell), Holme on the Wolds, Hutton Cranswick (Hutton Cranswick, Rotsea and Sunderlandwick),

¹⁶ PRO, E179/205/523; Ollard & Walker, *Herring's Visit*, iii, p 213.

The 1673 hearth tax figure was used since it gave a marginally higher number of householders than the 1672 list. In addition to the contraction of the village centre, there had been a reduction in the number of outlying farms in the township by the mid-eighteenth century.



FIGURE 2
East Riding wapentakes

Kilnwick (Kilnwick, Beswick and Bracken), Kirkburn (Kirkburn, Eastburn, Southburn and Tibthorpe), Lockington (Lockington and Aike), Lund, Middleton on the Wolds, Scarborough, Skerne, Warter, and Watton. The Bainton Beacon division was partly chosen because of its situation at the heart of the East Riding, ensuring that influences upon its settlements were largely confined to that identifiable region (see Figure 2). Topographically the landscape is varied, ranging from low-lying settlements in the valley of the Hull river, for example Watton (see above) to Wolds settlements such as Warter, where the land rises above 600 feet. The demographic experience of the division, and incidence of settlement contraction there, mirrored

the pattern of the riding as a whole, thus making it an ideal unit for detailed examination.

III

The preliminary part of the study focused on analysis of population levels in the Bainton Beacon division. Population estimates for c 1672 and 1743 were obtained from the hearth tax and visitation return figures, using a multiplier ($\times 4.5$), and from an analysis of material from parish registers.¹⁷ The results obtained by both

¹⁷ Hearth tax returns for 1670, 1672 and 1673 (PRO, E179/205/504,514,523) were examined, and the highest figure for each township used. Parish registers for the Bainton Beacon division are all at HCAO, with the exception of the Warter registers, which are at BIHR. Bishops' transcripts (BIHR) were used to fill gaps in the registers wherever possible.

methods suggested a decrease in actual population of around 20 per cent in the Bainton Beacon division. A more detailed analysis of burial and baptism figures showed that, although the division experienced several periods of crisis mortality (notably 1679–81 and 1728–9, both periods of national crisis mortality), these did not have a long-term impact on population levels. Overall, during the seven decades from 1671–1740, 8581 baptisms were recorded, but only 7964 burials, indicating a natural growth in population. The decline in size of many settlements in the division was not a result of a natural population decline.

Having established that other causes of settlement contraction must be sought, a study of the landownership structure of the settlements within the Bainton Beacon division was then undertaken. The East Riding is fortunate in that it is one of only four areas where a Registry of Deeds was established in the early eighteenth century (in the case of the East Riding, the Registry commenced in 1708).¹⁸ The first two volumes of the township index of the Registry (covering the period 1708–1756) were searched and the number of land transactions in each township in the Bainton Beacon division recorded, on the assumption that townships where a high level of activity was recorded had a number of freeholders, whereas those where few or no land transactions took place would probably be under the control of one or a small number of landowners. The material drawn from the Registry of Deeds was used in conjunction with a list of freeholders who voted in an election in 1742, and, in the absence of an earlier reliable source, with the land tax returns of the 1780s.¹⁹ The townships were ranked according to

the number of transactions recorded in the Registry of Deeds.

When the material on landownership structure was presented alongside the percentage decline in size of individual settlements, a link between number of landowners and vulnerability to contraction was apparent (see Table 2). The majority of the settlements under the control of only one or a small number of landowners experienced substantial contraction, and in some cases had been reduced to one or two farms by the mid-eighteenth century. This suggested that settlement contraction could be a direct result of changes in land use or agricultural practice, such as emparking, enclosure, or an increase in size of farms, initiated by major landowners. A selection of East Riding case studies which demonstrate this point are given below.

IV

The creation of landscape parks is seen as one the principal causes of depopulation in the eighteenth century. In the East Riding emparking was a contributory factor in the shrinkage of several settlements and occasionally led to the destruction of a village. This was the case at Easthorpe, a small settlement which lay in Londesborough parish.

The site of Easthorpe lies south-east of Londesborough village, its eastern township boundary adjoining the Bainton Beacon division. The settlement, which comprised twelve households in 1672, and ten cottages and four farms in the early-eighteenth century, was depopulated when the park associated with Londesborough Hall was extended.²⁰

There may have been a small deer park at Londesborough in the Middle Ages, but it was not until the mid-seventeenth cen-

¹⁸ The Registry of Deeds, located at Beverley and now incorporated in HCAO, was concerned primarily with freehold land, although mortgages, wills and leases exceeding a term of twenty-one years could also be registered. Copyhold land was not dealt with by the Registry.

¹⁹ *Yorks Poll Book*, 1742; HCAO QDE/1 (land tax returns).

²⁰ PRO, E179/205/504; D Neave, *Londesborough: History of an East Yorkshire Estate Village*, Londesborough, 1977, p. 6.

TABLE 2
Landownership in the Bainton Beacon division linked with settlement contraction

<i>Deeds Registry: number of transactions registered 1708-56</i>	<i>Township</i>	<i>Number of freeholders voting in 1742</i>	<i>Percentage land tax paid by 3 largest owners†</i>	<i>Reduction in number of households/ families between 1670-3 and 1743</i>
300 +	Great/Little Driffield	33	54.1	n/a (other sources indicate none)
101-300	{ Hutton: Cranswick	15	57.8	4.5 (incl. Rotsea/Sunderlandwick)
	{ North Dalton	15	60.1	17.2%
	{ Lockington	8	77.3	n/a#
	{ Tibthorpe	10	63.0	see Kirkburn
	{ Holme on the Wolds	—*	69.4	9.1%
	{ Lund	13	69.7	10.7%
	{ Southburn	0	75.0	see Kirkburn
	{ Aike	2	84.5	n/a#
	{ Middleton	—*	85.1	25%
	{ Bainton	4	94.5	8.7% +
21-100	{ Skerne	0	95.6	25.6%
	{ Kirkburn	3	96.7	36.6% (incl. Southburn, Tibthorpe, and Eastburn)
	{ Kilnwick	2	99.8	n/a#
	{ Elmswell	0	100	n/a (deserted in 19th century)
	{ Rotsea	0	91.3	settlement depopulated
	{ Scarborough	0	99.2	52.6%
	{ Beswick	1	100	37.1%
	{ Bracken	0	100	settlement depopulated
	{ Eastburn	0	100	settlement depopulated
	{ Neswick	1	100	68% +
1-20	{ Sunderlandwick	1	100	settlement depopulated
	{ Warter	0	100	31.8%
	{ Watton	0	100	52.1%

* confusion with other Yorkshire townships.

† in 1782 or 1787.

for an explanation of the difficulties encountered with the parishes of Lockington (comprising Lockington and Aike) and Kilnwick see Neave 'Settlement Contraction' pp 54-57.

+ between 1672 and 1764.

Sources: HCAO Registry of Deeds; *Yorks Poll*, 1742; HCAO QDE/1 (land tax returns); PRO E179/205/504, 514, 523; Ollard & Walker *Herring's Visit* i-iii.

tury, when the estate was in the hands of Richard Boyle, 1st Earl of Burlington, that work on the present park commenced. Extensions to this park were made throughout the second half of the seventeenth century and by 1704 it had encroached upon agricultural land belonging to Easthorpe township. Eventually the settlement of Easthorpe was destroyed. Additions said to have been made to Londesborough park in the year 1738 include Easthorpe Green and several houses and garths. A rental dated 1739 mentions two ruinous cottages and a further five cottages 'all pulled down' at Easthorpe.²¹ Earthworks of the former village can still be seen within the park.

In the north-west corner of the riding the settlement of Scampston was partially destroyed in the early-eighteenth century when the grounds of Scampston Hall were laid out. A map of c 1730 suggests that some houses in the eastern half of the village had recently been cleared for this purpose, and by 1766 more cottages had gone in order to create the kitchen gardens of the hall.²² Forty-nine households were recorded at Scampston in 1672, but by 1743 only around two dozen families lived there.²³

Similar examples of villages having been swept away or reduced in size for emparking are to be found throughout England. Emparking was commonly associated with agrarian reorganization, and provided landowners with an opportunity to reduce the number of cottages to the minimum required to house key estate workers. Whilst many tenants benefited from the improved quality of housing provided in new estate villages, others for whom no such provision was made found themselves

forced to seek work and accommodation elsewhere.

In the medieval period enclosure of open-field land, and the subsequent conversion of the land to pasture, has been shown to be one of the major causes of village depopulation.²⁴ The importance of enclosure before c 1760 has been highlighted by Wordie who has estimated that some 75 per cent of land in England had been enclosed (in the legal sense) by this date. Furthermore, he estimates that 28 per cent of land was enclosed between 1600 and 1760.²⁵ One therefore needs to consider what effect enclosure had on settlement size between these dates. Several studies have been made of enclosure in the early-modern period, for example by Butlin, who has written on England as a whole, and Hodgson, whose work deals primarily with the county of Durham.²⁶ In these and similar studies the emphasis has, however, been on the chronology of enclosure and its impact on the *landscape*, rather than on the size of individual settlements. In some instances this is due to the lack of reliable source material. Reed, for example, found it difficult to assess the impact of enclosure upon the demography of individual townships in North Buckinghamshire in the period 1500–1750 owing to the lack of satisfactory population sources for the county before 1801.²⁷ As has been shown, this is not the case in the East Riding, where it can be demonstrated that a number of settlements whose open fields were enclosed between the mid-seventeenth and mid-eighteenth centuries

²⁴ See, for example, M Beresford, *The Lost Villages of England*, 1954, especially chapter 6.

²⁵ J R Wordie 'The Chronology of English Enclosure 1500–1914', *Econ Hist Rev*, 2nd ser 36, 4, 1983, pp 488, 495.

²⁶ R A Butlin, 'The enclosure of open fields and extinction of common rights in England c.1600–1750: a review', in H S A Fox and R A Butlin, eds, *Change in the Countryside: Essays on Rural England 1500–1900*, 1979, pp 65–82; R I Hodgson, 'The progress of enclosure in County Durham, 1550–1870', in Fox & Butlin, *Change in the Countryside*, pp 83–102.

²⁷ M Reed, 'Enclosure in North Buckinghamshire, 1500–1750', *Ag Hist Rev*, 32, 2, 1984, p 143.

²¹ Chatsworth House Archives, Bolton Abbey MSS 293, 321 and bundle entitled 'Old Indentures, Distresses, Valuations and Agreements'.

²² Hull University Library (hereafter HUL), DDSQ(3)/31/2,5.

²³ PRO, E179/205/504; Ollard & Walker, *Herring's Visit*, iii, p 122.

experienced a decline in both population and size.

At Birdsall, an estate village some five miles south-east of Malton, the number of households recorded in 1672 was seventy. The open fields of the township were enclosed by agreement in 1691-2. There are no population figures available for the first half of the eighteenth century, but by 1764 only thirty-seven families lived in Birdsall.²⁸ At Burnby, near Pocklington, twenty-nine households were recorded in 1672. A map and survey made in 1725 suggest the township comprised thirty-two farmhouses and cottages at this date. Six years later, in 1731, the open fields of Burnby were enclosed by private agreement. By 1743 only seventeen families lived in the township.²⁹ Both settlements were dominated by one landowner, and in the absence of firm evidence, it must be assumed that enclosure was part of a process in which their estates were reorganized so that they could be worked on a more profitable basis with larger farms and fewer tenants.

In the Bainton Beacon division of the East Riding, nine of the twenty-five townships were subject to non-Parliamentary enclosure before the mid-eighteenth century. In at least two cases this enclosure took place after the Restoration, and in both cases depopulation resulted.

At Eastburn, a now-deserted settlement within Kirkburn parish, the circumstances surrounding enclosure were perhaps more typical of the Middle Ages than of the seventeenth century, with a deliberate clearance of the village by a new landowner who considered it more profitable to graze sheep. The whole of Eastburn was acquired by John Heron of Beverley between 1664 and 1666, and soon after he converted the township to pasture. This eventually led to

a dispute concerning tithes of hay; it is from the evidence presented before the church courts in 1682 in connection with this dispute that the association between the depopulation of the township and the conversion of its lands to pasture is known.

According to one witness, the town or village of Eastburn '... did anciently consist of a great many messuages, cottages and dwelling houses ... the said messuages and other dwelling houses were about twelve years ago totally demolished and the town of Eastburn aforesaid quite depopulated by John Heron late of Beverley'. In a perhaps more realistic account, another witness described Eastburn as having anciently consisted of 'several messuages and cottages'. He, along with other witnesses, confirmed that Heron had pulled down most of the houses and converted the township to pasture.³⁰ Eastburn was not enclosed in the physical sense; following depopulation the township was initially used as a sheep walk 'not divided by fences or ditches', and later a rabbit warren was planted there.³¹

At Neswick, in Bainton parish, enclosure of the open fields was a more gradual process which took place during the first half of the eighteenth century. The principal estate at Neswick was acquired by Thomas Eyres in 1714, and evidence from the Registry of Deeds shows how he and his successor, Robert Grimston, bought out the other freeholders in the township. Associated with these purchases was the enclosure, in stages, of the open fields, and progressive clearance of the settlement.³² In 1672 twenty-five households were recorded at Neswick. By 1764 there were only eight resident families; fifteen years later the township comprised only Neswick Hall and two farms.³³

²⁸ BIHR, CPH 5705.

²⁹ A Harris 'The Lost Village and the Landscape of the Yorkshire Wolds', *Ag Hist Rev*, 6, 2, 1958, p 98.

³⁰ Registry of Deeds, Q/312/792, R/38/88, R/135/320, R/142/335; HCAO, DDWR/1/54.

³¹ PRO, E179/205/504; BIHR, BpV.1764/Ret.; HUL, DDCV/116/1.

²⁸ PRO, E179/205/504; B English *Yorkshire Enclosure Awards*, Hull, 1985, p 19; BIHR, BpV.1764/Ret.

²⁹ PRO, E179/205/504; HCAO, DDAN/239; Ollard & Walker, *Herring's Visit*, i, p 87.

Some eighteenth-century landowners apparently chose to amalgamate farm holdings into larger units irrespective of whether or not enclosure had taken place. An estate with few tenants required less management than one with many small tenants. Some initial outlay on improved farm buildings might be necessary when larger farms were created, but fewer tenants generally meant less expenditure on property repairs. The amalgamation of farms provided an opportunity to increase rents, if the economic conditions were favourable, and a larger tenant was more likely to be able to pay his rent during periods of agricultural depression. In 1749 an East Riding farmer complained in a letter to the *York Courant* that:

The gentlemen of estates, to prevent the trifling expense of repairing their cottage-houses, have suffered them in all a manner to drop down over the heads of the poor cottagers, throwing the little ground which belonged to them to the larger farms, at the old or perhaps an advanced rent, tho' there is now no house to maintain ...³⁴

On the Dean and Chapter of York's estate at Cottam, near Driffild, the cost of property repairs was clearly a factor in the demolition of cottages. In 1706, when there were nine houses and cottages at Cottam, it was noted that the tenants were poor, and that their houses were costly to repair owing to the shortage of local timber. In 1719, when the lease of the estate came up for renewal, the Dean and Chapter authorized the lessee to demolish all but four of the houses. By 1743 only one family lived at Cottam.³⁵

Engrossment of farm holdings commonly followed the purchase of smaller freeholds within a township by the principal owner. Instead of letting the farm to a new tenant, the landowner would add it to another holding, or split the land between a number of existing tenants. In

either case any property associated with the freehold became surplus. This occurred at Warter, in the Bainton Beacon division, where the Penningtons of Warter Hall gradually bought out other freeholders in the township in the first half of the eighteenth century. In 1725, for example, Sir Joseph Pennington purchased a farm belonging to a freeholder named Hurdsman. Instead of finding a tenant for the farm, Pennington divided the land amongst sixteen of his existing tenants and increased their rents accordingly.³⁶

Warter provides a classic example of a settlement where estate records give some indication of the timing of contraction and the physical effect which this had on the village. In 1673 there were eighty-five households at Warter, but by 1743 only fifty-eight families lived in the township.³⁷ Records suggest that contraction was of a piecemeal nature, with cottages demolished when they fell into a poor state of repair, or when a tenant died or moved away. Rentals taken by 'house row' show how the empty plots were usually rented by the tenant of the adjoining house. In 1715, for example, Robert Turner's house and garth adjoined that of Richard Parkins, which in turn adjoined that of John Sherwood. By 1736 William Turner had succeeded Robert Turner as tenant. Parkins and Sherwood no longer appeared in the rental, and their cottages were no longer listed, but 'Sherwoods and Parkins garths' had been acquired by Turner.³⁸

A similar policy of gradually reducing the number of houses available to tenants was pursued by Sir Marmaduke Constable on his estate at Everingham, twelve miles south-east of York, again in the first half of the eighteenth century. In 1730 Sir Marmaduke instructed his steward 'I would rather have my cottages diminished, than increased, though I am now in Everingham

³⁴ *York Courant*, 21 Feb 1749.

³⁵ K J Allison, ed, *Victoria County History Yorks E Riding*, vol 2, 1974, p 267; Ollard & Walker, *Herring's Visit*, i, p 161.

³⁶ Registry of Deeds, M/111/169; HUL, DDWA/6/23.

³⁷ PRO, E179/205/523; Ollard & Walker, *Herring's Visit*, iii, p 212.

³⁸ HUL, DDWA/14/4,9.

at or about the number of houses I would be at', and some ten years later he noted that 'Few houses and good is what I propose in Everingham'.³⁹ Everingham comprised fifty-seven households in 1672, but by 1743 there were only twenty-seven families in the parish.⁴⁰

At both Warter and Everingham, contraction took place over several decades; many of the farmhouses and cottages were demolished only after a tenant had left or died. In other cases, for example following the demolition of cottages at Eastburn when the township was converted to pasture, tenants were clearly forced to leave. Where did these people, and the younger people for whom cottages were no longer available in many rural settlements, go? Limited evidence which exists suggests that some people moved into larger, more open settlements, and that many others went to work in the rapidly expanding towns.⁴¹ On this point, the population figures speak for themselves. Recent research suggests that England experienced a prolonged phase of population stagnation commencing around the middle of the seventeenth century and lasting well into the eighteenth century.⁴² This period of stagnation coincided with a time of significant urban growth. The population of London alone increased from around 400,000 in 1650 to 675,000 in 1750, an expansion which took place in spite of high levels of urban mortality.⁴³ In the cramped and insanitary living conditions of the poor, which were to be found in most of the larger towns, epidemics had a more widespread and severe effect than in the countryside. The consequence was that if population levels

were to be maintained, let alone increased, substantial migration into the towns from rural areas was essential. The extent to which this migration was forced upon the rural work force is difficult to assess, but in the case of the rural East Riding evidence suggests that movement was not always through choice.

V

In the East Riding of Yorkshire, documentary evidence demonstrates that many settlements decreased in size between the mid-seventeenth and mid-eighteenth centuries, and that a number of 'shrunk village' earthworks date from this period of contraction. Although the population of many townships increased again in the late-eighteenth and early-nineteenth centuries, this was largely due to the establishment of post-enclosure farmsteads away from the village centres, with their large households of farm servants living-in, rather than the physical growth of nucleated settlements. In some cases the timing and causes of post-medieval settlement contraction are well-documented; in others the reasons for depopulation remain less clear. Ironically, at Watton, where good cartographic evidence is available, the causes of depopulation can only be surmised. But, as in the case of so many other contracting settlements, the core of the village was in the hands of a single landowner, emphasizing the apparent link between settlement contraction and the nature of landholding.

Comparative work on two east Midlands counties shows for this region a pattern similar to that found in the East Riding, with many settlements supporting fewer households in the mid-eighteenth century than in the mid-seventeenth century. Using hearth tax returns (1665) and visitation returns (1723) for four south Lincolnshire wapentakes (62 parishes), an overall drop of households/families of 16 per cent between these dates was found. It

³⁹ P Roebuck, ed, *Constable of Everingham Estate Correspondence 1726-43*, YASRS, 136, 1976, pp 28, 128.

⁴⁰ PRO E179/205/504; Ollard & Walker, *Herring's Visit*, i, p 189.

⁴¹ See Neave 'Settlement Contraction', chapter 11.

⁴² E A Wrigley and R S Schofield, *The Population History of England 1541-1871: A Reconstruction*, paperback edn with new introduction, Cambridge, 1989, esp. pp 208-9.

⁴³ E A Wrigley 'A Simple Model of London's Importance in Changing English Society and Economy 1650-1750', *Past & Pres*, 37, 1967, p 44.

is possible the decrease would have been higher had figures closer to the mid-eighteenth century been available.⁴⁴ A similar exercise was carried out using figures available for ninety-five Nottinghamshire parishes. Here the decrease between households in 1664 (hearth tax) and families in 1743 (visitation returns) was 18.6 per cent, a result remarkably close to that obtained for the East Riding.⁴⁵ This is particularly surprising in the light of the contradictory figures presented by Chambers in *The Vale of Trent 1670-1800*.⁴⁶

Demographic material from elsewhere suggests that settlement contraction between the mid-seventeenth and mid-eighteenth centuries was not confined to the eastern counties of England. Figures available for Gloucestershire, for example, show that 45 per cent of villages supported fewer households in 1712 than in 1650.⁴⁷ Of twenty-seven rural Bedfordshire parishes studied by Tranter seventeen (63 per cent) experienced a fall in population between 1671 and 1720.⁴⁸ And in a study of eight rural parishes in West Yorkshire, the total number of households decreased by 14 per cent between 1664 and 1743.⁴⁹ Similar studies to the one outlined above, especially in areas which contrast with the East Riding, would help evaluate the importance of the post-Restoration period in the history of the shrunken settlement.

⁴⁴ PRO, E/179/140/791 (typescript copy in Lincolnshire Archives Office), R. E. G. Cole, ed, *Speculum Dioeceseos Lincolnienensis* pt 1, Lincs Record Soc, 4, 1913.

⁴⁵ W. F. Webster, ed, *Nottinghamshire Hearth Tax 1664-1674*, Thoroton Soc Record Ser, 37, 1988, pp xvi-xvii; Ollard & Walker *Herring's Visit*, iv.

⁴⁶ Using 1674 hearth tax returns and 1743 visitation returns for sixty-two Nottinghamshire 'agricultural' villages Chambers recorded a 12.7 per cent increase in population, and for forty 'industrialized villages' a 47.8 per cent increase in population. The discrepancy between Chambers's figures and those given here can partly be explained by the inadequacy of the 1674 Nottinghamshire hearth tax which is not consistent in recording exempt households. If the incomplete 1674 returns are substituted for the 1664 returns for the ninety-five parishes studied here, a modest rise of 1.5 per cent in population by 1743 is recorded, but this goes little way towards accounting for Chambers's substantial rises. Unfortunately it is

impossible to determine precisely which villages Chambers studied, but it would appear that his 102 settlements included most of the ninety-five used here.

⁴⁷ A. Percival, 'Gloucestershire Village Populations', *Local Population Studies*, 8, 1972, Appendix.

⁴⁸ N. L. Tranter, 'Demographic Change in Bedfordshire from 1670-1800', unpublished PhD thesis, Univ of Nottingham, 1966, pp 105-6.

⁴⁹ M. F. Pickles, 'Agrarian Society and Wealth in Mid-Wharfedale 1664-1743', *Yorks Arch Jnl*, 53, 1981, pp 72-3.

Custom and Common Right: Waste Land Enclosure and Social Change in West Lancashire

By GRAHAM ROGERS

Abstract

The focus of this study is waste land enclosure in south-west Lancashire and particularly its impact on the social structure of one village, Croston. It takes the view that northern rural communities, especially in the pre-industrial period, have largely escaped the attention of historians. It borrows from the wider context of a shift of emphasis in enclosure history towards the significance of waste and common in the enclosure process as a whole. Further, this article takes the view that, until recently, we have underestimated the presence and tenacity of a mainly subsistence stratum in rural communities, the strength of their attachment to rights of commoning, and the depth of popular opposition everywhere to the erosion of those rights through the enclosure process. Villagers in west Lancashire did not possess an immunity from that process. Their experience deserves as much attention as communities in the traditional rural heartlands of the midlands and southern counties. This is a small contribution towards correcting the balance.

THE historiography of the north-west has largely been confined to drawing the social, economic, and cultural map of the industrial and urban communities which emerged during the course of the eighteenth and nineteenth centuries. Lancashire has been a mecca for the social and economic historian interested in the trail-blazing themes of 'proto-industrialization' and industrial 'take-off', the shaping of a class society, socialization, the demographic 'finger-prints' of economic change, and the culture of the industrial workplace, family, and community.¹

Given this preoccupation with industrial heritage it is not easy to picture the rural hinterland of Lancashire's manufacturing centres. If Lancashire had any rural traditions then they seemed to have slipped away in the mists of time. Nevertheless, it is worth bearing in mind from the outset that, outside of the coal and textile corridor

which skirted the southern and eastern flanks of the county, Lancashire boasted an extensive and varied agricultural landscape ranging from the plains of west Lancashire, the vales of the Ribble Valley, and the granary of the Fylde, to the pastoral uplands in the extreme north. Whereas aspects of nineteenth-century rural life in the region are reasonably well charted, our knowledge of earlier communities is more uncertain.² Admittedly there are notable exceptions. References to seventeenth- and early eighteenth-century Lancashire usually draw on the distinctive settlement pattern

¹ J K Walton, *Lancashire: a social history 1558-1939*, Manchester, 1987. Understandably, this scholarly survey reflects the historiographical preoccupation with the emergence of an industrial society which essentially stamped Lancashire's regional character. What remains are yawning gaps in our knowledge of Lancashire's pre-industrial communities. I am also grateful to John Walton for his comments and advice on an earlier draft of this paper.

² G Rogers, 'Social and Economic Change on Lancashire Landed Estates during the Nineteenth Century', unpublished PhD thesis, University of Lancaster, 1981; A Mutch, 'Rural Society in Lancashire 1840-1914', unpublished PhD thesis, University of Manchester, 1980, and *Rural Life in South-West Lancashire 1840-1914*, Lancaster, 1988. By way of comparison Mutch focuses on south-west Lancashire and describes a typically nineteenth-century social scene of major landowners, tenant farmers, and a substantial population of wage-dependent labouring families. W King, 'Illegal Behaviour in Seventeenth Century Lancashire', unpublished PhD thesis, University of Michigan; A P Coney, 'Aughton Enclosure in the Eighteenth and Early Nineteenth centuries: the Struggle for Superiority', *Historic Society of Lancashire and Cheshire* 136, 1987; T W Fletcher, 'The Agricultural Revolution in Arable Lancashire', *Transactions of the Lancashire and Cheshire Antiquarian Society*, 72, 1962; D Hey, 'Yorkshire and Lancashire', in J Thirsk, ed, *The Agrarian History of England and Wales, Vol. V 1, 1640-1750, Regional Farming Systems*, Cambridge, 1984, pp 59-86, though the chapter concentrates largely on Yorkshire.

and economies of Rossendale and Pendle to the north and north-east of the county.³ Yet research into the pre-industrial experience of communities comprising the lowland plain of south-west Lancashire and the Fylde region is much sparser and, at the same time, all the more surprising in view of the fact that lowland Lancashire developed into the agricultural heartland of the county, even though its productive potential was slow to materialize. But it is no accident that this process was closely associated with an area that boasted by far the strongest concentration of sizeable landed estates compared with other parts of the county, and which was also the location of considerable waste land reclamation and enclosure.⁴

For understandable reasons the attention of rural historians has been drawn elsewhere. It has been spellbound by the enclosure movement in general and especially by the crucial issue of the impact of enclosure on the social fabric of rural communities. Geographically it has been pulled towards the power-house of agrarian change, East Anglia, and the classic open fields of the midland core. However, there has been a more recent shift of focus which has settled on the centrality of commons and waste land to the enclosure process as a whole, and especially outside of the midland belt.⁵ Furthermore, Stevenson has

argued that violence and popular opposition were associated more often with the enclosure of commons and waste than with any other enclosure type, which is in line with Yelling's earlier view that, 'in general, the greater problems arose where cottages were numerous and where extensive common wastes existed'.⁶ Therefore, considering that the emergence of a more dynamic and intensive farming system in Lancashire rested to a large extent on waste land reclamation, it is all the more surprising that it has not received the full attention it deserves.⁷ It recalls one recent remark that 'agricultural historiography in Britain is shot through with southern insularity'.⁸

I

The starting point for this study is a modest contribution towards correcting the imbalance. The main focus is the township of Croston which, in 1725, was the subject of one of the earliest enclosure awards. Croston lies on the west Lancashire plain, approximately ten miles south of Preston, and was typical of rural communities in the area which settled on clay outcrops between extensive areas of mossland.⁹ The manor of Croston was coextensive with the 'old enclosures' of the township, and lay in the joint ownership of the Hesketh family, whose ancestral seat was the adjacent village of Rufford, and the de Traffords, who came into possession of their Croston

³ Pendle and Rossendale are the exceptions to the rule. See J Porter, 'Waste land Reclamation in the Sixteenth and Seventeenth Centuries: the case of south-eastern Bowland 1550-1630', *Hist Soc Lancs and Cheshire*, 127, 1977; M Brigg, 'The Forest of Pendle in the Seventeenth Century', *Hist Soc Lancs and Cheshire*, 113, 1961; 114, 1962. J W Swain, *Industry before the Industrial Revolution. North-East Lancashire c.1500-1720*, Manchester, 1986; G H Tupling, *The Economic History of Rossendale*, Manchester, 1927.

⁴ By the nineteenth century a small group of landed families were territorially dominant throughout the coastal plain from Liverpool to Lancaster, notably Derby, Sefton, Blundell, Hesketh, Lathom, de Trafford, Scarisbrick, Farrington, Rawstorne, Clifton, Fitzherbert-Brockholes, Garnett. See also B G Blackwood, 'The Lancashire Gentry 1625-1660. A Social and Economic Study', unpublished PhD thesis, University of Oxford, 1973.

⁵ J Chapman, 'The Extent and Nature of Parliamentary Enclosure', *Ag Hist Rev*, 35, Part 1, 1987, pp 25-35. According to Chapman's estimates common pasture and waste accounted for c 61% of land in England affected by parliamentary enclosure and much of this lay outside the Midlands core. One estimate calculated that Lancashire's wasteland in 1815 extended to 82,000 acres of moor

and common and a further 26,500 acres of moss and fen. See R W Dickson, *General View of the Agriculture of Lancashire*, Preston, 1815, p 96.

⁶ J Stevenson, *Popular Disturbances in England, 1700-1832*, 1992, p 53; J A Yelling, *Common Field and Enclosure in England, 1450-1850*, 1977, pp 28, 176. Yelling, however, makes only two specific references to Lancashire.

⁷ The reclamation of mossland and waste in Lancashire has a long history to it starting with early efforts by the Heskeths to drain Martin Mere in the 1690s and culminating in the intensive improvement of the wet mosslands during the nineteenth century in south-west Lancashire and on the Fylde. See Rogers, *op cit*, chap. 4.

⁸ A Charlesworth, 'An Agenda for Historical Studies of Rural Protest in Britain 1750-1850', *Rural History*, V II, 2, 1991, pp 231-240. The same view could be taken of the pre-1750 period.

⁹ F Walker, *The Historical Geography of South-West Lancashire before the Industrial Revolution*, Manchester, 1939.

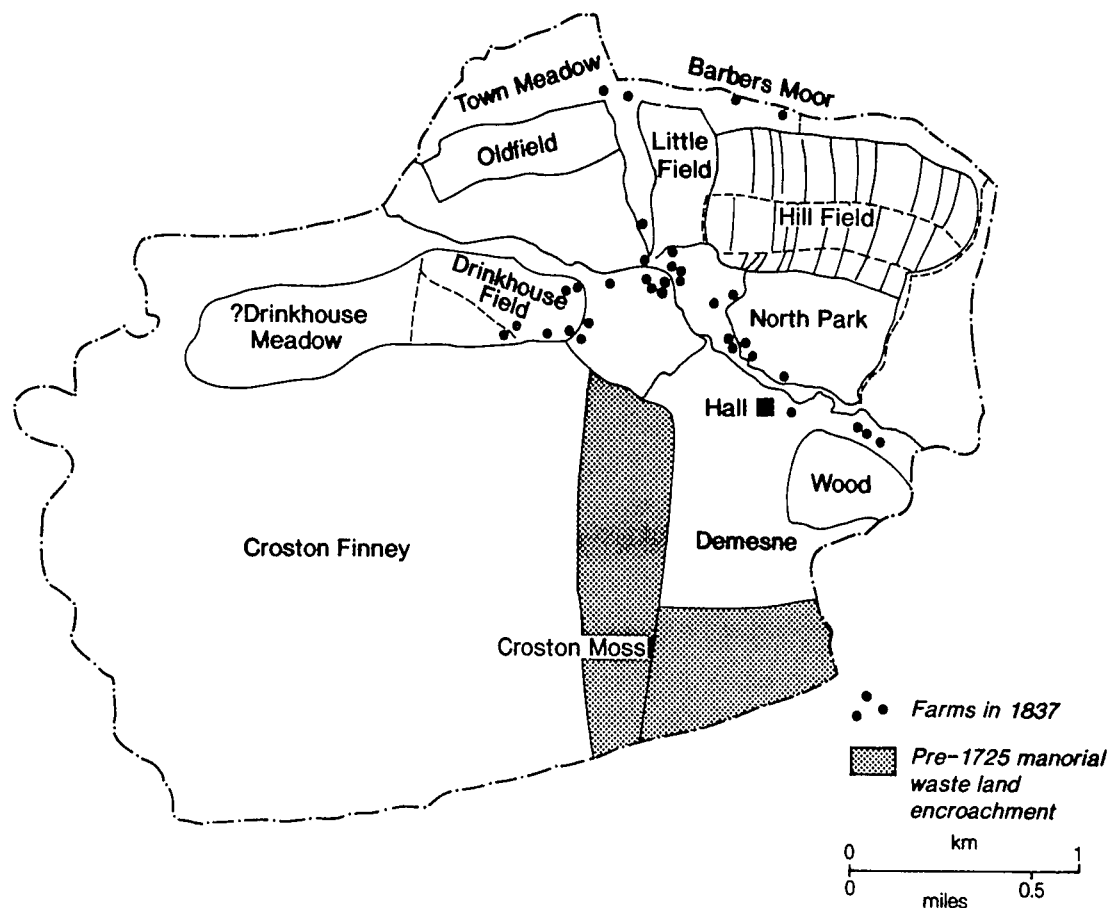


FIGURE 1
Croston Finney, its farms, and enclosures

estates through marriage in the late seventeenth century. The township itself ran to c 2000 statute acres, and consisted of c 1200 acres of formerly enclosed manor and demesne lands, and a further c 800 acres of open waste known as Croston Finney, which was the subject of the enclosure award in 1725.¹⁰

The enclosing of Croston Finney was not uneventful, nor should it be seen as a parochial incident on the sidelines of the enclosure movement. At the very least it set a precedent for the surrounding locality. It raised much the same fear and grievance

among its victims as has been demonstrated elsewhere.¹¹ It threw down a decisive and ultimately irresistible challenge to the values of the co-operative and mutually supportive community. Above all, the reaction to enclosure draws our attention to the existence of a substantial stratum within the community, who based their largely subsistence life-style on access to resources of the waste. It is with the experience of these families that this paper is mainly concerned. For them, common 'use-rights' to the common were of material significance; they were not anachronistic reminders of a past, fading age. On

¹⁰ The customary acre has been converted to statute measure for ease of use. The customary acre in this part of Lancashire was approximately twice the size of the statute acre.

¹¹ E P Thompson, *Customs in Common*, 1991, p 121.

the contrary, in trying to capture a sense of the way of life they pursued, we may well have to revive the term 'peasantry' as Alun Howkins has rightly suggested.¹² What is clear is that, within a century following enclosure, Croston was a very different place in terms of its social and occupational structure. It was a society of landlord, tenant farmer, agricultural labourer, and handloom weaver. The 'cottage-farmer', dependent on his rights of commoning, had been displaced and absorbed into the swelling ranks of a wage-dependent population.¹³ That in itself raises still broader issues beyond the scope of this paper. We still need a fuller picture of agrarian change during the chronologically neglected years of the late seventeenth and early eighteenth centuries, and in a region which was later to transform itself from one of provincial backwardness, marginal to the mainstream of economic life, into the hub of industrial and urban expansion. We also lack a complete understanding of the social and economic synthesis which brought about that transformation and one in which the villagers of west Lancashire must surely have played their part.

The picture of agrarian change in seventeenth- and early eighteenth-century Lancashire is both a hazy and a confusing one. By any definition mid-sixteenth-century Lancashire was one of England's poorest counties.¹⁴ It was sparsely popu-

lated; a large proportion of available land was barren waste; there was little in the way of agricultural innovation; fiscal returns point to comparatively impoverished communities; and there was an absence of major urban centres of any significance. Though the county could lay claim to a number of sizeable estates, notably those of the Earl of Derby, a finely graded tenantry system had yet to develop, and the emergence of a landless proletariat was a thing of the future. Instead, given the availability of surplus land, the relatively even spread of resources throughout a wide cross-section of the rural population, and an unassuming and unassertive set of landowners, social relations in Tudor Lancashire were comparatively tranquil.

Not a great deal, we are told, had changed by the time of the Restoration. If the Hearth Tax returns of 1664 are a reliable guide, Lancashire was still a poor county. Waste land settlement and the subdivision of holdings in the Pendle and Rossendale areas of east Lancashire had continued unabated.¹⁵ These traditions produced families who combined the running of small holdings of just a few acres, with employment as semi-independent domestic manufacturers, especially of linen and worsteds. Such people typified not just the uplands of east Lancashire but could be found almost everywhere, on the central Lancashire plain and along the coastal region. This social type was still very much a typical figure in early eighteenth-century Lancashire. According to Hey, numerous landholders of under ten acres, and dependent on the exercise of common rights, could be found on estates stretching from Samlesbury, just south of Preston, and running south-westwards through Clayton-le-Woods and Charnock Richard down to Kirkby.¹⁶ Moreover, Joan Thirsk points out that though waste land enclosure

¹² A Howkins, 'Labour History and the Rural Poor 1850-1980', *Rural History*, V I, 1, 1990, p 117.

¹³ There were survivors, however, who clung tenaciously to a distinctive way of life. The oral record describes the existence of cottagers in neighbouring Bretherton who, at the turn of the twentieth century, followed part-time employment as mowers during the harvest season, but who existed for much of the year by cultivating plots of a few acres for their own domestic purposes. Furthermore, even the bartering of goods had not entirely disappeared from this cottage economy. I am grateful to Miss A Norris for her recollections of village life in this period.

¹⁴ Walton, *Lancashire*, p 8. It is difficult to offer any precise regional comparisons. Even the most recent analysis stops short of north-west England. See C Husbands, 'Regional change in a pre-industrial economy: wealth and population in England in the sixteenth and seventeenth centuries', *Jnl Hist Geog*, 13, 4, 1987, pp 345-59.

¹⁵ Walton, *Ibid*, pp 24-29.

¹⁶ Thirsk, ed, *AHEW*, V, 1, p 60.

had taken place, it was either small in scale or, where it was extensive, was of 'an amicable kind', and therefore should not be considered as an 'anti-social' movement.¹⁷ Yet these conclusions raise a number of assumptions; that abundant waste land guaranteed wide accessibility; that major landowners were largely lethargic in their attitude towards the continuing backwardness in agricultural practices; and that, in any event, there were always economic alternatives available in the form of domestic manufacturing, which therefore weakened the attachment to land. These assumptions are largely unproven.

To start with, this outwardly stable scene is seemingly at odds with other impressions that social changes of a fundamental kind were already at work. For instance, Wrightson feels sure that Lancashire was developing 'a very large agricultural proletariat of landless and virtually landless labourers' by the early seventeenth-century.¹⁸ What proportion of the rural population is not made clear nor, more importantly, is the extent to which families in receipt of wages were actually *dependent* on wages; hence the confusing debate that surrounds the survival of a subsistence peasantry, which worked mainly to produce food and other goods for their own consumption, but also needed cash earnings to discharge rents and other obligations. According to one school of thought, a subsistence peasantry which meets this description had had its day by the mid-seventeenth-century; for others this social type continued into the eighteenth and beyond; and, for Chambers and Mingay, the whole question of subsistence production has been something of a red herring.¹⁹ At the same time, it has been estimated that 60 per cent of

families already in receipt of wages at the end of the seventeenth century also drew on non-wage sources of subsistence. More recently, Allen has reinforced this view in claiming that 'in 1688 the peasantry of England occupied not a third of the country but closer to two-thirds'. If that were the case then it was the contraction in these traditional sources which gradually pushed most of these families into wage-dependency, and enclosure was the culprit.²⁰

Contrary to first impressions, in fact not all was peaceful among Lancashire's rural communities. Recent work by Manning has drawn attention to social conflict on estates within the Duchy of Lancaster, which was triggered principally by 'seigneurial assault on the resources of common and waste'.²¹ Unilateral enclosure, allied to rent exploitation and moves to revise customary tenures, threatened not only the well-being but the very existence of smallholders, who were largely dependent on their 'use-rights'. Actions of this kind were seen as sufficiently threatening to provoke popular disturbances in the wake of waste land enclosure at Penwortham, Prescott, and Sutton in the early seventeenth century. In the same period, the settlement of the Bowland Forest area in the Pennine foothills of north-east Lancashire was promoted largely by waste land encroachment and reclamation.²² What emerged was a class of petty land-

¹⁷ Thirsk, *Agricultural Change: policy and practice 1500-1750*, Cambridge, 1990, p. 100.

¹⁸ K Wrightson, quoted in Walton, *Lancashire*, p. 28.

¹⁹ A Kussmaul, *A general view of the rural economy of England 1538-1840*, Cambridge, 1990, pp. 105-6, provides a summary of views; but in drawing her own maps of agrarian change Kussmaul's data virtually excludes any reference to north-west England.

²⁰ See C Tilly, 'Demographic Origins of the European Proletariat', in D Levine, ed, *Proletarianization and Family History*, 1984, and J Humphries, 'Enclosures, Common Rights, and Women: the Proletarianization of Families in the late Eighteenth and early Nineteenth Centuries', *Jnl Econ Hist*, 50, 1, 1990, pp. 17-41; R C Allen, *Enclosure and the Yeoman: the Agricultural Development of the South Midlands 1450-1850*, Oxford, 1992, pp. 85-86. However, Allen takes issue with the view that enclosure was primarily responsible for the 'precipitous decline' in the number of peasant families. Instead he argues that tenurial management by landlords was the principal agent of change.

²¹ R B Manning, *Village Revolts*, Oxford, 1988, pp. 112-19, though Thirsk took the view that areas of abundant waste such as could be found in Lancashire remained relatively free of such conflicts, *Agricultural Change*, p. 57. But see A B Appleby, 'Agrarian Capitalism or Seigneurial Reaction? The North-West of England 1500-1700', *American Historical Review*, 80, 1975, pp. 574-93.

²² Porter, *op cit*.

holders working small plots of marginal land. But even the partition of this vast expanse of common land was not without its problems. The common denominator in all these examples was the interference of the Duchy of Lancaster intent on extracting its full due from waste land development. A reduction in the amount of open common, and an inability to confirm or purchase a copyhold, compounded the predicament of the poorer, displaced squatter. However, the saving grace was the overriding interest by the Duchy commissioners in short-term gain, and therefore in confirming rights of copyhold for modest fines. Major landowners on the lowland plains of west Lancashire probably took a more calculated long-term view of waste land management, and with more serious social consequences. Certainly by the close of the seventeenth century they were more assertive than has been assumed.

These well-documented incidents suggest that Lancashire rural society was not always an undisturbed provincial backwater, where change and social adaptation could take place in a smooth transition. They serve as a reminder that a way of life for many people was governed, at the local level, by wide access to the resources of the land over which use-rights were cherished and rigorously defended where they mattered. Moreover, we still lack a full account of the actual practice of common right usage, especially in relation to the fringe benefits of common, waste, and herbage, by the cottager and inhabitants with limited holdings.²³

II

The experience of the villagers of Croston during the seventeenth and early eight-

eenth centuries, and the protracted struggle over competing claims to the surrounding mossland, brings the attachment to common rights and waste land enclosure into still sharper relief. Croston witnessed periodic friction over encroachment onto the common before the enclosure award in 1725, but not to the extent that it fundamentally altered the economic and social fabric of the community. Indeed, Croston on the eve of enclosure was probably little different from the village community that existed a century earlier. Direct evidence from fiscal records, wills, inventories, and manorial surveys helps to gather a sense of place and period and to fill out the lives of those families who scraped a living from small holdings and who made up the bulk of the population. The most striking feature about the social profile of the village is its very broad base and the blurred boundaries between social and occupational groups, which profoundly informed personal and family relationships at the socio-economic level. As such it fits Walton's broad impressions of late seventeenth- and early eighteenth-century west Lancashire, made up of villages with 'a balanced economy, agriculturally dominated and agriculturally self-supporting, with no built-in tendency to specialisation in textiles or other manufactures for distant markets, and no runaway land-subdivision, population explosion or landless proletariat'.²⁴

The Protestation Returns of 1641-2 describe a village predominantly attached to an agricultural economy and domestic craft trades.²⁵ This list of 286 adults can be broken down into households headed by men who styled themselves yeomen (7%), husbandmen (29%) and craftsmen (24%); but, in terms of wealth, social standing,

²³ Thompson, *op cit*, p. 101. W A Armstrong, 'The Countryside', in F M L Thompson, ed, *The Social History of Britain 1750-1950. Regions and Communities*, Vol 1, Cambridge, 1990, p 88. Armstrong also makes the point that measuring the problem of the cottager and his dependence on common land is compounded by the lack of quantifiable sources.

²⁴ Walton, 'Proto-industrialisation and the first industrial revolution: the case of Lancashire', in P Hudson, ed, *Regions and Industries: a perspective on the industrial revolution in Britain*, Cambridge, 1989, pp 50-51.

²⁵ Lancashire RO, (hereafter LRO) MF1/25, Protestation Returns 1641-2.

and the routines of daily life there was probably not a great deal to distinguish between the modest smallholder, who accounted for most occupiers, and the craftsman who combined domestic trade with the cultivation of a small croft and the management of a few animals. Only 13 per cent are listed as 'labourers'. Just over 14 per cent included widows and spinsters, and servants accounted for almost 11 per cent. But, more striking still, when compared with later developments, is the small number who primarily regarded themselves as weavers, just 2 per cent of the total. Moreover, in keeping with many Lancashire villages, Croston's extensive waste land proved especially attractive to squatter settlement. There are frequent references to actions being taken against 'strangers' cattle', being pastured on the adjacent mossland and against squatter families who attempted to build cottages on the Finney, though these measures were not entirely successful.²⁶ A fairly numerous constituency of such families remained part of Croston's social profile as was the case in neighbouring townships bordering the mosses.

The Hearth Tax returns of 1664 present the familiar image of a broad base of villagers who lived close to and moved in and out of poverty. The wills and inventories of the period are similarly indicative of households which made few concessions to comfort. At the same time they offer an insight into the household economy, the marginal existence most must have endured and the narrow dividing line that separated abject poverty from modest self-reliance. They also underline the value which villagers attached to having access to land, and the supportive social network on which many depended at intervals in their life-cycle. Thomas Staziker is typical of period and place. Describing himself in his will as a 'husbandman', he in fact secured

an existence from a garden and croft which supported a cow and a calf and which, together with a quantity of hay and corn, produced a combined value of £3.75 in 1670, representing a third of his total estate. He possessed a considerable quantity of flax, like many of his contemporaries, and when he died he was owed a small sum of money from the Rector for the services of his labour.²⁷ There is little to distinguish Staziker from William Nixon, who in 1656 took out an annual lease on 'herbage for his cattle in the field commonly called the Finney'.²⁸ In his contract with John Molyneux of Rufford Hall, however, he is described as a labourer. Nixon appears again in the 1664 Hearth Tax listings but on this occasion as a 'husbandman' and, unlike his neighbour Staziker, liable for payment. These examples fit John Marshall's description of a 'homogeneous' type of peasant society he identified in seventeenth-century Cumbria, in the important sense that any differences in personal wealth were not reflected very closely in the ways of life and aspirations of most villagers.²⁹

Predictably, wills and inventories for the most part record the status, assets and material possessions of the relatively more substantial figures in the community. They also provide pointers to the character of the local agrarian economy. There are regular references to the cultivation of oats and barley; by the mid-seventeenth century wheat had also put in an appearance. Arable land was in short supply as was good quality meadow, which may explain a lingering tradition of the multiple occupancy of a large number of fields, the survival of a 'Town Meadow', and why holdings in severalty were by no means a fully estab-

²⁷ LRO, WCW, Will and Inventory of Thomas Staziker, 1670.

²⁸ LRO, Hesketh MSS, DDHe 11/115, Agreement, William Nixon of Croston, labourer, 'to have herbage for his cattle in the field commonly called the Finney'. 1656/7.

²⁹ J. D. Marshall, 'Agrarian Wealth and Social Structure in Pre-Industrial Cumbria', *Econ Hist Rev*, 2nd ser, xxxiii, 1980, pp 503-21.

²⁶ LRO. de Trafford MSS, DDTr Box 63.

lished feature even by the early eighteenth century.³⁰ Despite the absence of manorial records this suggests the survival of a communal approach to the management of resources.

Yet, whatever the size of their holdings, most farmers placed a heavy reliance on keeping a modest number of stock and dairy cattle. William Baxtenden left an estate valued at £36.³¹ It included six cattle, five horses, three pigs, farming equipment, and 'corn in the ground' (£5), which together accounted for over 80 per cent of the total valuation of his earthly goods. Yet the size of the Baxtenden holding was more modest in scale. In 1672 it consisted of no more than nine acres and was made up of a small parcel of arable land in 'common hill field', a croft, and part of 'Baxtenden's Meadow'. By itself it is unlikely that a holding of this size could have supported the number of stock which William Baxtenden carried.³² What made it possible was the fact that the Baxtenden family had a 'right of common' on Croston Finney confirmed in their lease.³³

The not untypical experience of the Baxtendens points to features of a largely subsistence economy – the prevalence of small holdings, the humble status and assets of the vast majority suggested by the Hearth Tax Returns and the evidence from available probate inventories, the fact that payment by way of boon work was still being made even in the early eighteenth-century by small copyholders, and an impression of a communal stake in the

resources of land and stock.³⁴ It reached down to the lowest levels of local society, supported in the main by dairying, cheese-making, and stock-rearing, and it was one in which the pursuit of monetary gain probably did not reach far beyond the immediate community. But this way of life was only possible if the broad base of 'cottager-farmers' could acquire stock and had access to some land. Recent work elsewhere has established how common wastes were essential to and remained an integral part of communal farming arrangements. Indeed, maintaining wide customary access was vigorously defended.³⁵ Of course, most of Croston's occupants had very little capital behind them but, as one remarkable inventory makes clear, there existed a widespread and complex network of support running through the community, which went further than channeling small loans in the direction of the poorer sort.³⁶ Henry Nelson, for instance, was one of the village's rare and more substantial figures. He provided credit to a wide circle of non-relatives and not always on an interest-yielding basis. He also supported himself in his waning years by making his stock available for 'cow hire' to numerous and presumably less well-placed neighbours. It provides some indication of the extent to which animal husbandry constituted the dominant preoccupation on a wide social level; and, considering the high value of a cow relative to the total wealth of the cottager, how it

³⁰ Based on the 1838 Tithe Survey, field-name evidence, pre-enclosure estate surveys and leases. See G Youd, 'The Common Fields of Lancashire', *Hist Soc Lancs and Cheshire*, 113, 1962.

³¹ LRO, WCW, Will and Inventory of William Baxenden, 1672; PR2607, A Survey of Mr. Hesketh's Lands.

³² Humphries, 'Enclosures', p 28. It has been estimated that 2.5 acres were needed to keep a cow. See also R W Malcolmson, 'Ways of Getting a Living in Eighteenth Century England', in R E Pahl, ed, *On Work*, Oxford, 1988; For a fuller discussion see D Levine, *Reproducing Families: the Political Economy of English Population History*, Cambridge, 1987.

³³ LRO, PR 2607, Mr. Hesketh's Lands.

³⁴ LRO, Lancashire Papists' Estates, 1715; de Trafford leases of 1715 make it clear that boon work was still being exacted.

³⁵ See P Large, 'Rural Society and Agricultural Change: Ombersley 1580-1700', in J Chartres and D Hey, eds, *English Rural Society 1500-1800*, Cambridge, 1990, pp 105-7; C E Searle, 'Custom, Class Conflict and Agrarian Capitalism: the Cumbrian Customary Economy in the Eighteenth Century', *Past & Pres*, 110, 1988, pp 106-33; J M Neeson, 'The Opponents of Enclosure in Eighteenth Century Northamptonshire', *Past & Pres*, 105, 1984, pp 114-39; J M Martin, 'Village Traders and the Emergence of a Proletariat in South Warwickshire', *Ag Hist Rev*, 37, 2, 1984, pp 179-88.

³⁶ LRO, WCW, Will and Inventory of Henry Nelson, 1615; B A Holderness, 'Credit in English Rural Society before the Nineteenth Century with Special Reference to the Period 1650-1720', *Ag Hist Rev*, 24, 1976, pp 91-109.

TABLE 1
Distribution of holdings by size

Pre-enclosure		Post-enclosure	
Size (Statute acres)	Number	Size (Statute acres)	Number
under 2 acres	52	under 2 acres	34
2-5	16	2-5	6
5-10	10	5-10	14
10-20	7	10-20	8
20-30	7	20-30	4
30-40	3	30-40	6
over 40 acres	3	over 40 acres	5

Acreages have been converted to a statute measure. The customary acre in this part of Lancashire was approximately twice the size of the statute acre. These figures include all freehold and leasehold possession but exclude Hesketh and Trafford demesne together with glebe land in hand. The pre-enclosure survey was provided for the enclosure commissioners. The post-enclosure survey has no date although deeds and leases put it no later than 1735. Source: LRO, PR 707; DDTr Box 35; DDSc 126/2-3; DDHe 72.

was possible for even the poorest members of the community to acquire animals in order to meet their own needs. This sort of practice must also signify that families had the facility to graze their animals.

Indeed, central to this vulnerable subsistence economy was the question of land; and Croston's inhabitants had access to some land in several ways. First, the 1715 survey of Lancashire's Catholic landowners makes it clear that a high proportion of cottagers on the de Trafford estate had the benefit of a croft or 'backside' ranging from one to three acres in size.³⁷ This is also consistent with the picture provided by the several and more detailed surveys of landholdings in the township which preceeded the 1725 enclosure act. Most of the fifty-two holdings under two acres consisted of at least one acre.³⁸ (Table 1) Secondly, recent work has constructed a much fuller picture of widespread access to the waste land resources usually by way of customary and common rights, which sustained the viable, if tenuous, economy

of cottagers and smallholders. These practices we are told survived well into the eighteenth century and beyond.³⁹ Against this background it would be misleading to describe the broad base of Croston's villagers as mere 'landless poor'. They too were the beneficiaries of custom and, when they are included alongside those with a legal entitlement, the common waste appears to have been utilized by a significant portion of the population. Clay's view, therefore, that 'cottage farmers' were relatively few in northern lowland areas stands to be corrected, though his picture of a fluid social structure and of fluctuating fortunes between one generation and the next certainly fits a description of lowland villages like Croston. There is all the more reason, then, to question the value of drawing any sharp distinctions between the 'cottager farmer' and the 'cottager labourer' at least in the context of wide access to waste land resources.⁴⁰

III

At the heart of Croston's economy lay the villagers' contentious claim to a common right of access to the extensive mossland south of the village known as the Finney. Described in disparaging terms by the major landowners, the value of the waste land to people at every level is unmistakable.⁴¹ It was just as essential to Croston's subsistence cottager and to the farmer grazier, as well as to the cultivator with his ploughstock, or to the widow with her one cow. It provided furze and turves for fuel, clay for building, and an abundance

³⁷ LRO, Lancashire Papists' Estates, 1715.

³⁸ L.R.O. PR 2606. An account of the quantity of each proprietor's land within the Manor of Croston and the value of their proportions of the Finney; PR.2607&2608. Lands in the possession of Hesketh, de Trafford and their tenants.

³⁹ Mick Reed, 'The Peasants of Nineteenth Century England: a Neglected Class,' *History Workshop*, 18, 1984, pp 53-76, provides a timely reminder of how tenaciously smallholders clung on to their customary practices; Thompson, *op cit*, offers a brief summary of recent work, pp 106; 114-5; as does Humphries, *op cit*; G Seal, 'Tradition and Agrarian Protest in Nineteenth-Century England and Wales,' *Folklore*, Vol.99, 2, 1988 pp 146-69.

⁴⁰ C G A Clay, *Economic Expansion and Social Change: England 1500-1700*, Vol. 1, Cambridge, 1984, pp 187-90.

⁴¹ Humphries, *op cit*, p 19.

of marl which served as the chief source of fertilizer.

It was also the source of a rumbling, acrimonious dispute which stretched back into the sixteenth century and was only settled, at least in law, by the enclosure act of 1725. The soil of the wasteland was vested in the manorial lords. But, whereas the proprietary claims of the Hesketh and de Trafford families as Lords of the Manor were acknowledged, their possession was also conditioned by an insistence on use-rights which attached to copyholders and other freeholders.⁴²

Claims to access could be and were made through several devices. Freeholders had only to establish title to their ownership of land within the 'old enclosures' of the village to secure rights to the common. On the eve of enclosure there were fifteen of them occupying c 140 acres, including two absentee owners, Edward Dicconson and Maximilian Nelson. The largest owned thirty-eight acres, though twelve of the freeholds ran to ten acres or less.⁴³ The claims of the wider community, however, were much more tenuous. By far the most secure were those customary tenants who could demonstrate that a grant had been made in their leases. Yet only a handful could make that claim. The rest asserted rights of commoning which stemmed from 'customary tradition and usage'.

The collision between proprietary claims and customary usage made itself felt at regular intervals over at least a 130-year period prior to 1725. It pitched landowner against landowner, squire against tenant and, on occasion, the church against the community at large. In the earliest documented incident in 1594 Hesketh claimed 'the Great Field' (ie, the Finney) was his by inheritance and was shared with the other lord of the manor. Villagers countered with the claim that they had right of

access to the Finney 'by ancient charter'. This in reality was more of a reference to customary activity, since 'from time out of mind it hath been the usage and custom within the manor and lordship of Croston that all the charterers, freeholders, ancient tenants and inhabitants...could depasture their stock' on the payment of a yearly collective charge of £3 10s. This defence has a familiar ring to it. The privilege as opposed to the right of access established the battlelines thereafter. In 1596 charges were brought against a number of villagers for 'riot and affray' over the digging of clay on the moss 'without the lord's consent'. In retaliation Robert Hesketh was challenged over his claim to absolute ownership and his provocative assertion that the right of common 'lay in the lord's gift'.⁴⁴

The dispute simmered throughout the seventeenth century. It established a heritage of mistrust periodically erupting into still further litigation and judicial inquiries and given added bite in times of economic hardship.⁴⁵ For their part the citizenry of Croston jealously guarded their claim on the Finney against threats from any direction. They were just as zealous in their prosecution of encroachment on the waste through squatter settlement, which was an endemic problem on the mosslands of west Lancashire.

However, the territorial ambitions of the major landowners presented a much more serious threat. The de Traffords had been especially active in building up a more profitable leasehold sector by extending their demesne lands onto the Finney. The Heskeths also followed a similar strategy of enclosing and leasing small parcels of moss-land and, in some cases, to individuals who were not resident in the township.⁴⁶

⁴² Manning, *op cit*, p 19; LRO, PR 2601, Summary of evidence: ownership of Croston Finney. n.d.

⁴³ LRO, PR 2607; 2608; DDTTr Box 35.

⁴⁴ LRO, PR 2600; 2599, Riot and Affray on Croston Finney, 1596.

⁴⁵ LRO, PR 2600; DDTTr Box 35, de Trafford Estate Rentals, Croston, 1659. The troubled years of the 1650s brought renewed challenge to restrictive devices threatened by the manorial lords. See King, *thesis*.

⁴⁶ LRO, DDHe 26/84; 11/114.

Nevertheless, the landed alliance was not always trouble free. The manorial lords and the Church engaged in expensive litigation for compensation as happened in 1710 when one party made what were seen to be excessive territorial incursions into the mosslands at the expense of the other two.⁴⁷

The intrinsic value of the Finney to the wider community can be measured partly by their unrelenting efforts to assert their own claim. Their defence was dressed in oral traditions that were passed down from one generation to the next, and which depicted the waste as an indispensable and indisputable collective right and resource. The oral record dredged up recollections of the regulated use of the mossland through manorial agreement and the appointment of 'Finney keepers' to control access and pasturing. The stored memory could also be inventive and at times contrived. Villagers were much less comfortable when turning perceived custom and practice into a formal deposition with sufficient legal weight behind it. At one mid-seventeenth-century inquiry into ownership and rights to the Finney, they offered sworn testimony that a previous lord of the manor had granted rights of common to the inhabitants of Croston in 1544, though no deed could ever be produced.⁴⁸ All of the witnesses summoned claimed to be octogenarians with unimpeachable memories, and all of them paraded the same carefully rehearsed description of past practice and, in an effort to establish the weight of convention, employed certain terminology – 'from time out of mind' and 'from time immemorial' – which would have been familiar to defendants of common rights elsewhere.⁴⁹ The outcome of the inquiry is not clear.

In any case conviction was enough and it legitimized direct action. When one of the lesser landowners attempted to construct fences around his barn on the Finney 'some of the farm holders and others of the town did pull them down and would not suffer them to stand'. He was also forced to remove a shippon (cattle shed) from the Finney 'on to his own ground'. And the same unilateral action was taken against attempts to build cottages on the moss 'because it went against custom'. Behaviour of this kind strongly suggests that legal prescriptions should not be interpreted as an exhaustive account of the actual practice of common right usage 'especially where the fringe benefits of common, waste (and) herbage to the landless inhabitants or cottagers' were concerned.⁵⁰

It is not altogether surprising then that one of the major reasons for enclosure lodged by the landowners in their petition of 1723 was a desire 'to put an end to frequent disputes and differences'.⁵¹ They too were treading familiar ground by formulating a rationale designed to lend legitimacy to their actions in the sense of offering an alternative definition of community interest, but they also raised conflicting concepts of order, one based on legally enforceable, statutory regulation, the other on norms and attitudes operating at a social level in the village community.⁵² Like many before and after them they resorted to an Act of Parliament precisely because it was the most effective means of removing further challenge, obstruction, and litigation. At the same time expressions of concern for the common good would smooth over any remaining dissent. Enclosure, they argued, equated with progress because it would make it possible to extend the arable and ensure an adequate

⁴⁷ LRO, DDHe 56/35;55; DDTr Box 61, Agreements to abide by award; enclosures on Croston Finney 1709–10.

⁴⁸ LRO, DDTr Box 63; PR 2602(a).

⁴⁹ B Bushaway, *By Rite; Custom, Ceremony and Community in England 1700–1880*, p. 7.

⁵⁰ Thompson, *op cit*, p. 101.

⁵¹ LRO, PR 2603, The case and reasons for enclosing the common called Croston Finney.

⁵² K Wrightson, 'Two concepts of order: justices, constables and jurymen in seventeenth century England,' in J Brewer and J Styles, eds, *An Ungovernable People*, 1983, pp. 21–46.

supply of corn to the township; cattle would no longer be endangered by flooding; and 'enclosure would encourage good husbandry and provide employment for the poorer inhabitants'. There was nothing unusual in this strategy. Enclosure accompanied by assurances of improvements for the common good drew a legal veil over ulterior motives and it was notoriously difficult to offer a common law defence under these circumstances. Indeed not only had the Heskeths asserted their right to lease grazing on the Finney, but they also insisted at the same time that these leases were only valid until such time as the waste was enclosed.⁵³ In short, detaching usage from custom began long before 1725.

The real motives of the two estates are clear enough. Their assault on the Finney must be seen against a background of concerted efforts to generate an improved income through extending and leasing demesne land, a reduction in customary leases and the enlargement of an annual leasehold sector, and the engrossment of holdings. Considerable progress had already been made in that direction. By 1715 virtually all de Trafford's demesne land was leased on rack rents. Meadow land was highly prized and, when removed from the customary sector, carried an appropriately high rental. Even labour services as part of the customary lease were insisted on.⁵⁴ Confirmation of full ownership and control of the waste through enclosure widened the scope for profit-taking still further. No doubt, the start of the River Douglas Navigation scheme by 1722, with which the Heskeths were closely connected, was an added spur in as much as the embanking work would effectively remove the threat

of serious flooding.⁵⁵ But it was the potential return on the enclosure which was particularly enticing. Enclosed Finney land was valued at £1.5 per acre for the best quality and the average valuation was put at some 50 per cent higher than the 'old enclosures'. Such a prospect reinforces Allen's recent argument that the overriding motive among enclosing landlords was to raise rents and, by doing so, were by far the largest beneficiaries of the enclosure process.⁵⁶ Nor indeed, was the newly enclosed land in Croston immediately turned over to intensive cultivation in order to generate employment for the poor. It was highly valued for grazing and remained so until the turn of the nineteenth century.

Moreover, the dispute over Croston Finney was not an isolated case. The Heskeths and de Traffords could not have been unaware of contested claims to Aughton Common, just a few miles further south, which surfaced in the early 1720s. Here once more proposals to enclose brought the lord of the manor into conflict with small freeholders and the community at large which was not resolved until the final Enclosure Act of 1815; and the fact that meetings of the manor court had long since lapsed helped to sharpen competing claims.⁵⁷ Nor was Croston Finney the first enclosure undertaking to involve the Heskeths and de Traffords. Both had had a stake in the enclosure of neighbouring Longton marsh in 1710/11. On that occasion, too, village 'charterers' pressed their claim to a substantial allocation. In fact twenty-six of them collectively received the largest grant, among them fourteen smallholders who were allocated between two and ten acres each. Even so, whether an allocation of a few acres was

⁵³ LRO, DDHe 11/96, common of pasture was granted to Hugh Norris 'upon such common in Croston as shall not be enclosed by Robert Hesketh in his lifetime.'

⁵⁴ LRO, Lancashire Papist Estates 1715.

⁵⁵ S C Walker, 'The Navigation of the River Douglas 1713-1771,' unpublished BA dissertation, University of Lancaster, 1982. In fact work on the project was delayed until the 1730s.

⁵⁶ LRO, PR 2606, DDTTr Box 1005, de Trafford rentals.

⁵⁷ Coney, *op cit*.

sufficient recompense for former customary rights is open to question.⁵⁸ That could not be the case in so far as Croston's smallholders were concerned, and their claim to a share in the Finney was clearly more tenuous. Both landowner and tenant drew on the Longton experience. Proposals to proceed with an enclosure bill started in 1721. From the outset the major landowners claimed that the bill was opposed 'by a small number'.⁵⁹ Technically that may have been the case; but, taken at their face value, such formal statements do not record the full story. It was convenient to distinguish between those who had a legal basis on which to voice an opinion and the vast majority who did not. Yet this would be to overlook the fact that large numbers of cottagers and smallholders felt fiercely that they too had a stake. They also had a voice. A meeting of cottagers and smallholders, together with many of the small freeholders, put forward conditions in which neither squire nor rector could acquiesce. Their demands amounted to a communal sharing of the resource on manageable terms. There was no prospect of challenging legal title, but it mattered little, at least in their own perception, that the vast majority could make no legally binding claim within the normal terms of reference. What mattered was usage. Instead, all the 'tenants, inhabitants and small freeholders' of the village, they demanded, should have the right of first refusal when the Finney was eventually put out to lease on the payment of an entry fine of just three years' value and a yearly rent of one shilling per acre. They also insisted that the land which Hesketh and de Trafford had arbitrarily enclosed in recent years should not count as 'old land', and therefore towards their allocation of 'new land'.⁶⁰ In effect, by transposing a

concept of rights and obligations onto a legal framework of proprietary claims, it was an attempt to rescue customary practice embodied in broad access to the waste.

From the outset the appeals of the village community carried little weight in law. The enclosure commissioners would not recognize any claim that could not be substantiated by legal deed. In any event, falling back on a defence of 'time immemorial' and 'time out of mind', in relation to the claims of agricultural custom and practice, was fraught with legal uncertainties and especially when they were made by such imprecise categories of people as 'inhabitants' and 'villagers'. Given the changing nature of customary behaviour, it was virtually impossible to codify and rationalize custom within a legal framework which gave increasing primacy to the claims of ownership.⁶¹ In short it could be safely ignored and it was. Moreover, since there is no evidence of an active manorial court in seventeenth-century Croston, this would certainly have weakened a defence of 'use-rights' on the basis of regulated customary practice. The other principal weakness was that Croston's copyholds extended to named lives, invariably three, which unlike copyhold by inheritance did not offer the same degree of protection.

IV

Not surprisingly the lords of the manor and the rector took the lion's share of the spoils. The de Traffords were allocated 322 acres, the Heskeths 270, and the Reverend Pilkington 90 acres. A further fifty-two acres went to two small absentee landowners, Maximilian Nelson and William Dicconson of Wrightington, with the remainder distributed among Croston's

⁵⁸ LRO, DDT Box 1005, Landholdings on Longton Moss 1710-11.

⁵⁹ LRO, PR 2603.

⁶⁰ LRO, PR. 2610. Proposals for the enclosure of Croston Finney, 11 December 1721.

⁶¹ Large, *op cit*, pp 110-111; see Ursula Vogel, 'When the Earth Belonged to All; the Land Question in Eighteenth Century Justifications of Private Property,' *Political Studies*, xxxvi, 1988, pp 102-21.

freeholders and the handful with secured rights of common under their lease agreements.⁶² The enclosure of Croston Finney redrew the social map of the village. The impact was fairly swift and immediate. Fortunately it is possible to measure the changes to the size, distribution and occupancy of holdings brought about by the enclosure act and based on two manorial surveys. The first was undertaken between 1721 and 1725. Unfortunately, the second is not dated but, based on the evidence of estate leases, must have been completed by 1735 at the latest. (Table 2)

Traditionally, attention has been focused on the fate of the small farmer.⁶³ Admittedly their numbers shrank from fifteen separate holdings to eleven. For the three largest, however, enclosure was an opportune moment to sell at the best price and, in the case of two, for the best possible reasons. Elizabeth Knight disposed of her twenty-three acres because she was a widow and had no direct heirs. For much the same reason John Dandy's nine acres of freehold and his apportionment of five-and-a-half acres of common found their way into other hands not long after enclosure.⁶⁴

What is socially more significant is the experience of that category of smallholder, under thirty acres, which accounts for most occupiers. Freehold status was not of itself the main issue here. Again, most of these holdings, even many of the smaller ones, were pieced together through a combination of customary and short-term leasehold possession, and a few included an element of freehold. But the fate of individual occupiers rested on factors other than security of tenure. Just as much depended on an occupier's tenurial background as well as the scale and location of the holding, inheritance decisions and, quite clearly,

a readiness to take risks. And there were those who seized their opportunity to establish themselves as much more substantial figures. In other words, enclosure in terms of its impact was just as much a 'revolution' from below as a 'conspiracy' imposed from above. The solidarity of community was not cast in stone, and the run up to enclosure exposed divisions between small landholders and between cottagers who had verifiable legal claim and those who did not. The squires of Croston exploited these divisions in drawing up the battle lines between supporters and opponents of the enclosure act.⁶⁵

Amongst the handful who strengthened their social and economic position was the Thornton family.⁶⁶ Prior to enclosure John Thornton typically combined twelve acres of freehold with the lease of a farmstead belonging to the Hesketh estate and thirty-seven acres of glebe land. He was apportioned seven-and-a-half acres of the Finney on the strength of his freehold, and two acres in relation to a right of common which specifically attached to the tenement he leased from Hesketh. His successor then took out a lease on a further 85.5 acres which formed part of the Hesketh's allocation of the waste. The Thorntons, it appears, went from strength to strength, and John Thornton's widow emerged as the largest tenant occupier in the community with a holding that finally ran to 126 acres. The disposal of four freehold acres probably helped with the process of constructing a much more substantial farm. Its size overshadowed anything that had gone before.

Thornton's experience was not unique, but a further example will suffice. Prior to 1725 one of the several branches of the Ryding family leased just over forty acres of glebe land which, in the post-enclosure period, was extended by a further sixty-six

⁶² LRO, AE/3; PR 2606.

⁶³ G E Mingay, *Enclosure and the Small Farmer in the Age of the Industrial Revolution*, 1968.

⁶⁴ LRO, DDT Box 35.

⁶⁵ Thompson, *op cit*, provides a fascinating case study, pp 151-158.

⁶⁶ Traced through estate leases and the pre- and post-enclosure surveys.

TABLE 2
Croston Finney apportionment

1725	c 1735
Humphrey Trafford (82 acres)	retained
John Trafford (240 acres)	retained
Thomas Hesketh (270 acres)	retained
Revd. Pilkington (90 acres)	retained
<i>Small Freeholders</i>	
Elizabeth Knight (> 15.2 acres)	sold
Maximilian Nelson (> 25 acres)	retained
Edward Dicconson (> 20 acres)	retained
Thomas Sumpner (< 6 acres)	sold
John Thornton (> 6 acres)	retained (in part)
John Dandy (< 5.5 acres)	sold
Edward Parr (< 1 acre)	retained
Samuel Parr (0.25 acre)	sold
George Norris (> 1 acre)	sold
Ralph Withington (> 1 acre)	sold
Henry Hesketh (> 1 acre)	retained
John Ryding (> 2 acres)	retained
Margaret Dalton (> 3.5 acres)	sold
Banister Parker (< 4 acre)	sold
John Dewhurst (> 1.75 acres)	retained
<i>Hesketh Estate (tenants)</i>	
John Astley (> 3 acres)	Lawrence Almond (13.5 acres)
Margaret Baxtenden (> 2 acres)	John Aspinall (2 acres)
Richard Hodson (1 acre)	William Bamford (1 acre)
Robert Hodson (1 acre)	James Dobson (1 acre)
Richard Langtree (> 2 acres)	Richard Farrington (5.5 acres)
Richard Nixon (> 1 acres)	Richard Forshaw (15 acres)
John Sharples (1 acre)	John Hardiker (1 acre)
William Spencer (1 acre)	Hugh Hesketh (5.5 acres)
John Thornton (1 acre)	John Langtree (7.5 acres)
Harry Watkinson (> 3 acres)	Richard Norris (10.5 acres)
Anne Watmough (1 acre)	Thomas Rigby (2 acres)
	John Ryding (2 acres)
	Margaret Thornton (85.5 acres)
	Thomas Walsh (1 acre)
<i>Trafford Estate (tenants)</i>	
John Thorpe (< 2 acres)	John Hardiker (7 acres)
	Hugh Hesketh (28.5 acres)
	Richard Lee (7 acres)
	Robert Norris (33 acres)
	Robert Ryding (2 acres)
	Roger Ryding (66 acres)
	James Spybie (7 acres)
	William Sybbie (24 acres)
<i>Maximilian Nelson (tenants)</i>	
John Dandy (16 acres)	Thomas Molyneux (< 2 acres)
Samuel Thorp (> 1 acre)	John Farrer (< 2 acres)
Edward Monk (> 1 acre)	Ralph Smith (< 2 acres)
Richard Monk (> 1 acre)	Edward Parr (< 2 acres)
Robert Almond (> 1 acre)	Samuel Parr (< 2 acres)
Margaret Rutter (> 1 acre)	Henry Hesketh (< 2 acres)
Thomas Ryding (> 1 acre)	John Ryding (2 acres)

TABLE 2 (continued)

1725	c 1735
Richard Hardiker (> 1 acre)	Richard Norris (< 2 acres)
	Lawrence Almond (< 2 acres)
	Roger Ryding (< 2 acres)
	Margaret Thornton (< 2 acres)
	Henry Cooper (< 2 acres)
	John Hardiker (< 2 acres)
<i>Edward Dicconson (tenants)</i>	
Margaret Dalton (10.2 acres)	{ Ralph Smith (c. 22 acres)
Richard Harrison (4.2 acres)	
James Knowles (2.8 acres)	
Edward Parr (0.6 acres)	
Janet Mason (1.3 acres)	
John Knowles (1.3 acres)	

Source: LRO, PR 734, PR 707; DDTr Box 35; DDSs 126/2-3; DDHE 11.

acres of de Trafford's Finney land. In fact these two families together, the Thorntons and the Rydings, came to occupy almost 45 per cent of the common within the space of ten years after enclosure. Generally, all of the tenant farmers who came to occupy the newly enlarged farms of over forty acres in size were promoted from among the ranks of Croston's more energetic and better placed individuals. They were typically the ones who, at an earlier stage, had been prepared to invest in shorter leases and higher annual rents on demesne land previously carved out of the waste, and who then went on to compete for substantial holdings on the Finney after enclosure. Their advancement was in itself a comment on a widening social gulf among landholders. Indeed the emergence of this village élite is recorded in the numerous memorial plaques which were soon to decorate the aisles of Croston Parish Church.

The fate of Croston's cottagers was the overwhelming impact of enclosure, as a few simple statistics make clear. There was a significant amount of turnover at all levels, but it was most marked among the lowest and most vulnerable group of erstwhile 'cottager-farmers' who, collectively, had brought a certain distinctiveness to the social profile of the seventeenth-century

community. Enclosure effectively removed this layer. In the immediate pre-enclosure period, sixty-eight families occupied holdings of under five acres of whom the vast majority held less than two acres. None the less, few had the benefit of less than an acre. Additionally, in more tolerant times, most certainly would have taken advantage of the open mossland. The size of this group had been reduced to a total of forty after 1725 and, of the thirty-four holdings of less than two acres, half can be identified as having new occupants with little more than a cottage and garden in every case. (Table 1) The casualty rate among tenants on manorial and glebe lands was even worse. Of the thirty-seven cottages identifiable in 1725 only half were still under the same occupancy by c 1725.

Clearly, the cottagers' small holding only mattered when combined with access to broad acres, and this applied equally to the seemingly better placed individuals who were in a position to claim entitlement to an allotment on the Finney by virtue of 'right of common' confirmed in their leases. They seemed to have fared little better than their more vulnerable counterparts. (Table 2)

When faced with the proportionately higher costs of drainage and hedging work on unviable plots, most surrendered their

rights and became indistinguishable from an expanding body of labouring families.⁶⁷ In 1725 ten Hesketh estate tenants came into this category. Apart from three individuals they all received a nominal allocation of c 1.3 acres of common in so far as their cottages 'counted' as two acres of 'old' land. The final destination of these small allotments makes interesting reading. None of the original recipients retained his holding apart from John Thornton who could hardly be described as a simple cottager. By 1735 only two lessees, William Bamford and Thomas Walsh, corresponded with the 1725 list of cottagers who were dependent on a small croft and grazing rights to the common. The remainder combined the lease of Hesketh Finney land with other holdings. More dramatically still, the combined apportionment allocated to Edward Dicconson's tenants found its way into the hands of just one leaseholder.⁶⁸

In short, the comparatively more even distribution of resources of pre-enclosure days, secured by communal access to the waste, had all but disappeared. Here, to quote Michael Turner, is 'the independent peasant shuffling inexorably down the agricultural ladder'.⁶⁹ Furthermore the experience of Croston's cottagers, when faced with waste land enclosure, may not have been exceptional. Sir Thomas Hesketh, together with Edward Dicconson and Maximilian Nelson, were also involved in the enclosure of nearby Wrightington common the following year.⁷⁰ There the common was carved up between the major landowners leaving just three acres for the 'town's use' to extract road building mate-

rials and a few acres kept in reserve for 'herbage, depasturage and the taking of timber'.

As for Croston, by the early nineteenth century the social transformation was largely complete. It was a village peopled by squire and parson, substantial tenant farmers and a large social base of agricultural labourers and handloom weavers.⁷¹ This is not to say that the smallholder with a few acres disappeared from the scenes even though agriculture became more commercialized at an earlier stage in south-west Lancashire compared with the pastoral northern reaches of the county. Comparatively small farms remained very much the norm. Indeed, preserving a pool of small farmers was essential to maintaining progression up the 'farming ladder'.⁷² As part of that pool were survivors of an earlier tradition, smallholders on customary leases who, in the main, held more than just a cottage croft and garden. A number of these holdings were included in the sale of Hesketh property in 1804. All of them had reduced to just one 'life'. Typical was eighty-six year old Richard Abbott whose predecessors can be traced back to the time of enclosure. He rented c 7 acres of meadow land, pasture and a small arable plot for an annual rental of just 52.5p, compared with the usual rack rent of 150p per acre for good arable and 350p for meadow land.⁷³ It is also clear that customary tenure lingered on into the nineteenth century among a diminishing number of smallholders to be found on the Fylde mosslands.⁷⁴

Nor should we suppose that the small

⁶⁷ LRO, DDTr Box 35, Survey of Croston Finney Lands; DDHe 72, Croston Leases. For instance, the lease of a parcel of land to Henry Sumner in 1726 required him to carry all the improvement costs of drainage and hedging.

⁶⁸ LRO, PR 2606.

⁶⁹ M Turner, 'Economic Protest and Rural Society: opposition to Parliamentary Enclosure in Buckinghamshire', *Journal of Southern History*, x, 1988, p 114.

⁷⁰ LRO, Scarisbrick MSS, DDSc 149/19, Supplementary enclosure agreement for Wrightington 1768.

⁷¹ LRO, Census Enumerators Schedule, 1851. According to an analysis of occupations of heads of household, 53 per cent were engaged as handloom weavers or agricultural labourers. Farms in the township generated employment for 62 'outdoor' labourers.

⁷² Mutch, 'The "Farming Ladder" in North Lancashire, 1840-1914: Myth or Reality?' *Northmen History*, 27, 1991.

⁷³ LRO, DDHe 71/5, Hesketh property in Croston sold in 1804.

⁷⁴ Rogers, thesis, p 147. Many of the small farms on the Cliftons' Fylde estates were governed by life-leases which, in total, affected about 1300 acres in 1827. Most could be found on the mosslands. The picture is similar on Lord Derby's neighbouring estate.

freehold sector had been totally squeezed out. For example, the distribution of landownership on Blackmoor Common, bordering Croston Finney, included eighty-four acres awarded to the Heskeths and the de Traffords but had left a further fifty acres to be divided among eighteen other small freeholders.⁷⁵ But the plight of the cottager who had been dependent on utilizing the waste is much clearer. He constituted an important layer in pre-industrial Lancashire society and he disappeared from view both in large numbers and in the sense of having some personal stake in the land, though probably at a later date than has been supposed. Nevertheless, he is a link between a rural heritage and an industrializing society in the making. But there is an agenda here for much wider research into the vicarious experiences of these lowland Lancashire villages in an age of industrial and agricultural change, adjust-

ment to market forces and specialized production, and the emergence of a rural proletariat. Clearly, it would be a nonsense to suggest that the social impact of enclosure was crucial to the making of industrial Lancashire, but there is a connection. In describing the process of industrialization Walton has highlighted the need 'to take account of diverse influences to include not only the range of textile materials but also agriculture, land tenure, inheritance practices and the strengths or weaknesses of large landowners and manorial overlords'.⁷⁶ The enclosure of common and waste during the eighteenth and early nineteenth centuries was part of that process, and it was also one that was informed by landownership patterns, the attitudes of landowners themselves, changes to husbandry practices and, quite clearly, by the manner in which the wider community assessed and responded to the implications of change. These village communities call out for attention.

⁷⁵ LRO, DDT: Box 1005, Landholdings on Blackmoor Common 1839.

⁷⁶ Walton, 'Proto-industrialisation,' p 47.

The Real 'Great Betrayal'? Britain and the Canadian Cattle Crisis of 1992.

By SIMON MOORE

Abstract

Agriculture emerged from the First World War facing the problems of a drastically expanded and largely urban electorate, the decline of the traditional landowning class, with a greater political dependence on the inexperienced National Farmers Union. Meanwhile, the closer working relations with Government, embodied in the price and wage guarantees of the 1920 Agriculture Act, implied that a new era of agrarian policy had arrived. The repeal of those guarantees in 1921, now remembered as the 'Great Betrayal' – a classic symbol of State neglect – attracted little opposition from the NFU or parliamentarians. The contested removal of the ban on Canadian cattle imports reveals more about agriculture's political weakness. The crisis demonstrated a firm Government commitment to urban priorities and exposed differences among agriculturists. In its intensity, scale and consequences, the Canadian cattle crisis was in political terms a more serious 'Great Betrayal' than the Agriculture Act's repeal.

'THE issue in question', Asquith commented in 1922, 'has been a burning, or, at any rate, a smouldering political question, almost ever since I have been in public life'.¹ These lines may seem a trifle overstated today, but were not at the time. The argument over whether to admit live Canadian cattle into Britain split the cabinet and caused a Minister of Agriculture to lose his seat. It became the subject of a massive newspaper campaign, and of a Royal Commission. Large claims were made for Canadian cattle. Some said they would encourage disease, and ruin farms.² Others asserted that they would preserve arable acreages and provide business for towns and food for consumers. Asquith had chosen not to admit Canadian cattle into Britain during his term as Prime Minister from 1908 to 1916, but by the time of his successor, Lloyd George, a final decision was unavoidable.

The cattle crisis shares several features with the repeal of price guarantees for wheat and oats in 1921. Both were conclusively influenced by the 1914–18 War,

and by economic and political pressures in the immediate post-war years. There is though, one significant difference. The repeal of price guarantees went down in popular agrarian history as the 'Great Betrayal'. Because of it, argues the official illustrated centenary history of the Ministry of Agriculture: 'farmers felt a sense of betrayal which lasted up to World War Two and made it hard then to win back their confidence'.³ At the time, however, the now-forgotten cattle crisis was the more hotly contested of the two. It sheds early light on the condition of agriculture's political lobby after the Great War, and its relationship to urban Britain.

I

The end of the war created an unusually challenging series of problems for British farming, to a large extent because the political scene had been radically changed by the advent of Lloyd George. As Prime Minister from 1916 to 1922, he imposed state production and social priorities by introducing price guarantees for farmers

¹ House of Commons Debates [hereafter HCD], 1922, 157, col 90.
² BPP, 1921, XVIII, RC on store cattle imports, p 53.

³ S Foreman, *Loaves and Fishes: an illustrated history of the Ministry of Agriculture, Fisheries and Food 1889–1989*, 1989, p 25.

and wages protection for farm workers. In response to these actions, the National Farmers Union (NFU) expanded its political activities along with its membership, which trebled to roughly 100,000. Owner-occupiers and tenant farmers were motivated to join as they took up the land and the leading role in agrarian politics once occupied by the land-owning gentry. The landowners were organized under the Central Landowners Association. CLA members sat in both houses of Parliament, but their political importance was diminishing. Under pressure from death duties and rising taxation, landowners were disposing of property and concerned with their preservation as a social class. They were further outflanked by the Representation of the People Act, 1918, which trebled the size of the electorate, created an overwhelming preponderance of urban voters, and decisively shifted the policy balance further away from country to town. By inheriting the landlords' political mantle, NFU leaders were brought up against the problems of a politically inexperienced membership, an inherent suspicion of Government but a heavy dependence on it, and the need to build a successful working relationship with the relatively few and almost always Conservative parliamentarians interested in agricultural matters.⁴

Initially, the NFU embarked upon the post-war period with confidence, buoyed up by rising prices for agricultural products, and the knowledge that their support was vital to Lloyd George's vision of high corn production. NFU co-operation was severely tested by the Government's plan to maintain price controls on wheat, embodied in the Agriculture Act of 1920. Lloyd George and his coalition partner

Andrew Bonar Law, the leader of the Conservative majority, forced the Bill through remorseless opposition. The final Commons' consideration of Lords amendments had taken over twenty-two stormy hours. The NFU disliked the notions of maximum and minimum prices, and of linking wages to price guarantees in Part One of the Bill. It smacked of the worst sort of State interference – financial support conditional upon close regulation of the farmer's business affairs. Through the agency of the CLA, landlords resented the compensation for disturbance terms in Part Two of the Bill that had been mainly responsible for ensuring the NFU's reluctant support for Part One. As many over-taxed landlords were improving or selling land, the idea of offering greater securities to their tenants represented 'a heavy additional burden on owners who require to sell or desire to take their land in hand'.⁵ The Bill was passed by the New Year of 1921. According to the wife of Lord Lee, the Minister for Agriculture, it represented 'the most concentrated struggle of his whole political career'.⁶

As recent research has testified, it was hardly surprising in these circumstances that the repeal of Part One of the Act was accomplished with little political difficulty just seven months later.⁷ A drastic drop in prices occurred in the early months of the year, and the Government found itself unable to make up the increasing difference between the guaranteed price and the selling price. There was almost no opposition to repeal. 'Curiously enough,' remembered Griffith-Boscawen:

this complete upset of our policy was accepted with considerable equanimity. The fact is that many

⁴ P Self and H Storing, *The State and the Farmer*, 1962; A Cooper, 'British Agricultural Policy 1912–1936. A Study in Conservative Politics', PhD thesis, University of Manchester, 1989; S Moore, 'The Agrarian Conservative Party in Parliament, 1920–1929' *Parl Hist*, 10, 1991, pp 342–362.

⁵ Institute of Agricultural History, University of Reading [hereafter IAH], CLA MSS, CLA council meeting, 20 Oct, 1920.

⁶ Lee Papers, 'A Good Innings', Privately published, 1939, vol 2, p 813. Courtauld Institute.

⁷ A.F. Cooper, 'Another look at "The Great Betrayal,"' *Ag Hist*, 60, 1986, pp 80–104; Edith H. Whetham, 'The Agriculture Act, 1920 and its Repeal – the "Great Betrayal,"' *Ag Hist Rev*, 22, 1974, pp 36–49.

farmers were more anxious to be free from control than they were to have the subsidy. Farmers are beyond all things impatient of control of their business by Whitehall, not unnaturally, considering that they are small capitalists investing all their money in their business. They naturally think they can manage their farms better than any officials.⁸

With the burden of the Act behind them, the National Farmers Union and MPs from agricultural areas returned in relief to import protection: the staple proposal they had long relied on. The protectionist debate and the strong opinions it provoked formed the basis for the cattle crisis. 'They conjure up a mirage of prospective prosperity as a hungry gourmet might enjoy in imagination the savours of his favourite dishes', wrote Francis Blundell in 1928, an NFU sponsored MP for Ormskirk who later became a rare agrarian critic of the protectionists.⁹ It is a telling example of the depth of feeling against overseas competition in the eastern counties that, in the Norwich area, local NFU and CLA branches could convene a joint conference with farm labourers with the aim of promoting protection.¹⁰

II

The cattle embargo was an important post-war reminder of the main obstacle to agricultural protection, succinctly expressed in 1928 by the Executive Committee of Horncastle Conservative Association, which 'pointed out how apt people were to get the erroneous impression that our proposals meant dearer food'.¹¹ At base, protectionists identified their cause with cereal supplies. During the war and for some time into the 1920s, arable was the keystone of agrarian policy. Chastened by German naval threats to food supplies, and shortages after 1918,

Government policy was to extend or at best maintain arable acreages for as long as possible.¹² In this endeavour, the Government needed the co-operation of farmers from the electorally important region of East Anglia, steeped in a wheat-growing culture, and with time and money to involve themselves in the Union's development.¹³ A hostile contemporary, A G Street, described this lobby in 1937:

Somehow or other there had grown up in London and most of England's large towns an agreed opinion that farming in England meant wheat first, East Anglia second, and the remainder of agricultural England not at all.

So the farming community of this district played to this fallacy. Its members produced noise all over East Anglia, noise in London clubs, noise in the headquarters of the NFU, and noise whenever and wherever possible.¹⁴

Politically speaking, the livestock industry was less prominent than the cereals lobby. Economically speaking, it was more successful. Admittedly, J A S Watson of Edinburgh University's Agriculture Department, thought in early 1922 – one year into the post-war price slump – that 'stock men have need of all the faith and optimism they can call to their aid'.¹⁵ But livestock farmers generally – beef, pig, and sheep farmers – enjoyed considerably higher produce prices in 1922 than in the pre-war years 1911 to 1913.¹⁶ Certainly, the rise in costs had also been considerable, but these were less marked for grass-farmers than for arable. After the war many farmers converted from arable to pasture, a trend regretfully described by the NFU as following 'safety first principles'.¹⁷ The NFU, however, reminded members that 'meat production represents the largest section of British agricultural produce'.¹⁸ Change was

¹² PRO, Cabinet MSS, Cab cons 23/12 wc 632, 20 Oct 1919.

¹³ Self and Storing, *op cit*, p 45.

¹⁴ A G Street, *Farming England*, 1937, p 74.

¹⁵ IAH, NFU, 1922 *Yearbook*, p 299.

¹⁶ *Ibid.* Substantial price jumps were recorded of 149% for milk, 74% pork, 71% fat cattle, 53% sheep, 28% cheese.

¹⁷ IAH, NFU, 1924 *Yearbook*, p 79.

¹⁸ *Ibid.*, p 232.

⁸ Sir Arthur Griffith-Boscawen, *Memories*, 1925, p 237.

⁹ FN Blundell, *The Agricultural Problem*, 1928, p 66.

¹⁰ HCD, 1923, 160, col 1030.

¹¹ Lincolnshire RO, Horncastle Conservative Executive committee and women's branch committee, 22 Oct 1928.

also notable in the dairy sector. Milk prices attracted many farmers. New dairying areas opened up between the wars, especially in the East and South. Established dairying areas – notably Gloucestershire and Shropshire – increased their herd sizes.

In spite of his pessimism over the position of livestock, Watson at least took some comfort from a particular portion of it: 'the fact is that grain growing is, if anything, in a worse position than stock breeding'.¹⁹ 'The world,' he concluded, 'cannot yet get on without the British livestock industry, which is its stud farm'.²⁰ British breeds such as the Hereford enjoyed an international reputation. There was general agreement with the observation made in 1921 by Watson's Edinburgh colleague Robert Wallace, Professor of Agriculture and Rural Economy, that 'the whole system of agriculture in this country is built up on the breeding and feeding of cattle'.²¹ Along with sheep, cattle were the most important element in the arable-grass-livestock blend adopted by growing numbers of farmers in the economically uncertain years between the wars. Cattle were needed to manure the soil, to consume feed, and to milk or sell for beef. At the time Watson was writing, stock-breeders were protected by perhaps the most comprehensive and controversial legislation of the era. The difficulty was that it discriminated equally against all potential importers, which included Canada. Thus the restriction collided with both free trade and imperial preference, a cause that agrarian Conservative themselves often favoured. The result of this collision was the Canadian cattle crisis. Its resolution had a more immediate impact on the morale of agriculture as a whole than the Agriculture Act's repeal. Although the ructions of the cattle crisis have been ignored, it is arguable that the contemporaneous 'Great Betrayal'

of wheat and oats only won its higher place in agrarian myth because the concerns of cereal farmers, and not stock breeders, preoccupied the NFU and rural parliamentarians.

III

The origins of the cattle dispute lie in the last decades of the nineteenth century, when the havoc wrought by cattle plague, pleuro-pneumonia and foot-and-mouth, persuaded the Board of Agriculture to withdraw its discretionary right to admit imports of live animals. Cattle from the United States were prohibited in 1879, and by early 1892 prohibition had been extended to cover several European states. In September of that year, pleuro-pneumonia was suspected in a consignment of Canadian cattle, and by November Canada had been included in the embargo.²² Two years later, a consolidating contagious diseases Bill was passed, followed in 1896 by an Act comprehensively banning the import of live animals except for instant slaughter.²³ The Canadians naturally resented this, feeling that the suspicions of pleuro-pneumonia were unfounded – 'probably rightly,' admitted Sir Arthur Griffith-Boscawen long afterward.²⁴ Nevertheless, as Minister of Agriculture between 1921 and 1922 he backed the embargo. Official fears about the consequences of diseased foreign cattle escaping the scrutiny of British health inspectors persisted into the post-war period, and were voiced by Sir Daniel Hall, the Ministry of Agriculture's chief scientific adviser.

The 1896 Act banned imports of 'stores' – beef cattle destined for feeding and fattening in British fields. Stock breeders around the British Isles unsurprisingly felt that the embargo assisted them. Many small

¹⁹ IAH, NFU, 1922 Yearbook, p 299.

²⁰ *Ibid.*, p 300.

²¹ BPP, 1921, XVIII, p 51.

²² A H H Matthews, *Fifty Years of Agricultural Politics*, 1915, p 34.

²³ HCD, 1896, XXXVIII, col 1617.

²⁴ Griffith-Boscawen, *op cit*, p 238.

farms were engaged in cattle-breeding. Most were located in the uplands on the western side of Britain; usually small family-run farms, or, on occasion, politically-sensitive holdings settled by ex-servicemen with state encouragement. According to R. R. Robbins, the 1921 NFU President, 'a large portion of this class is practically confined to the breeding and rearing of young stock as their chief source of livelihood'.²⁵ Doubts about the embargo existed amongst other agriculturists. Many graziers with good pasture bought stores in spring, fattened them on grass with purchased corn and cake and produced beef in the summer months. This practice was particularly prevalent in Leicestershire and Northumberland. Primarily arable farmers, usually found in the eastern counties of England and Scotland, grew crops of turnips and bought large numbers of stores in the Autumn. The cattle were kept in stalls, fed turnips, straw and a certain amount of cake, and turned into winter beef. These two groups were likely, at best, to be unenthusiastic about the embargo. Livestock was the biggest source of profit to the powerful East Anglian farmers, for all their political and emotional devotion to supplying wheat. Furthermore, stores were needed to trample and manure the soil. Distaste for the embargo was of long-standing in this region: East Anglian MPs had stiffly contested the 1896 Bill. Leicestershire and Northumberland relied on a steady supply of stores. Northumbrian farmers obtained theirs from Ireland and Cumbria; farmers in Leicestershire and other traditional 'beef and hunting' areas²⁶ were searching for a choice of stores sources to cut rising costs, resist the introduction of dairying, and answer the demands for fresh meat from urban consumers.

Other opponents to the embargo

included butchers, imperial free traders and spokesmen for urban areas who contended, with varying degrees of certainty, that Canadian stores would reduce the price of home meat; manufacturers of cattle cake and their supply trades, representatives from market towns and city ports all anxious for business. An awkwardly-named pressure group was formed in Glasgow in 1901, the 'Free Importation of Canadian Cattle Association of Great Britain'. Their arguments were an odd mixture of national security, consumer demand and imperial responsibility. At root lay the belief that despite the claims of UK breeders, the national herd was insufficient to feed the expanding urban population, who for health reasons and personal taste preferred fresh meat over chilled or frozen. Shortages had been forecast for some time. The Board of Agriculture noted in 1912 that the:

possibly from the consumers point of view somewhat ominous, fact is that overseas supplies show insufficient expansion...to meet the increased demand.²⁷

This concern intensified after the Great War, when the threat to British food supplies had been made plain to all. In 1921 John Edwards, President of the London retail meat traders, foresaw that Canadian stores might lower beef by sixpence in the pound.²⁸ Meanwhile, an opponent claimed the embargo's removal would only add an extra ounce a week to the consumer's beef diet.²⁹

There was also an imperial perspective. Although the original embargo was worldwide with the local exception of Ireland, twenty years later Canada in particular stood to benefit from the removal of what one critic called 'an old sore and an old grievance'.³⁰ The stigma of disease was

²⁵ BPP, 1921, XVIII, p 63.

²⁶ A G Street, *op cit*, pp 58-64.

²⁷ Board of Agriculture, 1912 *Ag Stats*, IV, p 279, cited in BPP, 1921, XVIII, p 335.

²⁸ HCD, 1924, 170, col 1945.

²⁹ BPP, 1921, XVIII, p 317.

³⁰ House of Lords RO[hereafter HLRO], Bonar Law MSS, BL 100/3/9, Imperial Conference, Cattle embargo, 26 Apr 1917, p 6.

keenly felt, but the general case against the embargo began slowly, gathering strength as the war and resulting disruption of other forms of trade reinforced existing arguments and added new ones. After Ireland, Canada was the nearest source of stores supplies. Potential competition was therefore limited. Australian and New Zealand meat arrived in the inferior form of frozen beef. Australian supplies were also less reliable, as cattle there were more subject to drought. By the outbreak of the Great War, the growing population of the USA had diverted both American and Argentine chilled meat exports away from UK consumers. Canadian arable needed an expanding livestock trade to secure its own advance into foreign markets. The trade in cattle for slaughter at UK ports had been disrupted by the war, and it was thought that store exports would compensate. In 1921 the Canadian Minister of Agriculture claimed that two to three hundred thousand stores could be landed at once, increasing to half a million annually within five years – an attractive prospect to the embargo's opponents, but horrifying to its supporters. Prof. Wallace warned that such figures would 'completely upset' the whole system of breeding.³¹

Finally, the small Canadian domestic market, and the suitability of Canadian farms for the rearing but not the fattening of cattle necessitated profitable export markets for stores or slaughter. These were closed in Great Britain after 1892, but opened in the United States after 1913 when President Wilson's Democratic administration lifted tariff barriers. Since then, Canadian farmers enjoyed but were nonetheless heavily dependent on the American market. 'The [USA] Beef Trust at the present time, if it likes to go into Canada, can buy up all the cattle in Canada if it has the money to do it', claimed Sir

John Stephen, a leading British miller of oil and cake for cattle.³²

IV

The Liberals returned several MPs at their 1905 General Election victory who had pledged to lift the embargo. However, no legislation was introduced by the governments of Campbell-Bannerman and Asquith, and official support for the embargo was confirmed at every parliamentary session before 1914. The matter was raised once more at a special committee of the Imperial War Conference on 26 April 1917. There, the Canadian Minister for Public Works made a motion to lift the embargo as speedily as possible. 'If it is desired to protect the cattle industry in the United Kingdom, let it be done; that is a matter for domestic concern,' observed Sir Robert Borden, their chief conference representative and Prime Minister, 'but do not accomplish it by the enforcement of a regulation which casts an undeserved slur upon conditions in Canada'.³³

At this meeting, Britain was represented by Ernest Prothero (later Lord Ernle), President of the Board of Agriculture. The Chairman was Walter Long, the Colonial Secretary, a Wiltshire landowner, and as Robert Blake has commented, a country gentleman of ancient lineage and prominent representative of rural England.³⁴ Long believed that, in the cause of imperial unity, 'there must be genuine and thorough reciprocity' in trade between Britain and the Empire.³⁵ He had also been responsible for the Act of 1896, for which his autobiography made no apology, although he conceded that: 'it was impossible to resist Sir Robert's contention that immunity from disease for a quarter of a century had

³² *Ibid.*, p 293.

³³ HLRO, *op cit*, p 4.

³⁴ R Blake, *The Unknown Prime Minister*, 1953, p 242.

³⁵ Lord Long of Wraxall, *Memoirs*, 1923, p 242.

³¹ BPP, 1921, XVIII, p 51.

made it impossible to adhere to the old policy'.³⁶ Prothero too, accepted that Canadian cattle were free from pleuropneumonia 'and on those grounds therefore we should receive the present suggestion for the removal of the embargo very sympathetically'. His enthusiasm then led him to suggest that 'we could, not by legislation but merely by an order of the Board of Agriculture, put Canada into the free list to-day'. Long headed off the Canadian rejoinder ('Then for heavens sake why do they not do it?') by interjecting that a parliamentary repeal of his 1896 Act was probably necessary. The discussion closed with a clear agreement to remove the embargo as speedily as possible, but the minutes indicate that Long refused Canadian demands for a formal resolution. The difference between an 'agreement' and a formal resolution to admit stores was to preoccupy both sides for the next four years.³⁷

All the representatives understood that wartime shortages of shipping space meant there could be no imports until hostilities had ceased, but no other obstacles to the eventual arrival of Canadian cattle were foreseen. It is less inconsistent than it might at first seem that only a month after this undertaking to the Canadians, Prothero told the concerned Sir Hamar Greenwood, the future Irish Secretary of State, that he could not say whether or under what conditions Canadian stores might be permitted to enter British ports.³⁸ At the time of the conference, Prothero assumed that the drive to extend arable production would eventually reach the point where even increases in British and Irish-bred stores would be unable to deal with the increased volumes of straw and root crops. As Ireland progressed towards fattening and feeding cattle at home rather than Britain, Prothero anticipated less concern among

Irish breeders that Canadian stores would undermine their business.³⁹

Once the war ended, Canadian agriculturists and their supporters in the UK requested the British Government to redeem Prothero's pledge. They lobbied until 1921, provoking what Asquith – who supported them now he was out of office – described as 'various awkward little incidents'.⁴⁰ On 3 March, 1919, for example, Prothero informed representatives of the Canadian Live Stock Commission and Department of Agriculture that the unsettled State of British farming and the general health risk of foreign imports made the removal of the embargo inopportune, a view he repeated to subsequent deputations and to the press. This stance was adopted by Prothero's ministerial successor, Lord Lee, in late 1919 and January 1921.⁴¹ Both men, though, admitted the basic point – that Canadian cattle were free from disease. Events moved forward when another Minister of Agriculture, who crucially for the embargo's opponents was a member of the House of Commons, succeeded Lee in February, 1921. Sir Arthur Griffith-Boscawen followed the position taken by Prothero and Lee that as the 'majority of farmers in the country were strongly opposed to any change', and that 'as Minister of Agriculture I was appointed to safeguard their interests and represent their views', he was not prepared to risk their livelihoods, or forfeit their confidence in him and in an expanded role for his department.⁴² On this issue, Griffith-Boscawen maintained the position he had originally held as Lord Lee's Parliamentary Secretary.⁴³ As a Member of Parliament, the new minister's promotion to Cabinet rank necessitated by law his return in a by-election. Griffith-Boscawen's Midlands

³⁹ HLRO, *op cit*, p 3.

⁴⁰ HCD, 1922, 157, col 93.

⁴¹ *Ibid*, 154, cols 22–23.

⁴² Griffith-Boscawen, *op cit*, pp 127–128.

⁴³ HCD, 1920, 132, cols 949–50; *Ibid*, 135, cols 2129–2130; *Ibid*, 136, col 40.

³⁶ *Ibid*, p 244.

³⁷ HLRO, *op cit*, pp 4–6.

³⁸ HCD, 1917, XCIII, col 2636.

constituency of Dudley was heavily industrial: British opponents of the embargo saw an opportunity to accuse the minister of keeping cheaper Empire meat from the tables of his own working class urban electorate. 'I suppose', Griffith-Boscawen recalled of his erstwhile constituents, 'that many of them have never even seen a farm'.⁴⁴

The hitherto sporadic and ineffective British anti-embargo lobby gained momentum. Its chief adherents at this juncture included the Federation of Meat Traders' associations, whose members wanted Canadian meat in their stores; the free-trade imperialist and Colonial Secretary, Winston Churchill, whose constituency of Dundee agitated in favour of opening the ports to Canadian cattle; and the press magnate, Lord Beaverbrook. In him, embargo supporters faced a determined opponent, an experienced political operator and a masterly mass communicator. The ensuing cattle campaign – pre-saging Beaverbrook's Empire Crusade a decade later – was motivated in part by his Canadian background. He had worked with Borden in the past, most recently during the war as a self-styled 'Canadian Eye-Witness' with the partial aim of asserting a separate identity for Canada's soldiery. His main newspaper, the *Daily Express*, announced it would campaign against the Agriculture Minister's re-election and placarded Dudley with posters that read 'Boscawen Plumps For Dear Meat'. Beaverbrook kept to this simple argument against the embargo throughout the controversy. He and other supporters of imperial preference enjoyed finding themselves in the position of campaigning against protection in support of freer trade and cheap food. Conversely, outright free traders opposed the embargo on imperial grounds. This strange situation contributed to the problems of the pro-embargo agr-

arian lobby. 'I fought desperately with my back to the wall', Griffith-Boscawen truthfully remembered.⁴⁵ He wrote to Beaverbrook in high dudgeon:

Now you and I have been friends in the past, and though I have every reason to feel bitterly annoyed at the violent and unprovoked attack in the *Daily Express* at the moment when I was fighting for my seat I don't want any personal questions raised and certainly not through a misunderstanding.⁴⁶

Beaverbrook coolly replied: 'I take no responsibility for the editorial management of the paper or the form in which news appears, and I should be very sorry to think that there had been any personal attack on you in the *Daily Express* and I cannot find one in the files'.⁴⁷ This breathtaking defence, economical with the spirit of the truth, was not readily accepted by insiders. The Chairman of the Conservative Party, Sir George Younger, asked Bonar Law to help stop the 'disgraceful as well as unfair' attacks on Griffith-Boscawen; the General Committee of the Carlton Club notified Bonar Law of their 'profound regret' at Beaverbrook's treatment of another club member.⁴⁸ 'If you wish to attack my attitude over this issue I beg of you to do so without regard for our personal relations', wrote Beaverbrook to Bonar Law, enclosing copies of his exchange with the Agriculture Minister.⁴⁹ But as Beaverbrook would have known, it was not politically sensible for Bonar Law, let alone in his lonely, loyal character, to turn against one of his few close friends.

When Griffith-Boscawen eventually succumbed by 270 votes in a poll of twenty thousand, the embargo's opponents were galvanized. The newspaper campaign spread from the *Daily Express* to *The Times*. 'These papers have raised a very hurricane

⁴⁵ *Ibid.*, p 128.

⁴⁶ HLRO, BL 100/2/33, Griffith-Boscawen to Beaverbrook, 24 Feb 1921.

⁴⁷ *Ibid.*, BL 100/2/53, Beaverbrook to Griffith-Boscawen, 24 Feb 1921.

⁴⁸ *Ibid.*, BL 100/2/29, Sir George Younger to BL, 23 Feb 1921; BL 100/3/10, Carlton Club Gen. Committee to BL, 9 Mar 1921.

⁴⁹ *Ibid.*, BL 100/2/33; Beaverbrook to Bonar Law, 24 Feb 1921.

⁴⁴ Griffith-Boscawen, *op cit*, p 128.

of excitement,' complained Ernest Evans, Liberal MP for Cardigan.⁵⁰ Walter Elliot, the Conservative MP for Lanark, alleged:

We have been subjected to a perfect bombardment of leaflets and threatened with every kind of other consequences to ourselves if we dare to oppose the will of Lord Beaverbrook on this matter, ranging from the break-up of the British Empire to the personal hostility of the *Daily Express* at the next General Election.⁵¹

Griffith-Boscawen rapidly announced his new candidature for the firmly agricultural division of Taunton. The Government established a Royal Commission to investigate the embargo, chaired by a former Lord Chancellor, Lord Finlay. The decision was welcomed by the NFU and supportive MPs, who felt sure of continued ministerial support in maintaining the Act of 1896.⁵² Under the chairmanship of the Marquess of Crewe, the Livestock Defence Committee prepared a detailed case for the embargo on behalf of its fifty-seven member organizations, which included a large number of breed and agricultural societies and chambers of agriculture, as well as the Royal Agricultural Society of England. Their position was presented to the Commission by a legal team led by Douglas Hogg, KC, a future Lord Chancellor. Griffith-Boscawen marshalled testimony from his ministry and the Irish Board of Agriculture. The embargo's opponents were suspicious of Finlay, and did not initially have a counsel to represent them, although they eventually selected Evan Charteris KC, on behalf of the Free Importation of Canadian Cattle Association. Ninety-two witnesses were eventually heard in June and July. The atmosphere was intensified by an Emergency Tariff Bill passed at the end of May by the new Republican-led Government in the USA. It included a six-

month duty of 30 per cent on cattle imports, creating further uncertainties among Canadian farmers. In late 1921 the Commission, while admitting that their conclusions might cause a decline in domestic cattle breeding, found that imperial policy and protection of home industry formed no part of its terms of reference. This left the question of disease. The Commission simply endorsed the accepted view that cattle plague, pleuro-pneumonia and foot and mouth had not existed in Canada for thirty years. It thereupon shocked both sides by reporting in favour of opening the ports.⁵³

The NFU complained that the Commission's Report 'fails to justify the abandonment of a policy which has stood the test of time,' and called upon the Government to 'make an immediate pronouncement in favour of the present system'.⁵⁴ Lord Crewe declared that the Royal Commission's members did not understand rural life. Amidst rising agrarian indignation, Griffith-Boscawen felt compelled to recommend in Cabinet that the Report should be disregarded. This course was adopted, and confirmed to the Commons at the opening of the 1922 session.⁵⁵

Counselled by Lord Beaverbrook, the Meat Traders' Federation passed a resolution 'expressing astonishment and surprise at the determination of the Government to betray us over the Report of the Royal Commission'.⁵⁶ A fierce argument broke out between Griffith-Boscawen and the Federation. Again at the suggestion of Beaverbrook, the Federation revealed that they had agreed not to oppose the Agriculture Minister's successful election for Taunton in return for accepting the Royal Commission. Griffith-Boscawen

⁵⁰ HCD, 1922, 157, col 83.

⁵¹ *Ibid.*, 157, col 85.

⁵² PRO, Ministry of Agriculture MSS, MAF 53/12, 'Deputation to the PM from the Commons Ag Committee,' 15 Mar 1921, p 19.

⁵³ BPP, 1921, XVIII, p 9.

⁵⁴ IAH, NFU, 1922 *Yearbook*, p 233.

⁵⁵ Griffith-Boscawen, *op cit*, p 239.

⁵⁶ HLRO, Beaverbrook MSS, B/16, Beaverbrook to John Edwards, 11 Feb 1922.

angrily replied to the Meat Traders' President that no such dishonourable bargain was made, counter-claiming that the Federation was untruthfully alleging he had promised to lift the embargo if the Commission recommended it.⁵⁷ Capitalizing on the furore, Churchill and Robert Horne, the Chancellor of the Exchequer, told the Cabinet that they were unable to agree to the retention of the embargo. The Prime Minister was put in a difficult position. The dispute had now split the Cabinet, and threatened to split the Conservative Party, the majority partner in his coalition government. Under pressure from two of his senior ministers and close allies, Lloyd George acceded to their demands but, showing the political instinct for which he was famed, he reduced the chance of permanent fractures by removing the Government whip. The Cabinet agreed that 'in the event of a private member's discussion taking place,' the matter would be left to the judgement of the House.⁵⁸ To Griffith-Boscawen's dismay, his colleagues went further and fixed 24 July as the day for the discussion.

The embargo was finally overturned by 247 votes to 171 in the course of a heated seven-hour Commons debate. Members were treated to the extraordinary spectacle of two Cabinet members, Winston Churchill and Griffith-Boscawen, speaking in opposition to each other. 'The House of Commons has deserted the farming in favour of the trading interests' the *Farmer and Stockbreeder* lamented.⁵⁹ 'After last night', next morning's *Daily Express* correctly foresaw, 'even the Government cannot stand out against the community any longer'.⁶⁰ Even the House of Lords, 'which I certainly thought would stand firm, gave way on the subject', lamented

Griffith-Boscawen.⁶¹ Lord Chaplin, a former Conservative President of the Board of Agriculture, moved to maintain the embargo, but could only manage a compromise: a Liberal proposal to lift the embargo without conditions was rejected, but Walter (now Lord) Long's motion accepting the Royal Commission's view that Canadian cattle were healthy, and might be admitted as stores under quarantine, was passed without a division.⁶²

V

Twelve months earlier, Part One of the Agriculture Act was repealed without fuss, and with approval from many agriculturists. But the cattle crisis involved an intense political battle. This distinction is important, because the conflict shows that by 1922 agrarian spokesmen had not come to terms with post-war political conditions. Pro-embargo activists were outmanoeuvred on several fronts. They were unable to wield the same tremendous instrument of persuasion as their opponents. The anti-embargo lobby had the *Daily Express* at their disposal; the NFU relied on the *Farmer and Stockbreeder*. The agricultural lobby was an easy target for conspiracy theorists on this occasion as on others between 1918 and 1929, most notably during the campaign for agricultural rates reform. The *Daily Express* claimed that 'a small section of British agricultural interests' had held onto the embargo for years by 'subterranean wire-pulling'.⁶³ A Labour MP warned colleagues about the existence of 'a strong coalition of all the parties, associations and trusts in favour of the embargo'.⁶⁴ Of course, the fact was that Churchill's well-timed decision to withdraw Cabinet support for the embargo, and Beaverbrook's com-

⁵⁷ *Ibid.*, Griffith-Boscawen to John Edwards, 18 May 1922.

⁵⁸ PRO, Cab cons 23/30: 34(22)6, 13 Jun 1922.

⁵⁹ *Farmer and Stockbreeder*, 31 Jul 1922.

⁶⁰ *Daily Express*, 25 Jul 1922.

⁶¹ Griffith-Boscawen, *op cit*, p 240.

⁶² House of Lords Debates, 1922, 51, col 354.

⁶³ *Daily Express*, *op cit*.

⁶⁴ HCD, 1922, 157, col 64.

munications skills far exceeded those of the NFU or Griffith-Boscawen. The comment of William Shaw, the anti-embargo Labour MP for the livestock market town of Forfar, that 'we had only a poorly organised crowd,' seems at best disingenuous.⁶⁵ The singular logic of the issue enabled enemies of the embargo to employ the arguments of imperial preference and free trade. Their mutual cause infiltrated the country as well as the town. Walter Long had already been persuaded by the case for imperial relations, and the embargo's supporters were obliged to keep an eye on agriculturists for signs of desertion, a point that did not bode well for future joint policy initiatives. Party lines split in unexpected ways. Griffith-Boscawen exposed the contradictions of the cattle crisis when he reminded MPs:

I was a supporter of the Imperial Preference policy of the late Mr. Chamberlain, and a whole-hog supporter, at a time when many of those who are now advocating the removal of the embargo on Imperial grounds were his bitterest opponents.⁶⁶

Supporters of the embargo were thrown off balance by the organised campaign against them. Some preferred to apportion blame for the problems faced by British stockbreeding than to endorse the embargo. Edward Fitzroy, the Daventry MP and a leading member of the Commons Agriculture Committee, told Lloyd George defensively that the deficiency of stores was partly caused by the wartime increase in arable land.⁶⁷ 'Undoubtedly the fact that live stock is depleted is due largely to Government interference', concluded the NFU Conference Chairman in 1921.⁶⁸ The CLA after the war was more concerned with the mitigating the impact of supertax and estates duty on its members. Those thorny issues made its leaders more inclined to leave practical agricultural matters to the

NFU, and less inclined to activate their own membership, many of whom sat in the House of Lords. The Executive Committee reported in April, 1921, that it had 'watched the movement for the removal of the restrictions' but suspended judgement until the Royal Commission had reported.⁶⁹ The CLA Council was slightly less hesitant, and in response to a number of branch resolutions submitted in March 1921, decided to back the embargo;⁷⁰ but it was not until November 1921 that a formal resolution was finally moved. This reluctance among the landlords' spokesmen became more apparent when the embargo debate reached the Lords.

Most fatally of all, 'agriculturists were as usual not united', as Griffith-Boscawen remembered.⁷¹ Fifty-nine of the sixty NFU county branches – with Northumberland the sole dissentient – passed resolutions in favour of the embargo. This perhaps indicates a rare outbreak of grass-roots political activism by small farmers who usually left politicking to their larger and leisured brethren. Their arguments, though, were weakened by the internal conflicts of interest between breeders, feeders and arable farmers. 'One argument used in favour of removing the embargo has been that the agricultural industry is not unanimous on the point, and it was said that certain districts wanted the embargo removed', noted a delegate to the 1921 NFU Conference.⁷² William Shaw stoked the flames and exposed divisions in the officially united ranks of the NFU when he averred: 'It is the commercial farmer who wants the embargo taken off – the man to whom profits are more than prizes'.⁷³ The fact, affirmed by Edward Fitzroy in 1924, that milk 'is the only

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*, 157, 107.

⁶⁷ PRO, MAF 53/12, p 8.

⁶⁸ IAH, NFU, *op cit*, p 49.

⁶⁹ *Ibid.*, CLA executive committee report, 12 Apr 1921.

⁷⁰ *Ibid.*, CLA council meeting, 1 Nov 1921.

⁷¹ Griffith-Boscawen, *op cit*, p 240.

⁷² NFU, *op cit*.

⁷³ HCD, 1922, 157, col 65.

commodity that agriculture produces which is not open to competition from the whole of the world',⁷⁴ and the Royal Commission's conclusion that Canadian cattle would not damage the milk supply, decided the growing dairy sector's indifference to the embargo. As Griffith-Boscawen accepted, Prothero's original undertaking meant in effect 'that the matter had been hopelessly compromised'.⁷⁵ Walter Long's changed attitude to his own Act was similarly damaging. Were not these, Asquith rhetorically inquired, the opinions of two men who by their official positions and personal experience were 'perhaps more qualified than anyone else to speak for the Government of the day in agricultural matters? The House must remember that'.⁷⁶

Because agriculture was disunited, sympathetic parliamentarians could not work with the NFU or the CLA as easily as Beaverbrook worked with the Meat Traders' Federation. According to Griffith-Boscawen the support offered by the cereals sector to livestock was at best tardy, at worst non-existent. At least half the Scottish farmers, and those from Northumberland, Norfolk, 'and the eastern counties generally' wished to lift the embargo.⁷⁷ Graziers on the east coast of England and Scotland wanted Canadian stores in their fields. The Secretary of State for Scotland supported Churchill and Horne by warning Cabinet that the Scottish Board of Agriculture opposed the embargo.⁷⁸ Crofters wished to retain their monopoly of livestock sales to lowland arable farmers, but the more intensively farmed areas wanted Canadian cattle to eat their root crops and supply valuable manure. Eventually, the Scottish NFU sent four representatives to the Royal

Commission, two for the embargo and two against. Lloyd George forcefully reminded Conservative parliamentarians that opinion about the embargo: 'depends really on the part of the Country you come from'.⁷⁹ It was conceded by all that agricultural labourers equated cheap meat with lifting the embargo, in common with their urban counterparts.⁸⁰ In contrast, the urban-based Labour Party opposed the embargo as a united force. They reflected the campaign for cheap meat from the towns. The City of London held a special conference at the Guildhall in March 1921, that carried an anti-embargo resolution on behalf of a large number of corporations including Birmingham, Glasgow and Cardiff. The regional fractures identified by Griffith-Boscawen mainly divided the Tories, who were unanimously for the ban in Ulster but less unanimous in other districts. At the final division in the Commons, three Conservative MPs from East Anglia did not vote at all and two voted against the embargo. Three Conservative Members from the livestock counties of Leicestershire and Staffordshire did not support the embargo. The no-vote of Stafford Member William Ormsby-Gore, despite his keen interest in agrarian affairs, may be explained by his parallel interest in imperial affairs – in 1922 he became Under-Secretary for the Colonies. Sir Smith Hill Child sat for Stone in Staffordshire, and Sir Keith Fraser represented Market Harborough, one of the most important grazing districts where much of the country's feed-cattle was purchased. Since graziers and market traders expected to benefit from Canadian business, Child and Fraser abstained.⁸¹

A Bill re-admitting stores into Britain subject to strict veterinary supervision quickly followed the Commons debate, receiving its second reading on 7

⁷⁴ HCD, 1924, 171, col 2538.

⁷⁵ Griffith-Boscawen, *op cit*.

⁷⁶ HCD, 1922, 157, col 92.

⁷⁷ Griffith-Boscawen, *op cit*.

⁷⁸ PRO, Cabinet MSS, *op cit*.

⁷⁹ PRO, MAF 53/12, p 18.

⁸⁰ BPP, 1921, XVIII, p 58.

⁸¹ HCD, 1922, 157, cols 175–8.

December, 1922, and coming into operation on 1 April, 1923 as the Importation of Animals Act. Northern Ireland MPs complained about the import conditions set by the new Bill, but others now argued that agriculture must become more aware of post-war political realities. Robert Bruford, the Conservative Member for Wells in Somerset elected with NFU approval, had originally defended the embargo as one of the few full-time farmers in the Commons. As the debate over the replacement Bill unfolded, Bruford announced that it was useless for agriculture to resist. The British people were against the embargo, and if agriculture could show the people that they were reasonable, 'we shall do more to get them with us than we shall by resisting their desire'.⁸² So it was at this late stage, during discussions of the new Bill that agriculturists found a measure of unity and accomplished their most effective work. According to its Tory Chairman, Chelmsford MP Ernest Pretymann, the Commons Agriculture Committee took 'an active interest in the question', and helped prevent the passage of certain categories of live cattle from the port to inland markets.⁸³

'Thus', concluded the NFU of the affair, 'our stock-breeders received their share of discouragement'.⁸⁴ Further signs that agricultural protection was not a realistic possibility appeared in 1923, when it failed to feature in Baldwin's failed 1923 tariff election programme. For the rest of the decade, protectionists vainly concentrated on securing limited safeguards against a small range of overseas products like skimmed milk or malting barley. As for the embargo itself, the overall effect on trade of its repeal was minuscule, in contrast to the political heat and effort generated by the controversy. Canadian stores came

in, but not the 200,000 once forecast. Only 26,114 arrived between April and November, 1923, in the first seven months following the lifting of the embargo.⁸⁵ Five months later, Labour's Agriculture Minister commented: 'The numbers of Canadian stores which have so far been imported are too small to have had any appreciable affect on the price of meat'.⁸⁶ More ironically, Britain experienced three of its worse ever outbreaks of foot-and-mouth between 1922 and 1924. Canada promptly banned British exports. In 1926, a Conservative MP even requested more Canadian cattle imports to make up the resulting shortfall.⁸⁷ Sir Daniel Hall later conceded: 'Neither the fears nor the expectations of the protagonists in this dispute have been realised; no disease has been admitted and the imports of Canadian stores have been negligible'.⁸⁸

VI

Nevertheless, because of the scale of the original arguments, the political implications of the Canadian cattle crisis are more suggestive. For the first time, the structural weakness of the post-war agricultural lobby as a whole had prompted a major defeat. There had been division, bad co-ordination between various agrarian interests and a complete inability to win the understanding of the newly-enfranchised industrial populace. Lloyd George well understood that the majority of people were town-dwellers:

and if they are convinced that their meat is being kept at a high price in order to benefit agriculture without any rhyme or reason for it, you may depend upon it they will sweep aside everything and any Government will be beaten upon it.⁸⁹

The embargo's defenders lacked ways to

⁸² *Ibid.*, 159, col 2088.

⁸³ *Ibid.*, 1923, 162, col 2360.

⁸⁴ IAH, NFU, 1924 *Yearbook*, p 77.

⁸⁵ HCD, 1923, 168, cols 5-6.

⁸⁶ *Ibid.*, 1924, 170, col 1945.

⁸⁷ *Ibid.*, 1926, 198, col 1436.

⁸⁸ Lord Ernle, *English Farming*, 5th editn, 1936, p 469.

⁸⁹ PRO, MAF 53/12, p 13.

communicate their rural message to urban public opinion. Worse, their specifically agrarian priorities were opposed to the experienced, organized and veteran supporters of imperial preference and free trade. 'The whole plea for the embargo', the *Express* accurately concluded, 'resolved itself into an unjustified claim that a small section of British agricultural interests should be protected against Canadian cattle. This claim, if admitted, would mean taxing the people's meat'.⁹⁰

The scrapping of price guarantees in 1921 did not provoke the same ructions as

the cattle controversy. The repeal of the Agriculture Act only became a 'Great Betrayal' after arable farmers had re-learned the lesson that in a free market prices travel down as well as up, and had resorted to vain demands for protection. The cattle crisis is more illustrative of agriculture's post-war political position. It exposed the futility of the protectionist option, the inherent political weakness of the agrarian lobby, the unhealthy dominance of cereal policy at the expense of solidarity with smaller but more successful sectors of the agrarian economy. If any political event merits the bitter title 'Great Betrayal', it is the resolution of the Canadian cattle crisis.

⁹⁰ *Daily Express*, 25 Jul 1922.

Tithe Rent-Charge and the Measurement of Agricultural Production in mid-nineteenth-century England and Wales

By JENNIFER R BAKER

Abstract

Tithes represented a tenth of the natural increase of the produce of the soil paid by farmers to support the established church in the parishes of England and Wales. Traditionally, tithes were paid in kind, although in many parishes, some or all of them could be paid in money. The 1826 Tithe Commutation Act commuted all tithes in kind and customary money payments and substituted a fluctuating money payment known as a tithe rent-charge, which was to adjusted each year on the basis of the seven-year average price of wheat, barley, and oats. Since there is no direct method of measuring agricultural production before 1866, this value of rent-charge has the potential to be a useful measurement of agricultural output. The paper investigates the advantages, potentials, and problems associated with this source of data, using tithe material from Dorset as a case study.

THIS short note establishes some statistical relationships between tithe rent-charge – the values for which tithe liabilities were commuted in England and Wales under the terms of the 1836 Tithe Commutation Act – and the values of parish average annual land rental and land use recorded in the tithe surveys of Dorset. Tithe payments were a tax on the agricultural output of land, but conventional wisdom suggests that rent-charge values of *circa* 1836 do not bear any systematic relationship with actual output because the notional ‘tenth’ of output taken for tithe had by that time been much distorted by local tithing customs and practices. Our tests suggest the converse; in the aggregate tithe rent-charge values do vary systematically over space and there is a significant linear relationship between tithe rent-charge and the production-related variables of agricultural land rent and land use. It is not the object of this paper to explore the nature of the problematic relationship between rent and agricultural production but rather data on land rent and land use are used to demonstrate the *potential* of tithe rent-charge values to serve as an index

of agricultural output. We encourage further testing of tithe rent-charge values with data on *actual* agricultural production derived from sources such as estate accounts compiled independently of tithe surveys. In view of the dearth of general indicators of the spatial variation of agricultural production in the period before the systematic collection of agricultural statistics by the government, the prospect of tithe rent-charge being used as a surrogate index of agricultural production is indeed seductive.

I

For about 11,800 parishes and townships in England and Wales the values of tithe rent-charge are readily available in tithe apportionments held in county record offices and the Public Record Office. These sums were either agreed by local tithe owners and tithe payers or were awarded by an assistant tithe commissioner. The question which arises is whether these tithe rent-charges do in fact bear the direct relationship which they purport to the agricultural output of a parish and so can be used as surrogate measures of agricultural production.

At a local scale, records of tithe payments for periods of years have been used in a number of studies to measure changes in agricultural production. This approach was pioneered under the direction of Ernest Labrousse in France, and latterly has been coordinated and extended to a broader European canvas by Emmanuel Le Roy Ladurie and Joseph Goy.¹ Such studies are founded on the presumption that if the rate of tithe and tithable area remains constant, or if changes in either are known, and if tithe is levied on all crops and livestock, then the annual accounts of tithe will exactly reflect agricultural output. Localities for which there is a continuous run of such accounts are quite rare, though not as uncommon in France and Spain as in England. If temporal runs of tithe values are uncommon in England, then this country is unique in a European context in possessing data on tithe values for a large majority of its agricultural communities at a single date ie, c 1840.²

A comparative review of studies of tithe and agricultural production on the continent and England in 1979 noted that 'as yet there has been no study undertaken to test the tithe-production relationship in an English context'.³ Nor have tithe rent-charge data from c 1840 been used in such a way in the published literature. The presumption carried forward from the early 1960s, when tithe survey data were being extensively exploited by researchers based at University College London, is that factors such as moduses in lieu of tithes, customary compositions of tithe in kind for money payments, and exemptions of some properties or types of crops, produced such a variation in tithing practices such

that some tithe owners obtained levies quite close to the notional 'tenth' of the value of agricultural production in a district, while others, perhaps even in an adjoining parish, received only a fraction of this. It is undeniable that large disparities in tithe rent-charge per acre do occur between neighbouring parishes with similar soils and agricultural resources. This seems to have cast tithe rent-charge values in so bad a light that no formal testing of these data has been undertaken. What remains unclear is whether tithe rent-charge data are sufficiently trustworthy when used in the aggregate for large numbers of parishes to help identify broad regional differences in the value of agricultural production. It is a long-established maxim that all tithe data gain in strength if those for one parish are ranged alongside those of its neighbours, and those for one region against those of another.⁴

A principal difficulty with evaluating tithe rent-charge figures is obtaining a sample of equivalent size of values of another variable with which on a priori reasoning, tithe rent-charge might be expected to be directly related if it really is measuring agricultural production with tolerable accuracy. Ideal, of course, would be a set of statistics of agricultural outputs. Setting aside the fact that if such existed for the parishes of England and Wales c 1840 then the use of tithe rent-charge as a surrogate would be unnecessary, the nearest body of data in terms of size is that for the 7000 or so tithe districts where tithe was commuted by agreement, and for which data on cropping etc are recorded in the Tithe Commission's 'questionnaires' now preserved in the tithe files.⁵ Such a comparison would, though, be of little evaluative strength, as the output data in

¹ J Goy, and E Le Roy Ladurie, eds. *Les Fluctuations du produit de la dîme. Conjoncture décennale et domaniale de la fin du Moyen Age au XVIII^e siècle*, Paris, 1972; J Goy and E Le Roy Ladurie, *Tithe and agrarian history from the fourteenth to the nineteenth century*, CUP, 1982.

² R J P Kain, *An Atlas and Index of the Tithe Files of Mid-Nineteenth-Century England and Wales*, CUP, 1986.

³ Roger J P Kain, 'Tithe as an Index of Pre-industrial Agricultural Production', *Ag His Rev*, 27, 1979, p 80; Roger J P Kain and Hugh C Prince, *The Tithe Surveys of England and Wales*, CUP, 1985.

⁴ Roger J P Kain, 'The Land of Kent in the mid-Nineteenth Century', unpublished University of London PhD. thesis, 1973, p 102.

⁵ Roger J P Kain, 'The Tithe Files of the Mid-Nineteenth Century', in M Reed, ed, *Discovering Past Landscapes*, 1984, pp 56-84.

tithe file reports were used to assess the appropriate level of tithe rent-charge, and so tithe rent-charge and output data are not statistically independent. Data on crop acreages and yields from farm and estate records compiled independently of the tithe commutation process are not available in sufficient numbers to permit the broad, aggregate test that is required. A proportion of tithe files do, however, contain contemporaneous data on the rentable value of agricultural land in tithe districts at the same level of generality as tithe rent-charge data, ie, average annual rental of land in the tithe district as a whole.⁶ This paper compares such data on rentals and tithe rent-charge from Dorset, a county which displays a wide variety of agricultural ecosystems, from poor sandy heaths, through open chalk downlands to heavy clay vales.⁷ Dorset is also a county with good tithe survey coverage – 269 out of 285 tithe districts – and is thus a useful laboratory in which to test for the existence of systematic variation in tithe rent-charge in an objective manner.⁸ Our Dorset evidence suggests that the usefulness of tithe rent-charge may have been underestimated and that further testing of its relationship to agricultural output related variables in other parts of the country is merited.

II

In his unpublished University of Exeter thesis on the rural landscape of the Vale of Blackmore in Dorset, R F J Chiplen cites tithe rent-charges on arable land on the Inferior Oolite, Fuller's Earth Rock and

Forest Marble, of 9s 10d, 8s 4d, and 2s 11d respectively, adding that 'such differences would appear to be very closely related to soil fertility'.⁹

The mean value of tithe rent-charge per acre in Dorset was 3s 6½d and although values ranged from 8d at Winterborne Martin and Winterborne Whitchurch, to 9s 4d at Bradpole, there is a fairly small spread of data and values approximate to a normal distribution. Calculation of the standard deviation confirms that some 56 per cent of tithe districts have values that are within 1.5 standard deviations either side of the mean, ie, between 1s 4½d and 5s 8½d. The tithe districts with the most extreme values are listed in Table 1.

Some of the anecdotal evidence in assistant tithe commissioners' reports on Dorset commutation agreements supports the general contention that the natural productivity of a parish was a very important factor in affecting tithe rent-charge levels. For example, the parish of Studland, a very poor sandy area with scanty produce, had a tithe rent-charge of only 1s 3½d per acre. Aneurin Owen wrote in his report:

this parish consists principally of a low tract of infertile silicious soil covered for the most part by stunted furze, and appears to be incapable of any improvement but at a great and inadequate expense ... The tithable produce is scanty and not very easy of collection, and therefore the rentcharge agreed upon is an adequate compensation. The former incumbent had agreed to commute for £130, but as a professional surveyor had thought £140 would not be too high, the Agreement was effected with the present incumbent for £135.¹⁰

Conversely, in Hampreston the value of rent-charge per acre was 6s 4½d where tithe agent J. Milner reported in 1837 that:

The land is good particularly in the lower part of the Parish ... The arable land averages at 30s and the pasture and meadows at 40s per acre without the tithe ... The greater proportion of land in this

⁶ These data are available for all tithe districts where tithe was commuted by voluntary agreement (more than 50 per cent of parishes and townships) in those counties where 'pastoral farming' agreement questionnaires were employed. See R J P Kain, *An Atlas and Index of the Tithe Files of Mid-Nineteenth-Century England and Wales*, Cambridge, Cambridge University Press, 1986, pp 1–18.

⁷ Jennifer Gambier [now Jennifer Baker], 'Tithes, tithe commutation and agricultural improvement: a case study of Dorset c 1700–1850', unpublished University of Exeter PhD thesis, 1990.

⁸ Jennifer Gambier, 'Tithe free districts in Dorset at the time of tithe commutation', *Somerset and Dorset Notes and Queries*, 32, 1990, 823–27.

⁹ R F J Chiplen, 'The Rural Landscape of the Blackmore Vale circa 1840', Unpublished University of Exeter MA thesis, 1969, p 23.

¹⁰ PRO, Tithe Files IR18/1813.

TABLE 1
 Extreme values of tithe rent-charge per acre in Dorset

<i>Rent-charge/acre less than 1s 7½d</i>		<i>Rent-charge/acre greater than 6s 5½d</i>	
Dewlish	1s 0d	Bradford Abbas	6s 10½d
Fairwood	1s 5d	Bradpole	9s 4d
Fleet	9d	Bridport	7s 7½d
Hamworthy	1s 3d	Burlestone	6s 7d
Hillfield	11d	Fordington	6s 8d
Hook	9½d	Shaftesbury Holy Trinity	8s 7½d
Melbury Sampford	1s 1½d	Walditch	7s 1d
Moreton	1s 6d	West End	7s 2d
Morden	1s 5d	Weymouth	7s 8½d
Steeple	1s 6d		
Studland	1s 3½d		

Source: see text.

parish is a good barley soil and in general well farmed.¹¹

Similarly, at Bradpole, where the rent-charge per acre was 9s 4d, John Baverstock Knight, the valuer, wrote that the best land here was of higher average rentable value than any land in the county.

III

For 144 Dorset tithe districts there is information on the average rentable value per acre, and comparison of tithe rent-charge and these rental data indicates that there is a significant linear relationship between the two variables, both visually as in Figure 1 and also statistically as evidenced by the correlation coefficient value of 0.554 which is significant at the 99 per cent confidence level.¹² Regression of these two variables produces the following regression equation:

$$\begin{aligned} \text{tithe rent-charge per acre} \\ = 0.0466 + 0.00574 \text{ average rental per acre} \end{aligned}$$

The T-ratio for average rental per acre is

¹¹ PRO, Tithe Files IR18/1691.

¹² The existence of a relationship between variables, for example tithe rent-charge per acre and average annual rental of land, can be observed from a graph, but the point of regression equations is to quantify the strength of this relationship and to identify other variables which are also relevant.

7.93, showing this parameter to be significant at the 99.9% confidence level.¹³ The regression analysis produced an R^2 value of 0.307 which is a measure of the proportion of the variation in Y, i.e. in tithe rent-charge per acre, which is 'explained' by the regression equation. Other variables related to agricultural production which might increase the explained variance and for which information is recorded in tithe apportionments are the percentage of arable land in a tithe district, the percentage of wood and other unfarmed land in a parish, and the percentage of orchards, fruit, market gardens or hops which bore a supplementary or extraordinary tithe rent-charge. Simple regression analyses produced R^2 values of 0.142 for arable, 0.141 for woods and 0.036 for orchards, market gardens and hops.¹⁴ By introducing these variables in addition to rental values into a

¹³ For more information on the T-test and F-test, see D R Pindyck, and D L Rubinfeld, *Econometric Models and Economic Forecasts* McGraw-Hill Book Co, Singapore, International Student Edition, 1981, pp 33-36.

¹⁴ Before using these variables together in a multiple regression analysis, simple descriptive statistics were first performed on each variable individually. A correlation was also performed. These tests show that there is a significant positive relationship at the 99.9% confidence level between tithe rent-charge per acre and the percentage of arable land in a tithe district (correlation = 0.377), a significant negative relationship between tithe rent-charge per acre and the percentage of woodland in a tithe district (correlation = -0.376), and a smaller positive relationship between tithe rent-charge per acre and the percentage of orchard, market gardens

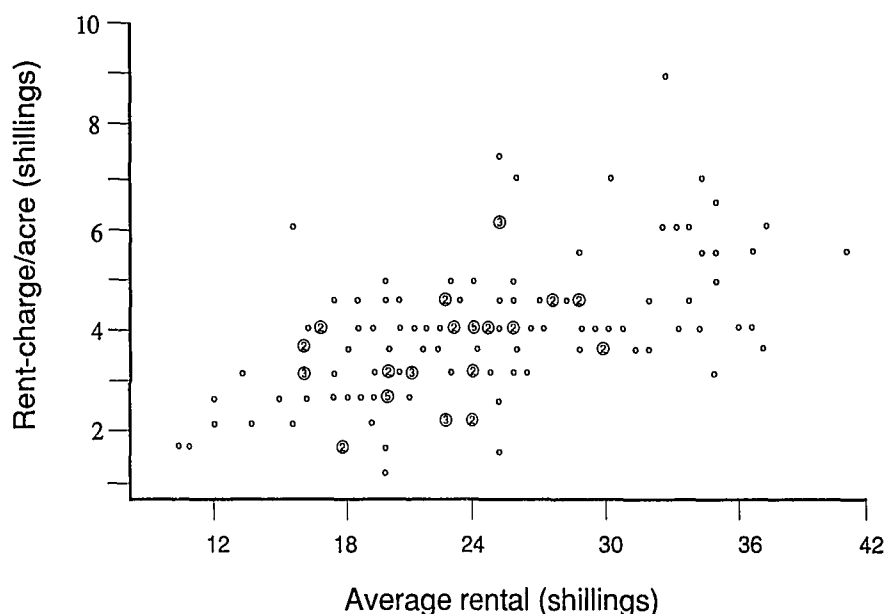


FIGURE 1

The relationship between tithe rent-charge per acre and average rentable value of land per acre in Dorset circa 1836.

multiple regression analysis, the following equation is produced:

tithe rent-charge per acre =
 $0.0308 + 0.00508 \text{ average rental per acre} + 0.00108 \text{ percentage arable land}$
 $- 0.00279 \text{ percentage woodland} +$
 $0.00708 \text{ percentage orchards, hops or market gardens}$

The T-ratios for each variable are all significant, so there is a statistically significant relationship between each of the independent variables and tithe rent-charge per acre and a total of 53.5 per cent of the variance is now explained.¹⁵

The presence or absence of moduses or similar customary payments or arrange-

ments in lieu of the full value of tithe undoubtedly reduced the level of tithe rent-charge per acre fixed under the terms of the 1836 Tithe Commutation Act.¹⁶ For example, at East Lulworth modus payments included:

The sum of Five Pounds as a Modus in lieu of all Vicarial Tithes of the Park Farm containing Two Hundred and Fifty acres. A sum of Two pence for each Cow depastured and fed in the said Parish and called or known as Cow white. The left shoulder of all calves killed by the owner, but a full tenth if sold to the Butcher. A sum of one half penny for every weanling Calf, but if the Farmer has Ten, the Tenth calf at seven weeks old. A sum of one penny for every garden. A sum of Four pence for every peck of Beans planted in Gardens in the said Parish.¹⁷

Moduses were in force in about eighty Dorset parishes c 1840 and by introducing a dummy variable representing moduses into the multiple regression analysis the R^2 value is increased to 0.584, thereby increasing the level of 'explanation' of the

and hops (correlation = 0.041). There is little correlation of the independent variables with each other, so they are suitable for use in a multiple correlation analysis.

¹⁵ The T-values are 'separate tests', i.e. they take each particular value and parameter in turn and test one after the other. The F-test takes all the parameters simultaneously and tests them. As this test is also significant, the joint null hypothesis that all the parameters are simultaneously equal to 0 is rejected, and the parameters are jointly significant in the regression model. A full discussion of the statistical procedures employed is provided in 'Tithes, tithe commutation and agricultural improvement...', pp 580-8.

¹⁶ Kain and Prince 'Tithe Surveys of England and Wales'..., pp 48-9.

¹⁷ DRO, Tithe Maps and Apportionments T/ELU.

TABLE 2
 Characteristics of tithe districts with large residuals

<i>Tithe District</i>	<i>Rent-charge/ acre</i>	<i>Rental/ acre</i>	<i>% arable</i>	<i>% wood</i>	<i>% orchard</i>	<i>modus</i>
Great Canford	4s 10 1/2d	20s	40.86	8.17	0.00	I
Morden	1s 5d	25s	16.46	3.42	0.00	I
Shaftesbury Holy Tr	8s 7 1/2d	32s 6d	32.08	0.00	5.97	O
Stourton Caundle	2s 6 1/2d	20s	14.10	0.52	7.05	O
Upcerne	3s 1d	25s 6d	94.98	6.75	0.00	O
Walditch	7s 1d	25s	55.52	1.42	6.76	O
Wyke Regis	6s 10 1/2d	30s	24.07	0.25	0.56	I

Source: see text.

model.¹⁸ Furthermore, analysis of the residuals in the regression analysis enables identification of those tithe districts where the regression model provides a poor fit. Tithe districts with large residuals are set out in Table 2, which shows that the most striking characteristics of each of these tithe districts are that: Canford has a relatively high proportion of wood; Morden has a very low value for tithe rent-charge per acre, but a high average rental; Shaftesbury has a high value for tithe rent-charge per acre, but an extremely high average rental; Stourton Caundle has a relatively large proportion of orchard and market garden land; Upcerne has an extremely high proportion of tithable land under arable cultivation; Walditch again has a reasonably high proportion of orchard land, and also of arable land; and lastly Wyke Regis, which has a high tithe rent-charge per acre, but also a very high average rental.

The ability to detect 'high leverage' data points which may be inordinately influential in determining the form and the fit of the model is as important as the ability to detect anomalous, ill-fitting data points using residual measures. The calculation of statistical parameters known as Dfits helps identify which extreme values exert such a disproportionate affect on the fit of the

regression model. If the data for Shaftesbury Holy Trinity, Stourton Caundle, and Upcerne are removed and the regression analysis rerun, the R^2 value increases to 0.627 showing an increased 'goodness of fit' and revealing that in the aggregate there is a very strong relationship between the combination of rental and land use variables and tithe rent-charge values.¹⁹ It is important to test any multiple regression model for heteroscedasticity and multicollinearity; neither causes a problem with this model.²⁰

IV

This paper has thus demonstrated that the general relationship between tithe rent-charge per acre and rent and land use is a strong one. However, at the resolution level of individual districts, particular circumstances can be all important. There is probably no better instance of this than at Godmanstone where James Jerwood reported in 1838 that 'an Estate the net Rental of which is £275 per annum has paid £80 a year for tithes which is 16/55ths

¹⁹ These observations have been returned to the model for the rest of the analysis.

²⁰ In the regression model it is assumed that the error variances are constant, ie, homoscedastic. However, if the spread of error variances around the regression line increases or decreases as the value of X increases, then heteroscedasticity is present. Another assumption of the multiple correlation model is that there is not an exact linear relationship between the independent variables in the model. Multicollinearity occurs when two or more variables (or combinations of variables) are highly (but not perfectly) correlated with each other.

¹⁸ The 'dummy' variable differs from the other variables in one important way: whereas normally a figure would be entered in each case, for example 18 per cent arable, a dummy variable is merely recorded as present or absent, using a figure of 1 or 0 respectively.

of the Rental or more than one fourth of the net profits arising from the estate'. Jerwood stated that all sides admitted that the rate of Commutation agreed on was much higher than in any of the neighbouring parishes, but adds that the rector has 'obtained no more than his average Receipt' and that 'the peculiar rights which the Titheowner had over the Lands in the Parish, to my mind, afford every satisfactory explanation - how that Receipt became so high in proportion to the value of the Parish'. The 'unusual right' of the tithe owner in this parish was that he was not only possessed the right of feeding a specified number of Cattle where he pleased on certain Lands in the Parish, but he also claimed the right of driving them *at any time* over other Lands whether those Lands were in Tillage or not. It was not therefore the value of the feeding the Cattle, but the annoying right of spoiling Crops &c which induced Mr Bridge to agree with the Titheowner

for the Right Tithes &c at so high a Rental in order that his tenants might be unmolested.²¹

Tithe rent-charge per acre may also have been higher when assistant tithe commissioners expected agriculture to substantially improve once tithes had been commuted.²² At Frome Vauchurch, Thomas Nippard wrote that,

this Estate is falling into hand, and as the Lives are not renewed, and when the lives drop considerable improvements will probably be made in farming 20 or 30 acres of water meadow, and otherwise by the usual system of agriculture under Covenants.²³

The average rental here was 30s per acre, but the usual average of such land in the neighbourhood was 25s per acre.

²¹ PRO, Tithe Files IR18/1686.

²² See R J P Kain 'Contemporary opinion concerning the possible conversion of pasture to arable after tithe commutation', *Cantium*, 6 1974, pp 77-9.

²³ PRO, Tithe Files IR18/1683.

The Humble Response of the Hired Lackey — A Reply to Hoyle

By I WARD

THE purpose of this brief note is to reply to R W Hoyle's 'reservations' on my earlier article, 'Rental Policy on the Estates of the English Peerage, 1649–60'.¹ As is usual in such cases, Hoyle has made a number of valuable criticisms which I can only concede, most especially on the particular nature of the Percy estates during the sixteenth and seventeenth centuries. Unfortunately these are complemented by number of misreadings, incorrect statements, and more than a few glimpses of the obvious. Most annoying of all, for all of us, I suspect, is his failure to present any sort of coherent alternative thesis.²

In an effort to systematically reply to Hoyle's points, I shall take the King of Hearts advice, by beginning at the beginning, going on to the end, and then stopping. I am not quite sure whether Hoyle's opening joust, 'it is none too clear what the article is about' qualifies as deeply penetrating or just one of the silly comments. All I can do is suggest he reads the title again. I can only assume that the 'hired lackey' metaphor is some sort of attempt at wry humour. With regard to 'peasant proprietorship', of course it is a potential factor, but unfortunately what there was of it during the 1650s, and the evidence is slight, was of marginal importance in comparison with the prime and well established dynamic of aristocratic estate control.³ I

must concede that there would have been a virtue in considering economic retrenchment, and it was a mistake not to stress its importance. However, in mitigation, there is a limit to what can reasonably be tackled in any one article, and the line must be drawn somewhere. Perhaps I drew it too sharply.⁴ Finally, at least with regard to the first paragraph, to suggest that my overall conclusion is at variance with my own finding regarding the Seymour estates is the first of the glimpses of the obvious. It was I who pointed out the exception.

The fact that copyholds could be distinguished between those for lives and those of inheritance, is not a great discovery. In fact it is about the first thing that any student of property law learns; the second thing is that there are in fact more than the two distinctions. The more eager student will have already read Simpson's comments on copyhold and

Landowners from the 15th to the 17th centuries', in Goody, Thirk and Thompson, *Family and Inheritance*, Cambridge, 1976, pp 192–237, and also his tentative support for Thompson central assertion that the emergence of leasehold in place of copyhold in the seventeenth century was a key stage in the consolidation of landownership, in 'The Social Distribution of Land and Men in England 1436–1700', in Cooper, *Land, Men and Beliefs*, 1983, pp 17–42, particularly 35–36. Lloyd Bonfield, 'Marriage Settlements and the Rise of the Great Estates', *Econ Hist Rev*, 2nd ser, xxxii, 1979, pp 483–493, and 'Marriage Settlements and the Rise of Great Estates: a rejoinder', *Econ Hist Rev*, 2nd ser, xxxiii, 1980, pp 559–563, the central assertion of which, being the power of the strict settlement in entrenching aristocratic control of land, is strongly reaffirmed in *Marriage Settlements 1601–1740, the Adoption of the Strict Settlement*, Cambridge, 1983. Most famous of all perhaps, is Lawrence Stone, *Crisis of the Aristocracy 1558–1641*, Oxford, 1965, 273–334, who emphasized the instrumental importance of the landowning aristocracy during the sixteenth and seventeenth centuries. More recently the central importance of the aristocracy, politically, socially and economically, has been asserted by John Adamson. See his 'The Baronial Context of the English Civil War', *TRHS*, 5th ser, xl, 1990, 93–120, taken from his unpublished Cambridge PhD dissertation, 'The Peerage in Politics 1645–1649'. Legal historians have been long aware of the reality of aristocratic control. See, most obviously, John Baker, *An Introduction to Legal History*, 1990, particularly pp 318–316, and A W B Simpson, *A History of the Land Law*, Oxford, 1986, pp 270–291, suggesting that if the landowners had not succeeded so strikingly in maintaining the dominance over land and forms of land use, then it begged the question of why during the nineteenth and early twentieth centuries, so many people should have been so sure of the need to reform it.

⁴ The extent of aristocratic retrenchment is considered in chapter 9 of my thesis, 'The English Peerage 1649–1660: Government, Authority and Estates', unpublished PhD, University of Cambridge, 1989.

¹ *Ag Hist Rev*, 40, 1, 1992, 23–37.

² In his own published work he presents, by his own admission, very little alternative. See Hoyle, 'Tenure and the land Market in early modern England: or a late contribution to the Brenner debate', *Econ Hist Rev*, 2nd ser, XLIII, 1990, 1–19. Having read Hoyle's own article with his comments that market forces were more in favour of leasehold and landowning control from 1650 onward, I am left even more bemused, and cannot help feeling a certain irony at his accusatory question with regard to what my article is supposed to be about. Curiouser and curiouser?

³ Given the obvious extent of our differences with regard to the perceived dynamics of property control in the seventeenth century, it is I think important to stress precisely the extent to which Hoyle is writing against established scholarship. See most famously John Habakkuk's articles, 'English Landownership 1680–1740', *Econ Hist Rev*, x, 1940, pp 2–17, 'Marriage Settlements in the 18th Century', *TRHS*, 4th ser, xxxii, 1950, particularly pp 15–17, 'Landowners and the English Civil War', *Econ Hist Rev*, 2nd ser, xviii 1965, pp 130–150, and 'The Rise and Fall of English Landed Families', *TRHS*, 5th ser, xxix, 1979, pp 187–207. See also F M L Thompson, 'Social Distribution of Landed Property in England since the Sixteenth Century', *Econ Hist Rev*, 2nd ser, xix, 1966, 505–17, and John Cooper, 'Patterns of Inheritance and Settlement by Great

the myriad of variants which beset medieval tenure, and taken on board his observations that although the legal niceties might keep generations of legal historians in employment, in practice these mattered little, as neither contemporary commentators or, very often, the judiciary itself, either understood or applied the appropriate distinctions.⁵ Presumably neither did our peasant proprietors, unless they were peculiarly well schooled. Even more disturbing perhaps is Hoyle's understanding of the practicalities of Chancery. 'Equity's darling', might have been originally designed, to promote the ideals of substantive justice. But in reality, to use an equally revered metaphor of Trust law, she was very much 'money's mistress'.⁶ If Chancery was such a saviour for the beleaguered peasant proprietor and such a blight on the wicked landlord, it does rather beg the question of quite why the latter were so eager to go to it.⁷ The Earl of Northumberland's own legal adviser, Sir Orlando Bridgeman, built his fortune around reorienting aristocratic litigation from the common law to Chancery. If this was a mistake, then the £20 which the Earl expended for Bridgeman's advice, often more than dozen times a year, was something of a poor investment.⁸ The power of Chancery as

a bulwark to aristocratic fortunes was appreciated by a number of commentators during the 1650s, most famously, James Harrington. Cromwell crushed the proposed reforms of Chancery precisely because he wished to stabilize property within the control of the landowning classes, and thereby promote his much treasured ambition of a 'healed and settled' commonwealth.⁹

Moving on to the next paragraph. First, I never suggested that copyholds could be converted to leaseholds 'at whim', and I never intended to give that impression. The conversion were almost invariably made on abeyance of tenure. With regard to the wider issue, the fact that the overriding tendency in the early modern period was to replace tenure by contract, is however, another of the points that the eager property law student learns in the first few weeks.¹⁰ With regard to why the peerage had not attempted to make the switch earlier, well, that is history – everything starts sometime, as indeed the King of Hearts reminded Alice. There are a number of possibilities. First, Chancery was still only emerging from its tussles with the common law during the reigns of James I and Charles I. Secondly, the appreciation of this fact itself would take time to be realized, even by such as Bridgeman. Thirdly, during the 1640s, many of these peers had been perhaps understandably somewhat preoccupied. Fourthly, the economic difficulties experienced by the peerage were particularly acute during the 1650s, which as estate correspondence suggests, certainly served to concentrate the minds of a number of peers. And fifthly, as a final point, it is important to note the complementary developments in property and trust law, including the barring of the entail in the strict settlement, which, together with Chancery's increasing willingness to further protect landowners by extending the doctrine of equitable redemption, could only have added to the impetus to restructure estates.¹¹ If there was ever a time to do so, it was quite clearly in the mid- and late seventeenth century.

⁵ See Simpson, *Land Law*, 160–172 repeatedly stressing the complexities and judicial determination from the early seventeenth century onwards to rationalize the situation by, wherever necessary, dismissing the particularities of various customs and types of copyhold tenure.

⁶ This might be the right place to consider Hoyle's rather curious suggestion, in his essay 'Tenure and the land Market', that if it had wanted to the 'state' would have been able to 'legislate copyhold out of existence', and the fact that it did not suggested that it permitted copyhold to remain as a gesture of human kindness towards peasant proprietors. Apart from the fact that the concept of 'state' enjoyed no economic-legal meaning for another two centuries, until Marx defined one, it might be suggested that the 'state' did not bother because there was no need to legislate away something that was under judicial pressure anyway. The 'state' still has not legislated copyhold away. Certain forms of copyhold, such as mineral copyhold, still remain, after the 1925 legislation. But no one really believes that it enjoys any real market force. The instances of such things being just 'legislated away' are few and far between, and to suggest that such was a real alternative in the legal and political maelstrom of early and mid seventeenth century England is to entirely misunderstand the nature of government during that period.

⁷ Both the records of Chancery and Exchequer for the mid-seventeenth century reveal a staggering number of actions taken by landlord peers in an effort to litigate defensively through the prerogative courts. Between 1649 and 1660 there were 365 such defensive actions in Chancery plus a further 67 in Exchequer. The number of actions taken in Chancery against landowning peers is considerably less. Collectors of curiosities, calculators at hand, can check these figures in Appendix 4 of Ward, 'The English Peerage'.

⁸ See W Sussex RO, Petworth House Archives, Percy MSS, 5832, 5841, 5858, 5867, 5879, 5888, 5908 and 5836. Presumably, the Marquis of Hertford who also employed Bridgeman, and the Earl of Bridgewater, whose lawyer, Halsey, also urged his employer to litigate in Chancery to circumvent the rigours of the tenure in common law, were also misadvised. For the Bridgewater-Day-Halsey correspondence see, Hertfordshire RO, Ashridge MSS,

1030–1065, and also Huntingdon Library, San Merino, Ellesmere MSS, 8059–8069 and 8276. The most striking evidence of a peer, on legal advice, seeking to use Chancery to out-litigate tenants, who wished to preserve an entitlement to a copyhold tenure, is to be found in Longleat, Seymour MSS, vol 7, fols 42, 48, 64, 66 and 68.

⁹ See Cooper, 'Patterns of Inheritance', 195. For a more general commentary on Cromwell's determination to prevent any radical assault on Chancery, see A Woolrych, *Commonwealth to Protectorate*, Oxford, 1982, 295–298.

¹⁰ The classic statement here remains Atiyah's, in *The Rise and Fall of Freedom of Contract*, Oxford, 1979.

¹¹ For the extent to which these reforms in property law complemented the re-structuring of the income side of estates, see my 'Settlements, Mortgages and Aristocratic Estates', *Journal of Legal History*, 12, 1, 1991, 20–35.

In the second part of his critique, Hoyle moves on to make a number of specific points regarding the Percy estates, many of which are valuable. Unfortunately one or two debatable assertions are elevated from guesses to gospel. Nowhere more so than in note 5. I was perfectly aware of the 1596 dispute, but that does not mean that the 1659 disputes listed in Chancery records did not exist. Of course, the endorsement 1659 might mean 1596, but there again it 'might mean' just about anything, and as the Close Rolls reveal that the Earl was immersed in a number of disputes with his Petworth tenants during this period, it seems only reasonable to assume that 1659 means 1659. With regard to it being a subsequent endorsement, it might equally have been an endorsement 1659 made in the 1672 review of the estates. Leconfield in his study of the Petworth estates also seems to prefer this approach.¹² I am afraid that this is a canard which must, for the present, be returned to ground.

Hoyle also suggests that rental figures used to gauge the development of the Percy estates cannot be used if they include arrears. If that is the case then we really may as well pack up and go home. The number of accounts across all estates during the period that do not include some arrears is too negligible to afford such a luxury. It is suggested that caution, not abandonment, is the order of the day. In the specific case of the Percy estates, the fact that the arrears regularly operated just the one year behind can afford to make us even more confident of their use. The idea that the considerable and largely uniform increases in rental return can be ascribed to demsesnes, parks, mines and so on stretches the imagination. With regard to the issue of custom and copyhold, first, custom by its very definition did indeed vary considerably from one estate to another, and so the suggestion that the Cumberland estates were unusual in their manner of custom is again something of a glimpse of the obvious. Moreover precisely because of the peculiarities of custom, the courts had increasingly established regulating principles at common law by which custom could be treated in line with the principles of copyhold tenure. Importantly, as the seventeenth century progressed they found less and less favour in courts precisely because of this irregularity, so the nature of custom in sixteenth-century Cumberland is of only collateral interest.¹³

Moving on to the analysis of table 4, Hoyle and any other of his fellow 'collectors of curiosities' might wish to take note that the table was specifically described as an account of total receipt, part of which, but not all of which is rental receipt. If

it had been meant to be rental receipt it would have been called such, as indeed two of the other tables were. As such it was never my intention to try and cunningly pull the wool over the readers' eyes by suggesting that, for example, 8 plus 208 plus 148 plus 125 plus 73, might somehow equal 3456. With regard to the 1654 receipt, if these figures were for Lady Day only, it is shame that the manuscript does not reassure us of this. Moreover, if these figures were for Lady Day only then they were astonishingly high. I might be prepared to concede that the Tynemouth returns could be explained by heavy repayment of arrears. However, Hoyle makes no effort to authenticate his alternative thesis, and moreover, it rather ignores the documentary evidence provided by the Earl's steward.¹⁴

Finally we come to Hoyle's parting shots. The discretion on the part of the peers may well be 'improbable', but it is documented in correspondence between, not only Northumberland and his stewards, but perhaps most strikingly between Dorset and his, Bridgwater and his, and Hertford and his. In fact of the five case studies I undertook, the only estate papers that did not reveal such an explicit interest in the running of estates, and the burning need to improve rental returns, were those of the Earl of Northampton, and that is probably simply because the remaining manuscript evidence is so intermittent (and also quite possibly because the Earl was generally thought to be simple-minded). With regard to the 'restraints' on lords, I think that we need to know what they are, and quite why the lords themselves seemed so oblivious to them. I can only conclude this reply by suggesting that, although I never intended to suggest that everything happened in the 1650s, the decade did present a window of opportunity, not least following the calamitous events of the previous decade, but also because of the fundamental changes in property and trust law during that time – most spectacularly the barring of settlement entails, equitable redemption, and the emergence of contract as a force to be accommodated in estate tenure.¹⁵ If the peers did not in fact take the opportunity, not just during the 1650s but also in the decades immediately following, then they, and their lawyers, were guilty of the most crass negligence, and moreover, in the absence of any substantive alternative thesis, we are left wondering precisely what did happen. For the present at least, in the absence of such a thesis, the humble 'lackey' remains unrepentent.

¹⁴ BL micro. 386, Alnwick Castle Archives, Percy MSS, RX, 11, 3 a and m.

¹⁵ For the rapidly emerging force of contract and its effect on land tenure, again the authority is still Atiyah. See also C Clay, 'Lifeleasehold in the Western Counties of England 1650–1750', *Ag Hist Rev*, 29, 2, 1981, 83–96.

¹² See Leconfield, *Petworth Manor in the Seventeenth Century*, 1954, 5–10.

¹³ See Simpson, *Land Law*, 160–172.

Further Comments on Dr Ward and the 'Rental Policy of the English Peerage, 1649-60'

By R W HOYLE

I AM reluctant to write further in opposition to Dr Ward but there are a number of points arising from his rejoinder which need to be quickly addressed. I shall restrict myself to major criticisms.¹

The first point to be made about Ward's rejoinder is that he appears not to accept that his analysis of events on the Yorkshire and Northumberland estates of the Earls of Northumberland is simply erroneous. The increases in rent receipts reported in his earlier paper were not the result of alterations in the tenants' tenurial arrangements. Having explained how Ward has mistaken the evidence, I am a little surprised to be criticised for making 'no effort to authenticate [my] alternative thesis'. A further case of Ward's way with evidence comes from his discussion of the mid-seventeenth century copy of the Chancery decree in *Northumberland v the tenants of Petworth* (Sussex) of 1596. Ward took this to be evidence of a further dispute over tenure in the later 1650s. His wriggling on this point is so supreme it deserves quotation in full:

I was perfectly aware of the 1596 dispute, but that does not mean that the 1659 disputes listed in Chancery records did not exist. Of course the endorsement 1659 might mean 1596, but there again it 'might mean' just about anything and as the Close Rolls [*sic*] reveal that the Earl was immersed in a number of disputes with his Petworth tenants during this period, it seems only reasonable to assume that 1659 means 1659. With regard to it being a subsequent endorsement, it might equally have been an endorsement 1659 [*sic*] made in the 1672 review of the estates. Leconfield in his study of the Petworth estates also seems to prefer this approach.²

Alas, at the end of it the manuscript is still a copy of the decree of 1596. Lord Leconfield at the

location cited offers no support for Ward's claims, and Dr Ward has been unable to supply me with references to either the 'Chancery Records' or the Close Rolls (*recte* Decree Rolls?) which he mentions.³ On this occasion Ward's canard seems to have been eaten by the fox.

As for the larger issue of the use of Chancery by the peerage in the 1650s, Ward offers figures for the number of cases launched by peers in Chancery and the Exchequer between 1649 and 1660 and says that there were fewer instances of peers being defendants than plaintiffs. Chancery was therefore a forum in which peers could launch an aggressive policy towards their tenants. I have consulted the appendix of Ward's doctoral thesis from which the figures were taken and I find there that 365 cases were brought by peers in Chancery, but 403 were brought against them. So on Ward's own figures they were more sued against than suing. But there is also a sleight of hand here. The figures are for *all* cases in Chancery in which peers were plaintiff or defendant, only a minority of which concerned tenurial matters. The figures amount to less than a case per peer per year and as only a proportion of these cases concerned landlord-tenant relations, the offensive against the tenantry in the equity courts was hardly large.

The second area in which I must express continued dissatisfaction with Ward's work concerns the whole question of the mechanism by which landlords converted copyholds to leaseholds. In my earlier comment I objected to Ward's failure to mark the distinction between copyhold for life and copyhold of inheritance. On this occasion he acknowledges but then appears to deny the importance of the distinction, a point of view which I find quite breathtaking.⁴ The problems faced by a landlord in clearing customary tenancies from his estates were quite different depending on the character of those tenancies. Ward says little of substance on conversion save for the comment that

¹ This continues the discussion of Dr Ward's paper ('Rental Policy on the Estates of the English Peerage', *Ag Hist Rev* 40 I (1992), pp 23-37) begun with my 'Some Reservations on Dr Ward on the "Rental Policy of the English Peerage, 1649-60"', *ibid.* 156-9 and continued by Ward in this issue of the *Review*, 176-8.

² Above, 178.

³ Pers. comm., 13 May 1993.

⁴ I read A W B Simpson, *A history of the Land Law*, second ed, Oxford, 1986, pp 164-5 as saying quite the opposite to what Ward believes.

'the conversion was almost invariably made on the abeyance of tenure'. This requires some explanation which again, Ward has been unable to supply.⁵ Are we talking of the extinguishment of the individual copy for lives or the finding in Chancery that the custom of inheritable copies on a manor was not good? If the former, then we surely have a process which extended over many years (which is what I originally suggested): if the latter, then no illustrative examples are offered. We are supplied with the instance of the tenants of Drayton who suffered the attentions of Sir Orlando Bridgeman, but we are not told what their tenancies were before or after the period being discussed.⁶ I am no wiser as to how Ward believes customary tenancies were swept away.

As for changes in the law, Ward will want to consider Dr Allen's recent suggestion that it was the development of mortgage law which allowed lords to extinguish copyholds for lives, for instead of being compelled to borrow from tenants by making disadvantageous grants, they could now borrow on the security of their estates. Allen, however, sees the disappearance of copyhold for lives as a protracted process.⁷ This brings us to the crux of one of my objections to Ward. We gain from his work no sense of the importance of the 1650s in the overall process of change. On the Seymour estates in Wiltshire the process had not gone terribly far by 1672, but as Dr Ward now stresses, they were exceptional. (Less charitably, one might say that when Ward offers evidence from *outside* his limited period, it does not support the case he makes of rapid change *within* his period.) The challenge for Dr Ward is not to show that conversion was taking place in the 1650s but that it *accelerated* in the 1650s either through greater economic need or a liberalisation of the law in favour of the landlord.

The third area of dispute between us is the most serious and the least easily bridged. In his third footnote Ward offers a long list of historians of whose work he approves. I am not sure what

relevance some of their writings have to the issues that concern us in this debate, but all are taken to support the view that the aristocracy was the pre-eminent class in the seventeenth century. Then we read that 'more recently the central importance of the aristocracy, politically, socially and economically has been asserted by John Adamson'. This rather gives the game away: we have here the application of a fashionable Cambridge perspective to agricultural history. I am not certain how numerous Dr Adamson's followers are, but I would not count myself amongst them. I would point to an equally large literature, unnoticed by Ward, concerning the disappearance of the small landowner and it is with this tradition, rather than the Peterhouse 'High Politics' school of writing, that my own sympathies lie.

There are a lot of assertions floating around in Ward's rejoinder. I am far from convinced that the power of the aristocracy or the landowning class, exercised through Chancery, was anything like as complete in 1660 as Ward assumes. Indeed, Ward's analysis seems to be broadly marxist: that in or from the 1650s Chancery acted as an instrument of class power on behalf of the peerage and that in a number of important respects, the law was altered to suit the needs of the landowning class.

Where Ward and I doubtless agree is that the character of landownership changed enormously between 1600 and 1800. I am sure that we both consider it to be an important task for the historian to discover how and why that transformation took place. But Ward and I approach the matter from completely different positions. Ward appears to believe that the transformation was achieved quickly by landlords who decided on a plan of action and used Sir Orlando Bridgeman and Chancery to terrify or bully their tenants into submission. I would hold that the consolidation of landlord power took place over a long period and was largely achieved through economic strength. The truth of the matter will only be found when someone marries the careful and reliable study of estate records with the wider experience of rural communities in both the equity and common law courts over a long period. For the moment Ward's claims remain, for this writer at least, grounded on assertion rather than evidence.

⁵ Pers. Comm. 13 May 1993.

⁶ Ward, 'Rental Policy', 31-2.

⁷ R. C. Allen, *Enclosure and the Yeoman. The agricultural development of the South Midlands, 1450-1850*, Oxford, 1992, esp pp 102-3.

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Conference Report: Spring Conference 1993

By DAN BYFORD

THIS year the Conference was held in the sylvan setting of Gregynog Hall, the residential centre of the University of Wales, in Powys 5-7 April. The programme provided was nicely balanced geographically, although it concentrated largely on the nineteenth century. In the one exception to this Professor Rees Davies and Dr Andrew Barrell (UW Aberystwyth) presented joint papers under the title of 'A Window into Medieval Welsh Society: the evidence of Court Rolls'.

Professor Davies explained that written evidence only became available in Wales after the Conquest of 1282 but that, although it tended to deal with Wales as if it were England, in the absence of Welsh documents it is invaluable. An ESRC grant has permitted the opening up of the huge series of rolls which exist for Dyffryn Clwyd from 1294-1654. These have a wider coverage than English rolls because there was no royal writ in the lordship. Such is the bulk of the rolls that the basis of the project has been making them available in machine readable form. In the companion paper Dr Barrell described the problems of making the material available with sufficient flexibility to permit a wide range of questions to be answered. Initially the periods 1340-1352 and 1389-1399 were chosen to make a full machine readable calendar in English because in these years the rolls are especially full and well preserved and deal with the times of the Black Death and the prelude to Owain Glyn Dwr's revolt respectively. The rolls contain details of many farming practices both pastoral and arable and of everyday life in a medieval marcher lordship.

In the second paper on Wales, Professor David Jones (UW Swansea) considered 'Crime in Nineteenth Century Wales: the Rural Experience'. He suggested that the notions of the innocent village and of the higher morality of Wales were destroyed by the Rebecca Riots. Yet late nineteenth-century statistics show Wales to be possibly the most law-abiding country in Europe. The Welsh crime rate was a third less than that of England, but although violent crime was rare the statistics give a false picture of the countryside, for much crime was hidden and unreported and there were many reasons why the crime figures were low. The Welsh rural police were few and sensitive

to accusations of malicious prosecution and they were often local men. Consequently cautions were frequent and instead of reporting crimes villagers often took the law into their own hands. Revenge was taken on offenders, they were shamed in chapel, their houses were attacked and they were ostracized. The *ceffyl pren* was used against social offenders such as wife beaters though it declined after 1860 in face of chapel and police hostility to it. Welsh courts tended to be tolerant even after they were anglicized by Peel and there were high acquittal rates in rural areas. In spite of much poverty even property crime declined in the late nineteenth century under the influence of the minister who often sat on the police committee, and the emphasis on respectability which lessened drunkenness, cruelty and profanity.

The first of two papers on British agriculture was by the Society's Treasurer, Dr E J T Collins (Reading University), who asked 'How "Golden" was the "Golden Age"? A re-assessment of the High Farming Period', and concluded that it was only Ratner's gold at best. Estimates of output and farmers' income led to the view that High Farming benefited farmers no more than it did landlords, the former growing by no more than 0.7 per cent per annum and the latter by c 0.8 per cent between c 1855 and 1875. The illusion of great improvement comes from increased prices as expanding demand met inelastic supply, and from the propaganda of free-traders led by Caird. Yield data show static hay yields and, from the late 1860s, declining grain yields. Dr Collins argued that by the 1860s many sectors were experiencing sharply diminishing marginal returns, especially corn growers. Among the reasons suggested for this were nitrogen overdose which caused excess straw growth and mildew, and consequent vulnerability to wet weather, and increased soil acidity due to the decline of liming. The increase in livestock production was also moderate, of the order of 1 per cent per annum from the 1850s. Dairy production rose in areas such as Cheshire and Somerset but may have declined elsewhere. Meat production grew modestly, the increase in beef (helped by Irish imports which made up 15 per cent of consumption), offset by a decline in sheep meat from the mid-60s, and neglect

of pigs and poultry. Dr Collins considered that the period 1835-55 saw the major expansion of physical output in British agriculture overall, whence it hit the buffers, and entered upon a prolonged phase of sluggish growth, reversed only after WW II.

Whereas Dr Collins further tarnished the image of the 'Golden Age' Professor F M L Thompson, the Society's immediate past President, gave a paper on 'British Agriculture and the Industrial State, 1870-1914' which questioned many of the assumptions made on the responses of farmers to the depression of the subsequent period. After 1870 the agricultural sector was seen as stagnant. Some even believed that the economy would improve if agriculture disappeared. In fact agriculture's contribution to GNP was a growth of output of 10 per cent whilst the work force halved. This was achieved by abandoning fringe tasks, substituting horses for human labour and producing more on less land by targeting fertilizers - potash on potatoes, phosphates on roots. Although mechanization was slow, British agriculture was the most mechanized in Europe by 1914. Even pasture farmers increased their use of horses by 15 per cent by 1911 though they had, in milk production, a much more favourable market position than cereal farmers. Cereal farmers had to innovate vigorously to keep afloat even though rents fell by up to 25 per cent during the period. Farm incomes fell up to 1890 but were above 1870 levels by 1909. Labourers' wages increased by 30 per cent reflecting their increased skill and decreased numbers.

Professor Thompson's successor as Director of the Institute of Historical Research, Professor Patrick O'Brien, dealt with some similar themes over a longer period in a paper on 'Agrarian Fundamentalism and the Industrialization of Britain and France before 1914'. Backwardness in French industry in the nineteenth century is seen as directly related to agricultural backwardness, whereas Britain industrialised first because of agricultural progress. Professor O'Brien showed that labour productivity in agriculture might have been about the same in the two countries in 1700 and that it was probably much higher in France in 1500 and provided a much higher living standard in spite of the pessimistic views adopted by the *Annales* school. The French lead in the sixteenth and seventeenth centuries diminished largely because of the growth of the British animal population after 1500. The elasticity of supply of fodder output was much higher in Britain and in the long run allowed for a higher rate of growth. In contrast, output in France increased roughly in line with labour inputs but the crucial point for industrialization was the ability to feed the towns with a decreasing work force and in Britain this was only achieved basically by

increasing the animal populations. By 1890 the manure available in Britain was three times that in France, and horse power, which made a decrease in human labour possible, was much higher. The French countryside was less able to increase fodder production and thus the new agricultural methods were more difficult to adopt. French soil was more acid and there was less lime and marl available to farmers. Furthermore the nature of French land-ownership and tenure also contributed to the inflexibility of French agriculture and its inability to transfer factors to industry and the towns.

In a second paper based on comparisons between societies, Professor Charles Withers, (Cheltenham and Gloucester College of Higher Education), spoke on comparative perspectives on rural social protest in Britain and Ireland with particular reference to Highland Scotland, Wales, and Ireland in the period 1840-1930. Professor Withers raised questions on the validity and methodology of comparative analyses and reviewed the difficulties of identifying single causal factors behind the anatomy, significance and explanation of protest. The Irish and Highland Land Wars were comparable features of the later nineteenth century but are not to be explained in the same way or understood as demonstrating similar forms of protest. He argued that it is for these reasons - of variety in cause, form, and explanation that such comparative analysis is rewarding yet fraught with difficulty.

The field excursion was to the Leighton hall estate, near Welshpool, where Dr Stephen Hughes of the Royal Commission on Ancient and Historical Monuments in Wales showed us the late nineteenth-century farm buildings and barn machinery installed by the Naylor, a Liverpool banking family. Our second visit was to the town of Montgomery, planted by Henry III but now very small and essentially Georgian. Dr Christopher Arnold (UW Aberystwyth) met us in the remains of the castle and vividly described to us its former power and grandeur and its relationship to the topography and defence system of the area.

In spite of the weather the expedition was enjoyable, and had the great advantage of short coach journeys which enabled us to return in good time to prepare for the excellent Society dinner and the after-dinner poem composed by Dr R J Moore-Colyer. The Conference was agreed to be a great success; all the papers were interesting and well delivered, their quality was amply attested by the vigour of the question period at the end of every paper. The Society's thanks are due to Dr David Howell of UW Swansea who arranged the venue and Dr John Walton of UW Aberystwyth who acted as local organizer, barman, and chief whip with efficiency and humour.

Book Reviews

R. H. BRITNELL, *The Commercialisation of English Society 1000-1500*, CUP, 1992. xiv + 273 pp. 3 figs; 5 tables. £30.

This book makes an important contribution to our understanding of social and economic change in the Middle Ages, and henceforth everyone working on the period must read and use it. Its arguments are too complex to be adequately summarized in a review. Britnell analyses and explains the main developments in economy, society, and government in half a millenium, based on wide reading of the voluminous historical literature, much of it produced in the last thirty years, and on a remarkable knowledge of primary sources. The period is divided into three sections, 1000-1180, 1180-1330, and 1330-1500, and each of these in turn is examined under the headings 'Markets and rules', 'Trade and specialisation', and 'Lordship'. Much of the discussion is naturally concerned with markets, towns, and trade, but the agricultural economy and social relations in the countryside figure prominently in the argument, so this is very much a book for agrarian historians.

An important theme is the transformation in commercial life between the eleventh and thirteenth century – indeed, a change concentrated mainly within the period 1180-1260. The underdeveloped state of the market economy in the eleventh and much of the twelfth centuries is emphasized. England lacked a close network of formal markets; many payments were still made in kind, and obligations discharged by service; and insecurity of property rights inhibited commercial development. In the late twelfth and thirteenth centuries the trading network was extended with the proliferation of chartered markets and new towns. The amount of currency in circulation greatly increased. Agricultural production for sale expanded, and a growing security of tenure and market regulations gave people the confidence to buy and sell. There was development also in the land market and the labour market. After 1330 the trends seem more contradictory. Britnell insists that this was a period of commercial contraction, though he resists the notion that it saw much urban decline, other than the shrinkage occasioned by the reduced population. He stresses the gains in productivity, personal freedom, and the tendency for farming for the market to be conducted increasingly by those below the ranks of the lords, but doubts whether there was any more capitalism in this period than in the thirteenth century.

The importance of this interpretation of the period is that it marks a move away from demo-

graphic explanations which have influenced us so much in the last forty years. Britnell often compares the eleventh with the fifteenth century: these were periods with similar levels of population, yet with very different economies, because the commercial development of the period 1180-1260 could not be reversed – the market network persisted, together with the economic behaviour associated with it. Britnell modestly suggests that he is reviving an older pre-Postan view of the period, associated with such names as Gras and Lipson, but his late twentieth-century approach is very different from that of those worthy pioneers. Britnell focuses less on the institutions that fascinated them and more on the experience of the people involved in economic change. And his new view of commercialization is more coloured by concepts of social domination than earlier notions of natural market growth.

Some attempts at generalization about long term social and economic change can be glib and reductionist. This book refuses to gloss over the complexities of the period, though it helps the reader by highlighting the main trends. Its quality lies in its capacity to make the reader stop and think. The insight, for example, that thirteenth-century peasants sold a higher proportion of their crops than did the lords from their demesnes is bound to offend the prejudices of those brought up on 'high farming' and 'federated grain factories', yet as expounded here it must be correct. Similarly, the notion that lords were progressively hedged about with rules and restrictions in the period 1180-1330 is not the conventional view of the social and political history of the period – and yet it stands up to closer scrutiny.

A book packed with so many generalizations and interpretations is bound to raise critical questions at one point or another. This reader felt uneasy about the assessment of the market before 1180, perhaps because it is based too much on a literal interpretation of the formal evidence for markets, when informal trade may have been more active. Similarly, one feels that Britnell's view of the period after 1330 is excessively negative, and gives insufficient weight to structural change. But it is a measure of the book's quality that in order to formulate a disagreement one has to take account of a formidable array of logical reasoning, backed up by a convincing battery of supporting information.

CHRISTOPHER DYER

MARJORIE KENISTON MCINTOSH, *A Community Transformed: The Manor and Liberty of Havering, 1500-1620*, CUP, 1991. xviii + 489pp. 10 figs. £50.

Essex has been fortunate in the survival of its records, its record office and the historians that have been attracted to work on its history. Having begun as an early modernist, Marjorie McIntosh found that she needed to become a medievalist to understand the early modern history of Havering. Her account of medieval Havering (*Autonomy and Community: the Royal Manor of Havering, 1200-1500*) appeared in 1986. This volume carries the story down to 1620 with a glance towards the eighteenth century. Sometimes one detects a medievalist's priorities. *A Community Transformed* is an attempt to write a comprehensive and total history which is both informed and sophisticated. There are chapters on 'Life and death', 'Changing economic patterns', 'Religion', one on other aspects of social change, and finally two on the jurisdiction and politics of the manor and liberty. It is richly documented, perhaps too much so, and I came to feel that it is a work to be read selectively rather than in its entirety.

The chapter on the family shows the McIntosh technique at its best: the interweaving of extensive tabulated material with striking anecdote and carefully worked out narrative. Her account of agriculture and economic life I found less satisfying. There is excellent material on the function of Romford market, but the sources for the history of landholding are not terribly good. Because the crown barely functioned as a landowner in Havering in the later Middle Ages, its own records are inadequate (the survey and map of 1618 are problematic), and large areas of land passed out of its control to become freehold submanors. The registration of land transactions was not compulsory, rentals or surveys of the submanors have survived but infrequently. (I remain sceptical of the comparison of 'acres' in the 1352-3 extent with those used in a survey of 1617 on pp 109-10, table 2.5 and other locations.) The penetration of the Havering landmarket by Londoners is well shown as well as the high turnover of resident families. The discussion of social control, where the number of cases concerning sexual misdemeanours increases abruptly after 1576 (coincidentally with the death of Sir Anthony Cooke) raised for me the twin questions of whether they really indicated any increased concern with deviant behaviour, and what Cooke had been doing *informally* to punish such behaviour in his lifetime.

The section of the book which I enjoyed most is perhaps that which is least obviously interesting,

the gradual decline of Havering's civil and criminal jurisdictions and their transfer to the central courts or the Essex Quarter Sessions. Here we have an early contribution to what will surely become a central element in the debate on the nature of power in early modern society and replacement of the self-regulating community by central courts, staffed by professional lawyers. In the case of the manor court, we are shown how the arbitration of cases was replaced by the jury trial, and the trial of felonies was abandoned. It met less frequently. The homage came to be formed of landowners to the exclusion of yeomen and craftsmen. The court of the Liberty of Havering seems to have been active whilst Sir Anthony Cooke lived, but after his death the Quarter Sessions quickly established their dominance over the criminal business from the liberty.

The puzzle is why the inhabitants acted cohesively to protect their liberties in the fifteenth century, but allowed them to atrophy in the sixteenth. It is clear that nobody in Havering was terribly bothered and that the liberty's own officers were instrumental in opening the liberty to the Quarter Sessions. It may also be that they brought its downfall by exhibiting partiality to litigants, poor standards of record keeping, and, in 1607, commencing litigation in Star Chamber over the election of a JP.

Havering is far from unique in making this switch from local to national jurisdictions. The question here, and elsewhere in the book, is whether Havering may justly be called precocious and if so, by how much. There was certainly a great increase over the sixteenth century in the number of cases in the London courts from all parts of the country (C W Brooks, *Pettyfoggers and Vipers of the Commonwealth*, 1986, table p 51), but much of this is doubtless an increase in litigation overall rather than a switch between jurisdictions. The explanation for Havering's surrender of its liberties may lie in a general explanation of social change rather than the particular circumstances of the liberty.

I also felt that the shortage of comparative reference left unresolved the question of whether ancient demesne tenure aided the precocious commercial development of Havering. I am not convinced that this was a prime determinant in Havering's development, but the work on other areas of London's commercial hinterland which might decide this point remains to be undertaken. It would be a shame if the claim of precocity was allowed to pass unchallenged, worse still if it discouraged others from reading the book. For those in sympathy with the author's aims, it is a challenging and thought provoking work.

R W HOYLE

DAVID LEVINE and KEITH WRIGHTSON, *The Making of an Industrial Society: Wickham, 1560-1765*, Clarendon Press, Oxford, 1991. xxi + 456 pp. £45.

Wickham was 'an industrial parish in a pre-industrial age'. Situated on the southern bank of the Tyne across the river from Newcastle it was at the geographical and economic heart of the north-east coalfield. It is thus both the first northern parish and the first truly industrial parish to be the subject of an intensive early modern 'community study'. More specifically this book is 'an attempt to reconstruct the making of Britain's first industrialised society' (p vii). Wrightson and Levine have a distinguished track-record in writing this kind of history and on the whole this new addition to their work maintains the high standards of its predecessors.

Elizabethan Wickham was essentially an agrarian community. Coal had been mined in the parish since the Middle Ages but towards the end of the sixteenth century, and especially during the first quarter of the seventeenth century, mining developed at a 'prodigious' rate in response to demand, particularly from London. After 1578 the right to mine coal was transferred from the bishop of Durham to the crown who promptly sold the rights to a group of Newcastle merchants who eagerly exploited their opportunity. Mining activity declined somewhat during the remainder of the seventeenth century, but renewed activity occurred at the turn of the eighteenth century, when Ambrose Crowley opened an ironworks in the parish in 1707, and the development of the wagonway system facilitated the extension of the mining area.

Mining development dominated the economic and social history of the parish. Traditional agriculture was severely disrupted by mining, most dramatically when mining activity spoiled and devastated agricultural land. It is not surprising therefore that the copyholders were in conflict with the coal-owners, and by the mid-seventeenth century they had lost the battle to retain their rights. As farm sizes became more polarized, patterns of agricultural production also changed as farmers moved towards the keeping of oxen and horses for the haulage of coal.

Social change followed in the wake of economic change. A new class of 'Gentleman Copyholders' emerged and the village became dominated by a new population of wage-dependent and highly mobile industrial workers. The outcome was a society more socially differentiated, and one with new institutions; for example, the Halmote or manorial court was replaced by Vestry. Yet the

community did not break down under these stresses: it was not subject to 'social dislocation'.

Studies of this kind are crucially dependent on the survival of adequate historical sources and many of the disappointments in the book are simply a consequence of the silence of the historical record, particularly before the eighteenth century. We have no information on the number and location of pits in the village, the amount of coal they produced, the detailed technology of coal production, or the size of the workforce and the wages they earned. In particular the pitmen themselves left few personal documents such as wills or inventories. Inevitably therefore, the discussion sometimes lacks the detail that is the hallmark of a local study. At other times a very heavy burden of interpretation is put on fragmented and ambiguous evidence. The historical experience of the parish itself also makes for difficulties of historical analysis. The family reconstitution of the parish relies on only a small proportion of the families because levels of migration were so high and in consequence its results may be more subject to bias.

Despite these problems with their sources, the authors maintain their high standard of scholarship in a book which is well-written and easy to read. Not only does it provide a particular account of the development of a coalfield parish, for if the authors are correct in asserting that 'parochial diversity was subordinate to a common experience' (p 429), then it could also to some extent be representative of the north-east coalfield as a whole.

MARK OVERTON

MICHAEL LESLIE and TIMOTHY RAYLOR, ed, *Culture and Cultivation in Early Modern England. Writing and the Land*. Leicester UP, Leicester, 1992. xiii + 241 pp. 21 figs. £35.

The essays in this collection are mostly based on the Hartlib Papers housed at the University of Sheffield, which are being transcribed and edited through funding from the British Academy and the Leverhulme Trust. Apart from Joan Thirsk, who has written the first essay, the contributors are specialists in English literature. All are concerned with the relationship between writing on husbandry and actual practice.

This relationship has long been one of Joan Thirsk's principal concerns. Here she develops her Neale lecture of 1982 to identify some of the sources for the new ideas of the sixteenth and seventeenth centuries. She demonstrates the influence of the writings of Cato, Varro, Columella and Palladius, which made their first impact in the last quarter of the fifteenth century and whose popularity can be judged by the fact that surviving copies are often underlined and annotated. She goes on to

show how native writers on husbandry, starting with Fitzherbert in 1523, followed paths opened up by the classical writers by producing popular manuals during the sixteenth and seventeenth centuries.

If the manuals appear to have been well-read, identifying their readers has proved troublesome. Much work remains to be done in local archive collections detecting brief references to such books. One such source which has not been noticed here is 'A note of all my bookes taken October 24 1633', in which Samuel Bower, the minister of Warmsworth, South Yorkshire, includes works which can be identified as Gervase Markham on husbandry, William Lawson on orchards and Charles Butler on bees, together with the *Faithful Farrier* and possibly Fitzherbert. Bower had a circle of friends in neighbouring parishes to whom he loaned his books. (See D Postles, 'The memoranda book of Samuel Bower', *Yorkshire Archaeological Journal*, 56, 1984, pp 119-29.) Such circulating private libraries were probably a major way of diffusing ideas.

Agricultural historians will surely welcome the interest of literature specialists in tracing and proving such connections, in considering the intellectual climate in which manuals were published and discussed, and in the textual criticism of the works of John Evelyn, John Beale, and Thomas Carew. In the second essay of this collection Andrew McRae shows that the gentry who returned to demesne farming felt comfortable with classical texts which emphasized the role of the 'house father' who was concerned with both 'profit and pleasure', but he goes on to challenge the assumption that gentlemen comprised 'the bulk of the readers'. Although Fitzherbert and Heresbach appear in the libraries of gentlemen and noblemen, some of the high-selling texts are conspicuously absent. Tusser's *Five Hundred Points of Good Husbandry*, which went through twenty-three editions in eighty-one years (making it one of the fifteen most popular books in Elizabethan England), is not recorded in the published catalogues of major private libraries of this period. It is therefore reasonable to assume that Tusser was read lower down the social scale: his style suggests that he aimed at this end of the market.

That remarkable man Samuel Hartlib was involved in many of the innovations and publications of the Interregnum years. His importance as an agricultural 'improver' is well known. Yet clearly there is still much to learn about him. In an interesting essay Timothy Raylor considers Hartlib's book on *The Reformed Common-wealth of Bees*, published in 1655. Raylor argues that Hartlib's bee-keeping project was not a whimsical irrelevance but a serious economic proposition in response to

the difficulties faced by the sugar trade. Bees could flourish in the English climate, they needed little attention and were cheap to keep. Thousands of hives across the country would help solve unemployment and poverty and reduce the trade deficit. Nor were the advantages merely economic. To the Hartlib circle bees were a unique natural source of divine wisdom and a model for humanity. Of impeccable character, they combined the virtues of sound economists and good husbandmen.

The different perspectives and interpretive techniques of the specialists in English literature (together with the recent work of archaeologists on the layout of formal gardens) undoubtedly add a great deal to our knowledge of agriculture, horticulture and silviculture in early-modern England. This interdisciplinary collection of essays offers many insights into the intellectual climate of the 'improvers' and opens up many new paths of enquiry. Samuel Hartlib would have approved of the eclectic approach of this circle of scholars.

DAVID HEY

JOHN CHAPMAN, *A Guide to Parliamentary Enclosures in Wales*, University of Wales Press, Cardiff, 1992. 200 pp. 2 maps. £12.95.

By comparison with England's 5341 parliamentary enclosures, the 229 enacted for Wales were generally late, some 50 per cent taking place after 1840, and rarely involved the enclosure of open field, there being little open field in Wales by the second half of the eighteenth century. In his introduction to this volume, John Chapman speculates on the circumstances underlying the halting, gradual and partial adoption of the parliamentary mechanism for the enclosure of the commons and wastelands of Wales. Among those identified are the continuing tradition of enclosure by agreement, a lack of appropriate expertise among those in Welsh society who might have been expected to serve as commissioners and surveyors, and a general ignorance among Welsh landowners of the required parliamentary procedures, the last two conditions exacerbated by Wales' necessarily limited participation in the early phases of parliamentary enclosure directed to the enclosure of arable open field. Maps showing the Principality's enclosure acts and awards by date draw attention to marked local and regional variations in enclosure chronology which, Chapman suggests, are only likely to be explained by local studies focused particularly on the activities and attitudes of landowners within those areas.

The major part of the volume comprises a handlist of Welsh parliamentary enclosures. Recognizing the need to improve on earlier inaccurate or incomplete listings by Bowen and Dodd, Chapman has sought to provide for Wales a work

comparable in scope with that already available for England in Michael Turner's edition of W E Tate's *Domesday of English Parliamentary Enclosures*, published in 1978. Some differences of presentation arise from the contrasting experience of the two countries. Thus Chapman presents a single list for each ancient county of Wales: he does not follow Tate in listing separately different categories of enclosure, most significantly those which involved open field and those which did not. But the main differences between the two works arise from the fact that Chapman, with only 229 enclosures, is able to present more information about each than was possible in Tate's *Domesday*. In addition to the information common to both volumes (act and award dates, acreages, and present locations of awards), Chapman identifies commissioners ('valuers' for enclosures carried out under the 1845 General Act) and surveyors where known, and lists the principal allottees and amounts allotted, and the location of any surviving papers. Analytical sections provide a full alphabetical directory of all the commissioners acting in Welsh enclosures and a county-by-county summary of acreages enclosed. Although these acreage totals depend in part on estimates, Chapman believes that the total Welsh parliamentary enclosure acreage of 525,880 given here is nearer the truth than his earlier estimate of 1.18 million acres based on the inflation of results from a small and, it turns out, unrepresentative sample of enclosures.

This volume will be widely welcomed by Welsh historians and by those interested in the history of enclosure more generally, for both of whom it will become a standard work of reference. The research on which the volume is based has clearly been wide-ranging and meticulous, although a misplaced heading which apparently locates many of the Pembrokeshire enclosures in Radnor, and a listing for commissioner John Matthews, born 1733 died 1848, point to some lack of care on the part of either author or publisher in the matter of proof reading.

JOHN R WALTON

ADRIAN HALL, *Fenland Worker-Peasants: The Economy of Smallholders at Rippingale, Lincolnshire, 1791-1871*, Supplement Series, 1, of the *Agricultural History Review*, British Agricultural History Society, 1992. 62 pp. £10.

This publication is very welcome, both for itself and as the first of a new series of 15-30,000 word essays to be published by the British Agricultural History Society. It will help to counteract the impression held in some quarters that the society is too closely associated with the development of capitalist farming, and not enough concerned with

broader rural history. There are two distinct parts to the monograph - the first twenty-three pages summarize some of the debate about the English peasantry and set up a general model which is then tested against some of the evidence available for a parish in south-west Lincolnshire (thirty-seven pages).

Rippingale is typical of the long string of villages on the west side of the Lincolnshire fens, which had a foot in each of two land-use zones: arable on the upland, pasture on the fen. Rippingale may be somewhat distinctive in increasing its pasture acreage after enclosure, since fen drainage made arable farming much easier in the fen. It is also probably distinctive in having been a parish of small farms and small holdings despite being very largely in the ownership of a single important absentee proprietor (Heathcote).

Nevertheless, Rippingale chooses itself for such a study because ten estate rentals and surveys at well-spaced intervals between 1720 and 1871 provide a comprehensive view of farming. These records have been combined with wills and inventories, glebe terriers, the enclosure award of 1803, the census enumerators' books of 1841 and 1851 and crop returns of the late 1860s.

No use has been made of the censuses of 1861-71 and the parish registers, and little use has been made of the trade directories and the land tax assessments (which in this case run down to 1838). These sources would have deepened the analysis, but might have taken the study beyond the bounds of a booklet of this length. It is also worth saying that Adrian Hall's research period was truncated because he left history teaching for the information technology industry, so one is grateful to him and his mentors for rescuing work already accomplished.

In the long continuum between landless labourers and capitalist farmers in Rippingale there survived into the last quarter of last century a third group of families the author prefers to call worker-peasants. A few were craftsmen or tradesmen with little or no land, but most were dual occupationists: either small holders who also worked on other men's land, or trades/craftsmen with land. Hall has divided the group into five categories in an extended and important piece of analysis, which could have been presented better if more use had been made of tabulations.

Hall also makes out a good case for the survival of a peasantry similar to that on the continent, provided that exact parallels are not expected. Thus, for example, the balance between subsistence and market-oriented production in the two situations is difficult to know. Moreover, even given the potential of many revisionist case studies of this kind, it is difficult to imagine that the macro-economic

contrasts between England and much of the continent will ever disappear.

Nevertheless, for some historians the survival of anything resembling a 'peasantry' in the nineteenth century is still perhaps a news item: the news from Rippingale is therefore very welcome. It would have been still more interesting if the author had been able to give us his views on some other aspects of the 'peasant' debate, such as that recently published in the *Journal of Peasant Studies* (and now in book form), the work of Alan Macfarlane, and of various authors in R. M. Smith's *Land, Kinship and Lifecycle*.

A wide variety of historians and geographers will find it useful to have this monograph on their shelves and one hopes they are not too put off by the price of £10 for sixty-two pages. Your reviewer suggests to librarians that they should catalogue the booklet as a free-standing item, rather than letting it get relatively lost within a run of the *Agricultural History Review*.

DENNIS MILLS

ROBERT WOODS, *The Population of Britain in the Nineteenth Century*, Macmillan (Studies in Economic and Social History), 1992. 88 pp. £5.75

In this well-known series, population trends in modern Britain were surveyed initially in M. W. Flinn's *British Population Growth 1700-1850* (1970) and Rosalind Mitchison's *British Population Growth since 1860* (1977). The former came to the end of its useful life with the publication in 1981 of the findings of the Cambridge Group, in *The Population History of England 1541-1871* by Wrigley and Schofield; and the latter, though a highly competent demographic survey, was not conspicuously successful in setting the trends in a broader historical context. The decision of the editors to commission this title is timely, and they could not have found a more capable specialist to do the job than Robert Woods, an historical geographer whose own research has done so much to illuminate the subject in recent years.

The book begins with a brief discussion of the demography of Malthus's Britain, concurring with the recent tendency towards the rehabilitation of the father of population studies, who could not have foreseen the changes which the nineteenth century would bring. This is followed by chapters on sources and on migration, where the author stresses that much remains to be discovered about the operation of push and pull influences, the extent to which entire families were involved, and the 'stepped' nature of the movement. Next, marriage patterns are discussed. The central place ascribed to buoyant nuptiality in the later eighteenth and early

nineteenth centuries by Wrigley and Schofield is accepted, and Woods shows (with reference to contrasting counties such as Durham, Norfolk and Wiltshire) that regional variations were very marked during its subsequent diminution. However, the late nineteenth-century fertility decline was primarily a consequence of falling marital fertility: the various theories that purport to explain this are reviewed, with the author leaning towards the more sociological approaches of writers such as Banks, rather than relying on mechanistic explanations centring on industrialization, urbanization, or a prior fall in infant or child mortality. On mortality in general, McKeown calls the tune: however, his work is discussed in the light of more recent research, and much more regional research is necessary before we can confidently attach precise weights to the various factors of improvement at work.

This conclusion epitomizes the book. As a result of recent advances in demographic history we are now much better informed about historical population trends, but commensurate advances in our understanding of causation have yet to be realized. As a neat summary of the present state of play, Wood's book is excellent. Technical complications are as far as possible subdued and every opportunity is taken to encourage a more disaggregated approach. In this agenda, historians with rural interests clearly have a large part to play. While the amount of space allocated here to rural areas cannot be large, Woods makes a number of points of interest to readers of this journal. These include the effects of heavy emigration on rural marriage rates (pp 41-2), and confirmation that infant mortality in agricultural labourers' families was very low and declining - he is, however, probably the first to make the point that it was falling less rapidly than in other social classes in late Victorian and Edwardian Britain.

W. A. ARMSTRONG

ROGER WELLS, ed, *Victorian Village. The Diaries of the Reverend John Coker Egerton, Curate and Rector of Burwash, East Sussex, 1857-88*, Alan Sutton Publishing, Stroud, 1992. 369 pp. £16.99 (hbk); £9.99 (pbk).

This book contains 9 per cent of the diaries, with an excellent commentary taking up about 40 per cent of the book's length. Extracts for each year are followed by the relevant footnotes, requiring readers to keep track in two sets of pages at once. Footnotes at the bottom of each page, or comments in distinctive type within the text would have been preferable. Use of the book for research purposes will be inhibited by the absence of an index. There

are twenty-nine photographs, but these are not keyed into the text, and their captions are minimal.

Burwash was a large parish in the Weald, with three settlement nuclei and many scattered dwellings. Originally a market town, it stood on a major highway and was still a service village. Many residents were classic dual occupationists, combining trades and crafts with farming. Roger Wells has already made Burwash widely known as a centre of popular politics and protest in earlier decades of the century, and this vein continued in Egerton's time.

In one sense Egerton was a typical Victorian parson: a scion of a landowning family (in Cheshire), an Oxford graduate, and an appointee of his uncle who had bought the Burwash advowson. In other ways he was unusual: a close observer of all his flock, sympathetic to their needs but not romantic or gullible; a man who called himself the village 'boss', but did not take himself over seriously. He would join the villagers at play and in physical labour, despite being overweight.

His diaries have little to say about farming, except for the particular problems of hop growing and harvesting, and of tithes on hops. However, a very wide range of other rural topics appears. Obviously he recorded the affairs of his church: the services, the choir, church rates, Anglican groups, and many visitations. The latter let us into the lives, present and past, of many parishioners. In addition, Egerton was much involved in the maintenance of law and order, the business of the Guardians, the school, the running of a friendly society, the encouragement of emigration, local politics, and many other village activities and issues. His style is pithy and the selection of extracts has made them readable and informative without being over repetitive.

Most entries pass without editorial comment, for example, only sixteen notes for 1877, but they are sometimes longer than this review. In effect, the notes are an embryo book in themselves, but their structure is a slave to the diaries. So it is to be hoped that Roger Wells will go a step further and write his own book about Victorian Burwash. Meanwhile readers can enjoy themselves at modest cost.

DENNIS MILLS

BRIAN SHORT, ed, *The English Rural Community. Image and Analysis*, CUP, 1992. ix + 239 pp. £12.95 (pbk).

This is very much a product of the University of Sussex, based as it is on a lecture course given there under the leadership of Brian Short. I suppose to many Sussex University is at first glance an ivory tower *par excellence*, its campus set in the South Downs with a fine county town at its back door.

Yet circumstance has gathered there a group of scholars who have been prepared to look critically at the green and pleasant land that is their milieu.

All the essays focus on the image and reality of the English countryside, for at times many of the authors exceed their brief of just dealing with rural communities. For this welcome, wider critical perspective, we must surely thank the clear but generous direction of the book's editor. Short's opening essay and his own contribution on the long-term evolution of differences within the settlements and landscapes of the English countryside set the tone for the rest of the volume. And by 'long term', Short considers both long term structural processes and historical context. This is not a volume of essays on the history of the English countryside with an epilogue dealing with the post-war rural Britain tacked on at the end.

Amongst the other essays, I particularly liked John Lowerson's essay on the mystical geography of the English countryside. The tension between the old and new religions through time is revealed in a most stimulating manner. The significance of places like Glastonbury for Christians and New Age travellers, and the contestation between different groups over such places are topics which will bear much more examination thanks to Lowerson's starting point. I found Stuart Laing's essay on images of the rural in popular culture on the other hand disappointing. This again is an under-researched area – the rural soap operas have still to attract the proper attention of academics. Laing also neglected the links between popular culture and advertising and the media. The final essay in the book by Susan Wright introduces us to the new and exciting work on gender, civil society and locality in a clear and succinct way.

The paperback edition looks like an archetypal coffee-table product – a Victorian painting on the cover, plenty of photographs, though it is a pity some of the photographs, particularly the Dixon Manor series, could not have been in colour. In packaging it reminds one of the recent Mingay three volume set on the English countryside. But that is where the similarity stops. This time the unsuspecting reader who purchases this volume will learn a great deal about the English and their countryside. For this CUP, Brian Short and his collaborators are to be congratulated for bringing substantive and critical issues about community and country life to a wider audience.

ANDREW CHARLESWORTH

N J G POUNDS, *The Medieval Castle in England and Wales: A Social and Political History*, CUP, 1991. xvii + 358 pp. 87 figs; 6 plates. £30.

M W THOMPSON, *The Decline of the Castle*, CUP, 1987. viii + 212 pp. 114 illus. £17.50.

Although from the same press, these two books would seem to have been independent in their commissioning and editorial oversight. The later-period work was completed in 1986 and emerged first, in time to appear in the footnote references of the other, completed in 1990, and a time-lag of review allocation and execution allows both to be reviewed here together. Their heavy binding and high-quality paper might suggest that we have yet more coffee table castle-books but in fact each is a work of scholarship, solid in every sense, but varied in approach and presentation.

Pounds' study manages to escape its card-index origins in an impressive trawl of the printed archive sources and the specialist literature. This is achieved partly by successfully communicating the enthusiasm that sustained a lifetime amateur interest which was maintained from transatlantic bases, like the exiled Jacobite dreaming by the Arno of his lovelier Tees; and partly by the freshness of the arrangement of even very familiar subject matter. One notes in particular the very original mapping of data, in the best tradition of the Cambridge school of historical geographers with their motto for the Middle Ages since Pelham and Darby in 1936: 'if it moves, map it'.

Although castles had their times of siege when the principal agrarian function was a place for safeguarding beasts and provisions, Pounds sets their history in a context of much longer periods of peace, when castles fall more within the precinct of this *Review*, as orchards yield their fruit, moats are fished, rabbits breed in the castle warrens on the slopes, moatside meadows are mown, parkland grazed and the castles share with the manor houses the role of administrative headquarters for seignorial demesnes. The claim to be a social history is fully justified.

Thompson, after years of service as Inspector and guardian of the King's Works in two kingdoms, relaxes from excavation reports to produce a series of essays, less encyclopaedic than Pounds, so that the overlap of subject is the less serious. The essays are research-based, and the six pages of footnotes are not confined (as they are in Pounds) to printed sources. There is a select bibliography (which would have been useful in Pounds, which has nine blank pages at the end, to clear some of the thickets in the 41 pages of his footnotes). The illustrations, oddly not listed on the contents pages, are varied, and correctly claimed as 'chosen to further under-

standing of the text rather than purposefully to beautify it'. There are three referenced appendices: one listing those castles already derelict in the fifteenth century; another, the state of decline in those mentioned by Leland in the middle of the next century; and a third the 'slightings' and Parliamentary demolitions of 1642-60.

The 'decline' in the title is treated not simply as a matter of obsolescent military technology but as a social transformation with a long nostalgic continuation into a period of domestic peace. There is an interesting comparative treatment of the role of the château in the French countryside.

In the Middle Ages a peasant pawn might marvel at the contrast between his cot and the crenellated castles on the English chessboard. In a later century did not Bunyan's Pilgrim view Doubting Castle – a site not to be found in either of these books – rather less respectfully? Thompson's final 'Nostalgia' chapter deals with the Gothic renaissance, and concludes in this century with a pawn – promoted to a rook through the profits of grocery – who built his private Disneyland fantasies in the Devonshire countryside at Castle Drogo.

MAURICE BERESFORD

ROBIN GLASSCOCK, ed, *Historic Landscapes of Britain*, CUP, 1992. 256 pp. 4 maps; 125 plates. £29.95.

This is the latest in a long line of books to use the best from the Cambridge University Collection of Aerial Photographs. It consists of an introduction and eight chapters, written by the editor and six other historical geographers, and takes us chronologically from prehistoric and Roman to modern landscapes of Britain. Each chapter is illustrated by between ten and eighteen air photographs, some of which, having been taken up to fifty years ago, are now historical documents in their own right.

Not all the air photographs are successful. There is a tendency to use many high-level/total landscapes which fade out in the distance and lose clarity. There are also a number of high verticals which are reproduced at a small scale and thus consequently not easy to understand. The contrast between these and the single-site low-level obliques, for which the Cambridge Collection is rightly famous, is marked. Most of the latter are superb, for example the visually striking and highly informative view of watermeadows at Britford, Wiltshire. Others, like the view of the prehistoric Scamridge Dykes, Yorkshire, while being excellent photographs tell us little.

Though the editor claims that the photographs are integrated in the text, this is not really so. As a result the only real explanation for most of them lies in the, inevitably, short captions. This is a pity, for one of the basic problems of air photographs is

that they are, by their very nature, non-selective and thus to achieve their proper value as historical documents they need to be interpreted. By themselves air photographs will only confuse or baffle those for whom they are not an every-day research tool. Here, the enormous value of the four interpretive line drawings which accompany a handful of the photographs only points up the lack of them elsewhere. Though, unlike the earlier volumes in this series, the book is not explicitly designed as a commentary on the air photographs, there is still a need to explain what the photographs actually show. The text rarely seems to relate to the accompanying photographs except, sadly for the readers of this journal, in chapter seven which is mainly concerned with Victorian urbanization and wherein lie two of the four explanatory diagrams. This is not to say that the text is poor. All the chapters give the current historical geographer's view of the British landscape and they are full of perceptive ideas and thoughtful insights.

The fact that the photographs are only referred to in the chapters they are set in and never related to other places, no matter what they show, leads to oddities. Thus, in the chapter on Georgian Britain a splendid photograph of Holkham Hall is used to illustrate the section on designed landscape. The caption interprets the plan of the 1734 house by Kent and also mentions the surrounding park by Brown. Yet the most obvious feature, the elaborate garden of c 1850 around the house, by Nesfield, is not mentioned. Likewise the excellent picture of the flight of locks at Devizes, Wiltshire, illustrates the advances in communication in the eighteenth century. But the caption ignores the huge railway embankment of the 1850s, now abandoned, which tells us as much of the unfulfilled hopes of the Victorian burghers of Devizes as of the collapse of rural transport in this century.

Despite these criticisms this is still a very useful book. This reviewer would certainly recommend it to undergraduates and extra-mural students as an excellent introduction to many of the problems of the history of the British landscape. For the rest of us – we can lie back and enjoy the views.

C TAYLOR

KATHERINE BARKER and ROGER KAIN, eds, *Maps and History in South-West England*, Exeter Studies in History, 31, University of Exeter Press, Exeter, 1991. xii + 148 pp. £8.95.

One by-product of the establishment of the University of Exeter's Centre for South-Western Historical Studies has been a steady stream of attractively produced and modestly priced collections of conference papers, of which *Maps and History in South-West England* is the latest. The most

engaging essay in the collection is William Ravenhill's on 'The South West in the eighteenth-century re-mapping of England'. Here he points out that Cornwall (though why?) was the first English county 'to be released from the trammels of ... cartographic bondage' imposed by the copying and vulgarization of Saxton's surveys during the seventeenth century, and that in the south-west as a whole there was a good deal of activity during the eighteenth-century cartographic revolution, as one might expect in a still heavily commercialized region. The histories which Ravenhill's maps illuminate tend to be of the cultural and military kind. Maps of types more useful to agricultural historians, and themselves often products of change in the countryside, are discussed here in chapters by John Chapman (enclosure), Roger Kain, Richard Oliver and Jennifer Baker (tithe), and Richard Oliver again (Ordnance Survey), all containing much of value to readers of this *Review*. For example, Chapman notes that enclosure maps are complex and varied documents because enclosure itself was a long drawn out process with many local variations, not least in the south-west; the authors on tithe maps give a valuable tabular summary of features, many of them agricultural, shown on the uniquely rich collection of surveys for the region; Oliver successfully finds much of interest in the history of the Ordnance Survey in the four south-western counties, including a map made by the Board of Ordnance in the 1780s (well before the foundation of the OS) showing the countryside around Plymouth and apparently with complete details of field boundaries.

Two chapters deal with maps from particular estates. Katherine Barker has the hardest job of all: to decode the messages carried on a highly unusual 'area map' of part of north Dorset, richly pictorial, rather random in content and corresponding to no known administrative area. But she modestly untangles the tangle, at least in part, by suggesting that the map could have been used as an *aide mémoire* by officials of the bishop of Salisbury (who had many manors and rights within the area), more specifically to assist in the perpetuation of manor boundaries and rights of common. Graham Haslam provides an excellent account, with much previously unpublished information, of the surveyors of the duchy of Cornwall from John Norden onwards. There are, though, two odd statements here. One (p 63) is that some surveyors did not show farm buildings on their maps because 'landlords had no interest in ... fixed capital assets'. Landlords *did* have an interest in the buildings of their tenants, because their quality affected rentals; surveyors did give details of buildings in some written surveys and they did often show them in

plan or perspective on their maps; moreover, agricultural historians and students of vernacular architecture may use these drawings for they can be reasonably accurate. It is also odd to read (p.60) that resident landowners with manors close at hand were the least likely to commission estate maps because of personal knowledge of their local fiefs. This is not borne out by the facts; moreover there was more to the commissioning of these maps than a simple desire to record, for was not many an English estate office symbolically adorned with the cartographic equivalents of those 'enormous pictures ... rustic art from the previous century ... the wealth of centuries transmuted into ornament' which the Prince of Lampedusa gazed wistfully upon in the office at the Villa Salina?

H S A FOX

CHRISTOPHER DYER, *Hanbury: Settlement and Society in a Woodland Landscape*, Leicester UP, Leicester, 1991. viii + 73 pp. 13 maps. No price stated.

Sometimes (but rarely) a press calls for someone to paint the Sistine Chapel: and sometimes (and equally rarely) for minaturists. In its heyday a glory of the Leicester University Press list was the flow of *Occasional Papers in English Local History* begun by Herbert Finberg and continued into four series by his successors in the headship of the Department of English Local History: thirty-six *Papers* in as many years, but now (we understand) to be numbered among the victims of the market forces of the nineties. These miniatures showed what could be done to advance the frontier of knowledge in a few score pages. Finberg himself set the example of *multum in parvo* with his 'Roman and Saxon Withington: a Study in Continuity' (Series I, no 4), the pages of Margaret Spufford's 'Chippenham' and Hallam's 'Elloe' were as instructive as any long book, and with *Hanbury* the *Papers* have defiantly ended not with a whimper but a bang.

Professor Dyer's study of this Worcestershire parish is the product of his own researches and those of an extra-mural class; it has a firm archival base in the public and diocesan records; although it reports no excavations in *Hanbury* it draws on extensive field-walking and has ground surveys of earthworks. Apart from the forty Romano-British find-spots recorded in Figure 3, the eighty messages of Figure 13, deserted since 1350, indicate not an empty parish but one more stage in the 'restructuring of the agrarian economy' which the essay follows back to its prehistoric roots and forward to the present day. The topographical information is particularly well displayed and the nature of the developed 'woodland landscape' (which did not exclude open fields) clearly explicated both in tables

and maps, a feature too often absent in studies of bocage.

In its physical features as well as in its documentation the recreation of a non-champion parish village is full of obstacles, here surmounted by assiduity, and a fine example to be followed by others elsewhere. This essay from the Birmingham School is in the best Leicester tradition, for most authors in this series of *Papers* taught English local history by exemplar rather than exhortation. If it had to come to an end, then, like the martyrs of old, the victims' names will be honoured when the executioners are in oblivion, and *Hanbury* perhaps be as much a place of pilgrimage as Withington and the New Lands of Elloe.

MAURICE BERESFORD

DANIEL W BROMLEY, ed, *Making the Commons Work. Theory, Practice, and Policy*, ICS Press, San Francisco, 1992. xii + 339 pp. 9 figs; 9 tables. \$44.95 (hbk); \$14.95 (pbk).

This collection is based upon a number of papers originally presented at a 1985 conference on common property resource management, with some additional contributions. The general objective is to counter the predisposition of development programmes to view the exploitation of resources in common as inherently destructive, and in any case inefficient. Instead, the authors seek to demonstrate the conditions under which the exploitation of resources in common contributes to the preservation and maintenance of a resource base, as against the imposition of private rights which can set in train a process of degradation. In his introduction the general editor, Daniel Bromley, lays emphasis on two linked misapprehensions in the property-rights literature: first, that use in common is equivalent to open access usage; and second, there is no such thing as a common resource, only resources which are managed in common, by the state, or by private agents. This accentuates the fact that the question of the commons is a matter of decision-making behaviour, and not primarily one of resource utilization.

Readers of this journal will be familiar with the development, since the later 1960s, of a property-rights paradigm applied to the transition in Britain from the working of land in common to the holding of land in severalty, a process often identified with the enclosure movement, but not in fact entirely congruent with it. Most prominently exposed in North and Thomas' *The Rise of the Western World* (1973), other contributors to this genre were Furubotn and Pejovich, Cheung and McCloskey, all of whom, as it were, brought Chicago economics to the English countryside. Contributors to this volume tend to refer most

frequently to a 1968 *Science* article by Hardin, 'The tragedy of the commons' as the key summary of the approach that they seek to counter. Hardin had argued that the use of commons embodies the free-rider problem, in which the cost to an individual grazing an additional cow or sheep is borne by all users, leading to overgrazing and possible destruction of the resource. Such a consequence follows not from use in common *per se*, however, but from open-access exploitation – where the resource is open to all able to cover the costs of exploitation, such as time, implements or livestock. Exploitation in common is distinct from this: it implies a decision-making framework and a restricted right of entry to the resource. This conception of 'common property rights' converges with that of 'private property', since the latter presupposes a legal and institutional framework that can assign rights over identifiable resources to specified agents, and enforce such assignation. There is nothing magic about private property rights; it is just that the rights and duties involved are more obvious, although the implicit costs of the enforcement apparatus required are generally overlooked. Failure to appreciate this point has resulted in international development agencies promoting the reassignment of resources managed in common to private holders who lack means and motive properly to exploit and maintain the resources, leading to their degradation and of the environment in general.

Two theoretical essays are placed at the beginning of this book, the first of which by Runge examines the theory of collective action in terms of game theory, and the second of which by Oakerson lays out a general framework for the understanding of resource management as a form of institutionalized decision-making. Oakerson's essay was available in advance of the writing of the eleven case-studies that follow, which range from Japan to Morocco, and from pasture to sea fisheries. Of particular interest to historians of English agriculture will be a contribution jointly authored by Bruce Campbell and Ricardo Godoy which compares the evolution of common tenure in the Andes and medieval England; but the great care that has been taken in editing this volume means that readers are likely to be drawn to hitherto unfamiliar territory and problems. All too often the joint efforts of academics fall from the press as unreadable concoctions, unrelated and poorly edited. The editors of this collection present a model of what co-ordinated common effort can achieve – a fitting exemplification of the thesis of the book.

KEITH TRIBE

DAVID GRIGG, *The Transformation of Agriculture in the West*, Blackwell, Oxford, 1992. xv + 141 pp. 26 figs; 26 tables. £30 (hbk); £11.95 (pbk).

Since agricultural policy arguments are still preventing agreement between western Europe, North America and Australasia in the General Agreement on Tariffs and Trade negotiations, the appearance of an account of the process of agricultural change in these countries is timely. The emphasis is on the last two hundred years, but some of the discussion goes back to the tenth century AD. Much of the book is concerned with farm land and labour: the amount used, its productivity and changes therein, and the way it was organized. There is also a chapter on the growth of markets, a 'prime stimulus' to the adoption of new crops and techniques, and largely brought about by falling real transport costs, according to Grigg. The concluding chapter discusses agriculture's contribution to economic development and the reasons for the change from shortage to surplus since the 1950s.

Many students will seize eagerly upon this book as a concise and intelligible source of data and essay material. If they want a rapid summary of what happened they will not be disappointed; if they want to find out *why* it happened they will not be so well served. If they wish to follow up what they read here they will not be helped by the absence of specific references. There is a list of further reading, but it is not organized by chapter, and only fifteen of its ninety-two items were published after 1984. What evidence is there that 'animal feedstuffs were, from the early nineteenth century, made up by compounders rather than on the farm' (p 8)? Who are all the historians who have written about '...the mid-eighteenth century, the period once described as the "agricultural revolution"' (p 33)? Whether or not it was it all worthwhile, and who gained or lost, is only discussed in the last two pages. Neither is there much in the book to guide students through the academic controversies of recent years. But with only 132 pages of accessible text to get through they will, to paraphrase Disraeli, lose little time in reading it.

PAUL BRASSLEY

STEPHAN R EPSTEIN, *An Island for Itself. Economic Development and Social Change in Late Medieval Sicily*, Past and Present Publications, CUP, 1992. xvi + 464 pp. 11 maps; 24 tables. £50.

The explanations for the economic and social gulf between northern and southern Italy have long intrigued historians, and Stephan Epstein renders a significant contribution to this important debate. Although this subject is likely to stir only limited interest among British agricultural historians, Epstein's book still has much to offer them. His

method and his conclusions offer a fresh perspective on two major debates: proto-industrialization, and the transition from feudalism to capitalism. This is demanding scholarship, and Epstein neither makes any concessions to his readers nor shirks any of the tough issues on these topics.

Epstein rejects the conventional description of the later Middle Ages as a period of economic decline. Instead he stresses the beneficial effects of the redistribution of income among society's lower orders, increased labour mobility, and the shift in comparative advantage of regions after the Black Death. Thus the Sicilian economy moved towards a more pronounced regional specialization of production in the fifteenth century: grain markets and livestock regions became more clearly defined, and infra-regional trade in minerals, textiles, manufacturing goods, silk and sugar increased. Epstein argues that, when combined with flexible market institutions, the increase in comparative advantage in population and resources forged 'regional commercial integration', which itself formed the basis for economic development in later centuries. Thus the book presents an optimistic assessment of Sicily's performance in the later Middle Ages, although the conclusion offers a few suggestions for the seeds of its backwardness in the early modern period.

The emergence of greater regional specialization is an observable phenomenon in many areas of late medieval Europe, but Epstein's innovation is to stress the importance of market structures in determining the pace of each region's path of development. The region is regarded as a discrete geographical unit in this context, for there were limits to the area over which market information could be effectively conveyed. Thus he believes that economic development is a function of different patterns of commercial activity, but that the extent and nature of commercial activity is determined by the institutional structure of markets.

Epstein concedes that market structures are themselves defined by a range of social, economic and political forces, but places particular emphasis upon the power of feudal lords or urban institutions to influence trade. Real forces, such as population decline, stimulated changes in demand, but *institutional* forces allowed that demand to be effective. By stressing the institutional and political constraints on marketing opportunities, Epstein adopts a broadly Marxist approach, although his stance is more sophisticated than in some Marxist interpretations. He shows that Sicilian market structures were sufficiently flexible in the later Middle Ages to reduce transaction costs for those wishing to participate in the market. This encouraged a greater proportion of produce to enter trade, which in turn shaped the processes of regional specialization.

Epstein has further developed this general argument in a recent London School of Economics working paper.

This is a complex and wide-ranging thesis, whose implications warrant serious attention. For example, the decline of English markets after the Black Death is often taken as a symptom of economic depression, but Epstein's work implies that historians should shift the focus of their attention to consider the reduction in seigneurial control over marketing, and the flourishing of informal trading centres: to what extent were English regional market structures leaner and fitter by 1500, and to what extent did this dictate the pace of regional development?

Any historian seeking to explain the processes of economic change in medieval and early modern Europe will have to reckon with Epstein. Too often, dialectical approaches to this subject have displayed only a nodding acquaintance with the primary material, but Epstein's thesis is rooted in extensive research. Yet some reservations remain. The demographic sources are limited, and not all historians will agree with Epstein's population estimates for late thirteenth-century Sicily. Here the evidence is straining to fit the model. The study might also be accused of bias towards Messina and the north-east. Similarly, the fifteenth-century is much better documented than the thirteenth, and so Epstein is unable to construct a clear picture of Sicily's marketing structure and regional integration before the Black Death: hence the extent to which the processes described by Epstein were 'new' in the fifteenth century remains slightly blurred. There is also a tendency to employ the phrase 'institutional factors' in a rather eclectic manner: beyond a certain level, it is not always clear what is meant by the term.

Those who prefer more functionalist approaches to economic history may ultimately remain unconvinced by Epstein's basic argument, but the book remains a provocative, stimulating and conceptually impressive work.

MARK BAILEY

DENIS COSGROVE, *The Palladian Landscape, Geographical Change and its Cultural Representations in Sixteenth-Century Italy*, Leicester UP, Leicester, 1992. xv + 270 pp. 85 figs; 3 maps; 1 table. £45.

It is the unfortunate fate of neo-classicism, at least in the English-speaking world, to have become associated with the supply of a species of architecture which is a more eloquent testimony to wealth than to taste. Indeed, it might be argued that even in earlier times the greatest appeal of neo-classicism lay in its capacity to demonstrate authority and opulence. A genealogical link may thus be traced

from Quinlan Terry and his imitators to the pattern-book Palladianism of earlier times.

In this volume Denis Cosgrove sets out to place the work of Andrea Palladio within the context of its place and period. The later fate of the style is not a major part of his concerns. Nor to any great extent (and more surprisingly) is the link between Palladianism and the exercise of power: the analysis is not in any fundamental sense either economic or sociological. Rather, we are invited to see Palladio's work in the Venetian republic as part of 'a cosmology which united the arts and sciences, grounding both in a rigorous intellectual explanation of humans' place in nature'. In one direction, architecture's geometry and rules of proportion reached down into 'more mundane activities like survey, drainage, the shaping of fields, canals and city streets'. In the other, 'they gave access to fundamental knowledge of created nature itself: the pattern of the heavens, the size, structure and the geography of the earth and the nature of the human body and spirit'. Thus 'architecture was an integral part of a primary geographical act, a cosmogony'.

The process of 'making a world', as practised by the Venetians and Vincentines in the towns and countryside of the sixteenth-century Veneto, is traced in a succession of chapters each treating a different aspect of an evolving landscape. 'Renaissance Venice and the terraferma' sets the scene by outlining the changing relationship between Venice and its lands in both their practical and cultural expressions. Attention then turns to Vicenza, the home of Palladio's early patronage and work, in a chapter which also explores the tension-laden relationship between the patriciate of that city, with its independent traditions, and that of Venice. The Palladian villa and the Palladian estate are treated separately in chapters which are concerned with the spiritual and aesthetic appeal of 'holy agriculture' as well as with the landscapes and built-forms to which this developing interest gave rise. A chapter on 'Water and the Palladian landscape' examines the work of the Venetian Ministry for Uncultivated Lands. It was an organization not unaware of the cosmological import of its activities. 'The rhetoric of reclamation', Cosgrove tells us, 'sought to locate the practical transformation of the environment into a grander scheme of nature and relate divine and human action with respect to altering nature'. 'Measuring and picturing the land' develops the interesting notion that map, picture and written record served as overlapping and not, as in their modern sense, conceptually distinct tools for use by those intent on taming the landscape. The development of triangulation in cartography and perspective in art is linked: 'the culture of landscape penetrated deep into all forms of represen-

tation so that the boundary between the local map and the painting was by no means impermeable'. The final chapters, 'The Euclidian ecstasy: describing and transforming the great machine of the world' and 'Landscape as theatre', place architecture and landscape in a broader cultural context, the first focusing on 'mathematics and geometry as key metaphors for the conception of human life and nature underlying the Palladian landscape', and the second on the metaphor of theatre which linked the landscape of the Veneto to the world beyond.

It will be apparent from this outline that the text is wide-ranging in scope and unconstrained in its intellectual ambitions. As a kind of Cook's tour of many different aspects of the history of the Venetian republic in the late Renaissance, it has much appeal. The suggested links between Palladianism, the cosmos, cartography, perspective, and reclamation are novel and interesting. However, there will be those who will feel that the imaginative interconnections which the breadth of approach make possible do not sufficiently compensate for the fact that little is really treated in adequate depth. This is a text which offers numerous pointers to where it is going next, but somehow never quite enough substance when it gets there.

Given the general orientation of the analysis, one would not expect to find significant additions to our understanding of the economic history of the Venetian Republic. More unexpected is the somewhat two-dimensional treatment of social and cultural matters. In the introductory sections, 'conventional' cultural geography (a category which poses more problems of definition for this reviewer than it appears to do for Cosgrove) is criticized for, among other things, its 'assumption of social uniformity'. But sensitivity to social diversity is not a central feature of Cosgrove's analysis either. Admittedly, such diversity is from time to time acknowledged. We are told, for instance, that 'the nobles who played on that stage [of the Palladian urban landscape] never forgot that its spectacle depended upon the peasantry who worked the land'. And yet, observations of this kind serve to circumvent rather than to engage serious discussion of the social formation and its tensions. Discontent is alluded to rather than analysed, while Martines' insistence that 'Renaissance treatises on architecture are profoundly class-conscious' sits oddly alongside the treatment they receive here. Also conspicuous by its absence is any real debate about popular culture and the way it fits into the broader picture. In contrast to the work of Simon Schama, this is Culture not culture, offering few insights into 'the physical and mental bric-a-brac which describe a culture' and which brought Schama such an embar-

rassment of riches in his analysis of the Dutch golden age.

JOHN R WALTON

JAVIER VIDAL, *Transportes y Mercado en el País Valenciano (1850-1914)*, Edicions Alfons el Magnànim, Valencia, 1991. 296 pp. No price stated.

Regional studies have flourished in recent years in Spanish economic history. The pathbreaking publication of a book edited in 1990 by Prof J Nadal and Dr A Carreras (*Pautas Regionales de la Industrialización Española*) has obviously exerted a profound demonstration effect. This book revealed the degree of regional disparities in modern Spain. It also proved that the lack of national aggregate data could be partially offset at the regional level.

In *Transportes y Mercado*, Vidal analyses the forward linkages of a railway network upon the economy of the provinces of Alicante, Castellón and Valencia over the period 1850 to 1914. As the economic historian of transportation knows only too well, forward linkages related to market integration defy any attempt at being encapsulated in quantitative form. Though Vidal has failed to make any progress in that direction, he has produced, however, a rounded picture of the role played by the different means of transportation – road, rail and coastal shipping – for the conveyance of commodities in eastern Spain. To some extent, Vidal has thus departed from previous works in the field of Spanish transport which, for the most part, generally focus either on traditional or on modern transportation, but hardly ever on the two at the same time.

Transportes y Mercado is divided into four chapters. In the first two, Vidal has concentrated mostly upon the transformation of the road system. In the first chapter, he offers an exhaustive account of the major improvements in road building which took place between 1750 and 1850, in particular along the Madrid to Valencia axis. While the chapter is particularly rich in information about projects and effective road building, little attention is however devoted to the number and seasonal availability of road carriers. To the author, increased road capacity prompted an expansion of regional traffic. On the other hand, an effort has been made by Vidal to assess the demand for transportation services in the years prior to railway building. As a proxy, Vidal has made extensive use of turnpike receipts. They failed, however, to provide any evidence about the nature of the traffic. In the next chapter, the author pushes forward his analysis to cover the period following the emergence of the railway. It is shown that the circulation of goods intensified as both systems complemented each other, road carriers

acting as natural feeders to railway companies. It is argued that carters and coastal ships competed successfully with the railway on account of its higher rates. Furthermore, the nature of freight traffic with the prevalence of primary goods and small hauls acted too against the interest of railway companies. Nonetheless, the argument is based on poor evidence about the real cost of transport. As a general practice, railway companies resorted to extensive price discrimination in spite of the fact that their legal rates were indeed relatively high. Neither does Vidal take into account the higher speed and regularity of rail traffic over traditional carriers.

In chapter 3, the author recreates the various steps which led to the full development of the regional railway network. It included a fair amount of narrow gauge lines which complemented the broad gauge lines of the companies operating at the national level. Vidal shows how the latter failed to grasp the traffic opportunities of the regional economy. Therefore, local interest groups struggled hard to link by rail the major production areas of the interior to the export centres on the shore. In the last chapter, Vidal has depicted the impact of the railway upon the regional economy by concentrating on various commodities which are of particular interest to Valencia. As the main staples for export, Vidal has selected citrus fruits and wines. Fertilizers, livestock and rice were also closely related to the local economy. Among industrial goods, the intensive traffic of coal and textiles reflect the extent of structural change in the Valencian economy throughout the period under scrutiny. Special emphasis has been placed upon the impact of the Great Depression. Unfortunately, the poor quality of the data, in particular for narrow gauge railway companies, has prevented the author from identifying major traffic flows within the eastern region. He has contented himself with the evolution of railway traffic to depict the competition from imported goods endured by local producers either in the agricultural or textile sector.

As a general appraisal of *Transportes y Mercado*, I wish to make some final comments. First, the reader will undoubtedly miss a detailed map showing the exact location of the numerous places which are quoted in the text. Regarding geography, the reader might also show some concern about the title of this book. Indeed, while 'País Valenciano' corresponds to a modern administrative partition of Spain, most of the analysis bears upon Valencia, one of the three provinces included within its territorial borders. Second, the awkward style renders some parts of the book, in particular the first chapter, difficult to read. Third, while it is obvious that regional studies benefit from a higher degree

of detail than national case studies, some of the information provided in this book has only a marginal interest. At times, the inclusion of excessive information makes it difficult to follow the argument. On the other hand, the reader will surely appreciate the vivid portrayal of local politics and economics behind railway development. The struggle among local elites, and the clash between national and regional interests are indeed major issues in Vidal's book. Finally, the reader with an interest in agricultural topics will find the data on the marketing of oranges, rice and livestock, particularly useful.

A GÓMEZ-MENDOZA

JOSÉ MIGUEL MARTINEZ CARRIÓN, *La Ganadería en la Economía Murciana Contemporánea, 1860-1936*, Serie Técnica y de Estudios, 8, Consejería de Agricultura, Ganadería, y Pesca, Región de Murcia, 1991. 223 pp. No price stated.

Murcia now has a strong group of agrarian historians associated with its university, and this study of pasture farming is an effective demonstration of their lively reappraisal of agriculture in the province. It concentrates on pastoral husbandry, evidently much neglected by historians hitherto in favour of the arable sector. The bias will be thoroughly familiar to British readers. The cereal farmers of Spain have always captured most publicity from historians, while pastoral husbandry was in the hands of small men, and has passed virtually unnoticed. When wool production lost importance in the Spanish economy in the second half of the nineteenth century, that fact obscured all consideration of compensatory developments with other livestock. Now with the help of many statistics, and an innate sympathy for pastoral communities, the balance in Murcia is redressed for the period 1860-1936. The author sees pastoral and arable sectors well integrated in the plains of Murcia, while transhumance was practised in the mountains. Small farmers, who were lessees and not owners, were responsible for significant increases in the production of goat's milk, goat meat, and pork, and in assessing their full contribution to the rural economy the author does not omit poultry, eggs, honey, rabbits, and silk production. All this was achieved by intensifying the use of the resources already available within the region, improving the native breeds (an English breed of pig hastened fattening), and giving up the use of asses for work in favour of mules, which were more expensive to feed, but more efficient on the land.

The present-day crisis in our understanding of environmental changes is plainly shifting the viewpoint of scholars when judging agrarian regimes of the past, and some of the judgments passed here

disclose an appreciation for sustainable agricultural systems that did not rely heavily on resources brought in from outside the region. Terms like the 'equilibrium of agriculture', and 'regional eco-systems' are used, and reference is made to the 'autonomous agricultural system' prevailing among pastoralists in Murcia as late as the 1960s and 1970s.

The book is repetitive in places, and as usual with Spanish academic studies, lacks an index. But it is a landmark in the study of regional economies, rescuing peasant agriculture from the ignominy usually heaped on it by those who have preferred to extol the grand spectacle of ever-improving cereal production by large farmers. Incidentally, this work notes the brighter fortunes of the pasture farmers in the late nineteenth century, in contrast with the cereal growers. Many such parallels with the British experience appear.

JOAN THIRSK

J R MCNEILL, *The Mountains of the Mediterranean World. An Environmental History*, CUP, 1992. xx+423 pp. 20 plates; 8 maps and figs; 28 tables. £40.

McNeill argues a case. It is essentially that the ecological degradation characteristic of the mountain areas around the Mediterranean Sea is a relatively recent phenomenon (within the last 200 years); that the degradation results, fundamentally, from the overloading of inherently unstable human-support systems through the integration of once remote areas into the world market economy; that the life-support systems decayed to such an extent from deforestation, erosion and soil depletion that they could no longer support former levels of population; and that the resultant emigration reduced the amount of labour available to the point where it could no longer even support itself. This thesis is demonstrated with evidence from five selected areas: the Taurus Mountains in south-western Turkey, the Pindus of central Greece, the Lucanian Apennines in southern Italy, the Alpujarra of the Sierra Nevada of Spain, and the Rif Mountains of Morocco.

Background is provided by a review of Mediterranean mountain environments (chapter 2) and an outline of their historical experience down to AD 1700, as illustrated by the five selected areas (chapter 3). Chapter 4 provides a general discussion of the distinctive human-support systems developed in the mountains during the period 1700-1900. These rested upon the exploitation of mountain soils and upland pastures, but - critically - also depended upon a variety of auxiliary activities such as migrant labour, military service, and craft work, all of which presuppose access to a market. Chapter 5 traces the experience of the five areas

since about 1700. Similarities and differences emerge, not only in the timing of the different phases of exploitation but also in the extent of the resulting degradation. Thus, the Pindus has experienced massive emigration since the 1880s and is full of 'shell' villages, whilst the Rif is clearly overpopulated in terms of its current support-systems; the Taurus may only just have reached the threshold of unsustainability or what McNeill calls 'overshoot', when ecological disaster begins. Chapter 6 reviews the ways in which market integration, combined with the extension of state power and the alienation of common pastures and forests, brought over-exploitation of mountain resources and at the same time gradually undermined or destroyed auxiliary activities. The penultimate chapter (chapter 7) summarizes the potential effects of the local mountain economy upon the ecology before evaluating the evidence for ecological damage and landscape change.

The case is vigorously argued, but with a touch of humour and some colourful phrases which make the book enjoyable to read. McNeill strays perilously close to repetition, but the amount of detail at his command allows him to veer away. Inevitably for a work on this scale, there are minor mistakes here and there. For example Piri Reis was not 'an Ottoman traveller' (p 98) but a naval officer who served the Sultan in the Red Sea as well as the Mediterranean, and Leake crossed the Taurus in February 1800, not 'around 1820' (p 289). It is odd, too, that C Delano Smith's book, *Western Mediterranean Europe* (Academic Press, 1979), is omitted from the fifty-eight page bibliography and perhaps even more curious that no reference is made to William McNeill's work on Greece which also dwells on the distinctiveness of the mountain way of life and its recent vicissitudes. But this is carping. Altogether, in arguing his case, McNeill has produced a valuable synthesis of material about the Mediterranean mountains which many, interested amateur and specialist alike, will find informative, useful and stimulating.

J M WAGSTAFF

STEPHEN J HORNSBY, *Nineteenth-Century Cape Breton. A Historical Geography*, McGill-Queen's University Press, 1992. xxvi + 274 pp. 66 figs; 20 tables. £33.95.

This book is a work of regional historical geography. It is clear, however, that Cape Breton in this period was closely connected with the Scottish Highlands (for the source of much of its population), with the Channel Islands (for the capital for the fishing industry), and with both Boston and the eastern seaboard as well as with west coast North America (as Cape Breton people emigrated in

numbers in the wake of the mid-nineteenth-century potato famine). In exploring these and other connections, Hornsby clearly shows how the development of agricultural society and economy, and rural-based industry was in one island bound up with circuits of capital and labour on international scales. Yet Cape Breton is, or more correctly was, an island with a peculiarly Highland Scottish influence. Gaelic is no longer strong there, but the agricultural landscape is the result of Highland influence as emigrants from one marginal economy established a new life for themselves in a similarly marginal environment.

Even this imprint, and that of the Irish, Acadians, and others in Cape Breton, was not the same across the island. Hornsby stresses the difference between the 'backlands', with poorer soil and less-developed agriculture and kin connections within the subsistence farming community, and the richer 'frontlands', with their emphasis upon a market-oriented economy and individualistic farming practices. In both, rural industry – in coalmining, in cod fishing – supplemented returns from the land as did seasonal migration away from the island.

The picture we are given is very detailed and essentially economic. If anything, the detail is too much and rather less attention to minutiae might have made for a clearer understanding of some of the more important large-scale issues. Interesting allusions are made to linguistic and ethnic divisions of labour within the mining populations, to kin-based connections with family in Scotland or in the urban centres of Canada. But the work offers relatively little insight into what might broadly be called social and cultural questions. This is partly a matter of emphasis, of course, but it may also be a result of the structure of the book which concentrates its analysis of rural economy and agricultural settlement through fairly thickly-cut 'time slices' for the early and late nineteenth century, and at the end of the 1800s, with a further short chapter on the potato famine of the mid-1840s. Despite the stated intention at outset for a regional geography, knowing how Cape Breton life was influenced by the ebb and flow of externally-derived circumstances is on occasion made difficult by this structure and by the systematically economic focus.

CHARLES W J WITHERS

MARIO SAMPER, *Generations of Settlers: Rural Households and Markets on the Costa Rican Frontier, 1850-1935*, Westview Press, Oxford, 1991. xvii + 286 pp. £18.95.

Samper's aim in this book is the historical analysis of peasant farmers who 'are neither fully traditional and subsistence oriented, nor totally mercantile in their productive activities, their values and their

social relations'. This he does by focusing on the history of the north-western part of the Central Valley of Costa Rica from the mid-nineteenth century to 1935.

What marks this period was the formation of an agro-export economy in which production of commodities, such as coffee, by peasant households played a crucial role. The period began with the settlement of land by a geographically mobile and personally free population on the agricultural frontier. These households, relying mostly on family labour, became part of a global market through credit, processing and trading networks. During this process, individuals found themselves enmeshed in complex and contradictory relations which created opportunities for accumulation for a stretch of time, but then increasingly became unfavourable inducing migration from the area.

Samper explains the profound transformation in the period under study in terms of three interrelated processes. At a regional level, it was a combination of expulsion and attraction factors that induced the first wave of migration to the agricultural frontier. The permanent settlement later led to outmigration of the offspring, as previously abundant land became scarce and demographic and socio-economic pressure intensified. At the level of productive units, associated with market-orientation, intensification of land-use patterns in terms of labour inputs and yields per area was observed, resulting in changes in the technical and social organization of the productive units. At the intersection of these two processes, the basis of economic interaction, Samper claims, was differentiation, that involved both reciprocity and exploitation, with emphasis increasingly on the latter over time. Opportunities of surplus generation and accumulation, which in the beginning were open to many, became the monopoly of the few.

The multi-layered empirical analysis comprises the changes in the composition, uses and allocation of factors of production in the various spheres of economic activity, at the regional level as well as the level of the productive units. In keeping with his argument about the creativity of human beings, Samper also discusses household strategies in response to changing circumstances brought about by the increasing commodification of input and output markets. The peasant domestic units exist in a dynamic macro-context which determines them as well as being determined by them. The typology of domestic units (where production and consumption are organized around the household) is based on the latter's surplus generating capacity.

Mario Samper's book should be considered an important contribution to the literature on rural areas in a multitude of ways. At one level, the

analysis represents a critical stand against the simplistic characterizations of the Latin American rural reality in terms of the traditional 'latifundia-minifundia' duality, by stressing constantly the significance of middle peasantry. This point is made especially well in a fascinating final chapter that draws on comparative material from other parts of Latin America, as well as the Caribbean. The wealth of empirical data gathered from a variety of sources such as probate inventories and oral histories is used effectively in capturing the dynamics of change.

At a more theoretical level, the analysis is a response to the question of whether peasant farming is compatible with the development of capitalism in agriculture. This question, which has some of its roots in the debate among some of the leading Socialist theorists at the turn of the century, has generated a substantial literature in social sciences. Samper claims that not only is peasant farming compatible with capitalism, but in Costa Rica (and elsewhere) it has in fact been the result of capitalism. It was promoted by both the owners of capital and the state. This claim begs the question: what was the nature of the Costa Rican state, and its relation to different socio-political groupings at the time, that informed this behaviour? What was the political legitimation used by the state at the beginning and then at the end of the period, when circumstances had changed? The analysis is somewhat lacking in this respect. More importantly, however, Samper's theoretical claim, although captured by his empirical analysis, is not complete. For if it is the forces of capitalism that in the beginning engendered peasant farming, it is also the forces of capitalism, as his analysis reveals, that later undermined it. With this in mind, one could begin to answer Samper's call to reconsider the traditional conceptualizations of capitalism: the particularity of agrarian capitalism's relation to peasant farming needs to be understood within the broader social context in which they are both situated.

SERAP A KAYATEKIN

SIMON G POWELL, *Agricultural Reform in China: From Communes to Commodity Economy 1978-1990*, Manchester University Press, Manchester, 1992. viii + 231 pp. £40.

When China began its rural reform in the late 1970s and early 1980s, followed by rapid increases in its total agricultural output and, in particular, its grain output, it looked as though that China was well on its way to solve its long-standing grain supply problems and to sustained rural development. Indeed, many observers and analysts at the time were unusually optimistic in their assessment of China's rural reform measures. Powell's book is a useful contribution. It will help researchers to

rethink many issues. Its chief virtue is that unlike many authors before him, Powell looked beyond the short-term efficiency gains associated with the rural reform, and focused instead on long-term obstacles to sustained rural development in China.

The book has eight main chapters. The first two are devoted to discussing the two principal planks of China's rural reform package: changes in management forms and the emphasis on developing a diversified rural economy in place of the monoculture of grain production under Mao. These are then complemented by six regional chapters, respectively on the periurban areas of suburban Nanjing and Taihu of southern Jiangsu, the intermediate regions of Xuhuai in northern Jiangsu and Yanbei in Shanxi, the resource-rich Nenjiang prefecture in Heilongjiang and the mountain region of northern Guangdong. The selection shows a heavy bias in favour of Jiangsu but, considering that Jiangsu remains one of the most diverse provinces in China in terms of both its varied natural conditions and the stages of development reached by its constituent parts, the choices on the whole appear to provide a balanced cross-section of spatial differentiation for China. Spatial differentiation in development is indeed another main theme of the book. The author appears to have regarded the cross-section provided by his six cases as also representing rural economies at their distinct stages of development.

The six case studies rely principally on secondary Chinese sources ranging from local publications, national press and radio reports, and of course articles from such popular journals in the field as *Nongyi Jingji Wenti*. The author's marshalling of such previously-underutilized materials is skilful, and he demonstrates a deep understanding of the long-term developmental problems both for China as a whole and for the six regions in particular.

The principal conclusions from the book might be summarised as follows. Owing to an extremely deficient transport network and poor transport facilities, and an inefficient and underdeveloped commercial system (in no small measure due to bureaucratic rigidities), the state has for decades pursued a policy of regional grain self-sufficiency,

and one does not expect this to change soon. At the same time, the state has for decades paid low prices for grain and, because of the current pressures on the state budget, this situation is also unlikely to change. Poor local agricultural infrastructural systems in many regions have further meant that in these regions, great proportions of resources have had to be used for grain production, thereby preventing them from diversifying into more profitable occupations. Unless such regions could find ways of building up their local resource base and undertaking the necessary infrastructural investment, thereby raising grain yield and releasing resources for more profitable uses, they will remain poor. Successful regions like Taihu and suburban Nanjing, favourably endowed as they are with natural resources and being close to the major urban centres, are those that have been able to utilize their local advantages and to diversify their local economies. Although other regions do not share the same advantages, one must expect that their long-term development will depend on local people utilizing, in their own way, whatever advantages they have, undertaking the necessary infrastructural investment, overcoming the grain supply constraint, and releasing resources for more profitable undertakings.

While the book deserves praise, a number of shortcomings remain. First, its heavy reliance on the secondary sources, most of which were published before 1985 (at a time when the former commune system was being disgraced), has meant that some of the discussion on the commune may be open to question. Reliance on the secondary sources also more generally raises questions about the data's authenticity, despite the fact that the author has been careful to exercise a critical approach in his use of the materials. A final point to mention concerns the book's presentation. No separate bibliography is provided. Given that the book relies so heavily on secondary sources, this is an important weakness. In my own reading, I experienced endless frustration in trying to keep track of the references.

MINQUAN LIU

Shorter Notices

PHILIP LYTH, *The Pinfolds of Nottinghamshire*, Planning and Economic Department, Nottinghamshire County Council, 1992. 19 pp. No price stated.

Philip Lyth has an informed eye for detail in the landscape, as his study on the ground of an Anglo-Saxon charter of Southwell showed in 1984. Here he displays the same discerning eye in an illustrated booklet on pinfolds (better known to southerners as 'pounds') in Nottinghamshire. A historical account of the pinfold (a manorial responsibility, requiring a pinder to recover straying animals, and lock them up until their owners appeared and paid a fine to retrieve them) is followed by a gazetteer, dividing them into four categories. Twenty pinfolds survive in good order in the county, others are recognizable but neglected, in other cases sites are identifiable but no more, while the existence of some is indicated only in place names. Their present state and use is shown to be highly varied, as vegetable gardens, weedy patches, war memorials, or public sitting places with benches.

Some Nottinghamshire parish councils clearly deserve warm praise for their effort in preserving pinfolds, and the excellent photographs given here will undoubtedly enable many more people to recognize them elsewhere. The county council is also to be congratulated for its support of this highly attractive publication.

JOAN THIRSK

HAROLD FASSNIDGE, *The Quakers of Melksham 1669-1950*, Bradford-on-Avon Friends, Bradford-on-Avon, 1992. 186 pp. Illus. £4.50.

This is an interesting and well-produced study of the Society of Friends in the Wiltshire market town of Melksham. It is based on the copious minute books and other records of the society and includes considerable detail about the fluctuating fortunes of the Quakers throughout Wiltshire from their establishment during the mid-seventeenth century. As such, it is a useful addition to local history studies in the county.

The interest of the book for readers of this *Review*, however, will stem from the diverse membership of the local Quaker community. The Wiltshire Quakers were to include members who became eminent and wealthy physicians, merchants, clothiers and manufacturers, including the Fry family, notably Joseph Fry who abandoned a lucrative medical practice to found a chocolate-making firm in Bristol. Others became bankers, or, during the nineteenth century, were linked in marriage to

families such as the Barclays, Frys, Gurneys and Lloyds. Marriages within the close-knit Quaker community also influenced the rise of the Fowler family of Melksham from small-scale clothiers and mercers in the early eighteenth century to become the best-known advocates and manufacturers of steam ploughs in the country. Through his family relationships, John Fowler (1826-64) was able to develop his drainage plough with the help of fellow-Quakers such as Albert Fry of Bristol, Ransomes and May (later Ransomes and Sims) of Ipswich and George Stephenson. Fassnidge quotes but does not attribute a comment made at the Great Exhibition of 1851 that 'but for the American reapers, Mr Fowler's drainage plough would have formed the most remarkable feature in the agricultural department'. Shortly afterwards John Fowler established his engineering works at Hunslet, Leeds. This is a good example of a well-researched and interestingly presented local history.

J H BETTEY

HUGH ROGERS, *Bottisham Enclosed - 1801*, Staine Hundred Local History Society, Bottisham and Cambridgeshire Libraries, 1992. 52 pp. £3.50.

This monograph provides the background to the parliamentary enclosure of Bottisham in Cambridgeshire, and offers the sort of material which illuminates the human side of the process. Although the award is not given in full, detail is presented that sheds light on the objections and manoeuvrings that inevitably accompany such activities. The author sets the enclosure against the background of rising prices due to the Napoleonic War, but it would have been useful to know also how this particular enclosure fits in with the movement in both Cambridgeshire itself, and the country as a whole.

In the discussion on the impact of the enclosure, the author reminds us of the consequences both to the landscape and to the village population. The advent of agricultural depression so soon after the enclosure had its main effects on the peasantry, as a study of settlement certificates makes clear. From the physical aspect, there appears to have been a classic transition from the rather bleak and open view to the hedged landscape associated with enclosure.

There seems to be very full surviving map evidence from this parish: a pity then, that the maps in this monograph are on the whole rather confusing. Some unified graphic style would aid comparison, as might a wider distribution through the text.

This becomes particularly obvious when one looks at the aerial photographs which illustrate points made in the text so well.

While this monograph goes some way to satisfying the curiosity naturally felt about the underlying mechanisms of enclosure by Act of Parliament, there is a feeling of dissatisfaction. More could have been made of the material gathered, perhaps by using a more tightly argued structure, and offering some analysis based on the detailed award.

SYLVIA SEELIGER

ROY BRIGDEN, *Agricultural Hand Tools*, Shire Publications Ltd, Princes Risborough, reprinted 1993. 32 pp. Illus. £2.25.

Much agricultural history is written from the point of view of technical change and 'progress'. This tends to obscure the fact that many of the tasks on the farm continued to be carried out in the same way and with the same tools from at least the Middle Ages until after the Second World War. 'Even the large, capital-intensive holdings continued into the 20th century to rely considerably on human muscle' (p 3). Hand tools remained in use longer on small farms and the change everywhere was a slow one, 'a developing conjunction between old and new...the rising cost of manpower tipped the balance progressively in favour of the new' (p 3).

It is these hand tools which are the theme of this recently reprinted Shire Publications. Like all the booklets in this series, a remarkable amount of information is compressed in a readable form into its thirty-two pages. This intensity leaves little room for introductory paragraphs or conclusions to chapters, and results in a rather abrupt style, but this is a small price to pay for the quantity and quality of the factual information. It is fully illustrated using photographs from trade catalogues and farming text books as well as from the superb photographic collection at the Museum of English Rural Life at Reading.

The subjects covered include field work (paring, burning, ploughing and hedging), seeding, weeding, harvesting and crop processing. Livestock and dairying are deliberately omitted as they are covered by other books in the Shire Album series. Not only the tools are described, but also the processes such as the craft of hedging for which they were developed. Regional differences in, for instance, hoes and bill hooks, which have changed little since the Luttrell Psalter, are discussed. The slow, labour-intensive work of dibbling, only possible in areas of very low wages, and of flailing where, at most, seven bushels of wheat per man-day could be produced, are described. This booklet provides a

timely reminder of the human grind and sheer hard work behind the statistics of yields and labour productivity with which agricultural historians are more familiar. But reading about the objects is only second-best to seeing the real thing and the booklet ends with a useful list of museums with relevant displays.

This publication is necessarily brief and descriptive. It is only able to hint at the wider question of 'progress'. In the same way as our dismissive attitude towards the agricultural systems of third world countries and primitive societies is now being replaced by a respect for some of their ecologically sound practices, so we are coming to be more cautious in our acceptance of the great modern goals of mechanization and intensification. As Roy Brigden says, hand tools can be used in terrain unsuited to modern machines, and as yet no satisfactory machine has been invented to lay hedges.

SUSANNA WADE MARTINS

B L TURNER, II, W C CLARK, R W KATES, J F RICHARDS, J T MATHEWS, and W B MEYER, eds, *The Earth as Transformed by Human Action*, CUP, pbk edition, 1993. 713 pp. £27.95.

This large volume takes as its theme the 'global and regional changes in the biosphere over the past 300 years'. The book has some forty-two chapters, arranged into four principal sections: changes in population and society, transformations of the global environment, regional studies of transformation, and understanding transformation. It grew from a symposium at Clark University in 1987, at which authors were invited to present papers on the theme of the book, echoing an edition entitled *The Earth as Modified by Human Action* published some 100 years previously, in 1885, by George Perkin Marsh.

Following the 1987 symposium, the editors commissioned an impressive team, largely of eminent geographers, to contribute chapters to a volume 'with a broad audience in mind'. It was first published in 1990; this 1993 paperback edition is a direct reprint of the 1990 hardback. Hence, potential purchasers should bear in mind, first, that the volume is now showing its age – for example, the 'global warming' debate, and particularly the contentions concerning the consequences for agriculture, receives rather less treatment than readers might be expecting – and, second, that the editors do not seem to have been afforded the opportunity to make corrections to the text – for example, on p 405, printing errors remain in both the text and in the diagram. Even the back cover says 'four principle sections' – an unforgivable error by Cambridge University Press! Nevertheless, the wealth of material in the volume should be sufficient for the text to serve as a first recourse for those

students and teachers in North America interested in human impact on the environment and in recent environmental history. There is, however, very little on the British Isles or the near continent; though the text might serve as an antidote to Eurocentric publications, it will, I suspect, be regarded by EC residents as somewhat deficient in examples closer to home. Chapters that adopt a regional theme include ones focusing on 'Tropical frontiers' such as Amazonia, Borneo and the Malay Peninsula, on 'Highlands' (Caucasia; East Africa), on 'Plains' (Russian plain; US Great Plains), on the 'Populous south' (Mexico, Nigeria [*sic* – hardly south!]) and the 'Populous north' (Sweden [populous?], Switzerland, and the North American Hudson-Raritan basin).

Some of the writing, particularly in the foreword and in several chapters in section I, is unnecessarily florid. The ubiquitous first-person plural serves as a bad example for undergraduates (who *are* 'we' – geographers? humans? HM the Queen?). Overall, though, this is an authoritative volume, with many first-rate diagrams and with useful references (given chapter-by-chapter). At £27.95, it is now a worthwhile library purchase, and is worthy of consideration by the more affluent student. Other, very readable, and more affordable, single-author treatments of a similar theme, are those by I G Simmons (1989) and by A Goudie (1990); each is as, or more up-to-date than this volume, and each has greater time perspective; but neither has such a strong emphasis on processes nor has such detailed regional studies as are contained in this weighty reprint.

F M CHAMBERS

Tools and Tillage, Vol VI: 4, National Museum of Denmark, Copenhagen, 1991. 64 pp. DKr 100.

As usual, this issue is worldwide in its scope and covers a diversity of subjects. The contributions are linked by their basis in primary research and marked by a precise documentation of working processes, detailed description of tools and the techniques of their use. Ancient methods of field terracing and associated tillage methods in the mountains of China, for example, are described using archaeological and literary evidence. The earliest indications of such activity go back as far as the Zhou Dynasty (1100–700 BC) and became widespread particularly in south China where population growth made the creation of additional crop bearing land essential.

Water flowing down through the terraced fields from natural mountain springs enabled a measure of temperature control to be exercised for the benefit of the growing plants. Rice seedlings require a slightly higher temperature so the cold mountain waters were made to pass directly through the paddy fields. Later in the growing cycle, when a lower optimum temperature is desirable, the streams were made to flow around the fields to cool the water already there.

Literary evidence is again to the fore in an article from India where there is discussion of a Sanskrit manual of agriculture in which a type of plough widely used in the Ganges valley was very clearly described in great detail. With the addition of a funnel placed behind the handle, it could be used as a seeder-ard. Observation of practical experience is the theme of Axel Steensberg's report of a visit to Papua New Guinea in the 1970s where he made a full record of the production and demonstration of a stone axe. It is a carefully fashioned tool with the blade slotting into a wooden socket, held tight with a rattan binding and this then bound to a fork-shaped handle. In the hands of a skilled user, the axe took only seven minutes to bring down a dole tree 17 cm in diameter. Studies of this sort, Steensberg argues, are valuable when doubts are cast on the ability of Neolithic agriculturists to have cleared large areas of forest with tools of a similar nature.

The remaining three contributions take the form of studies arising from archaeological finds. From a Chalcolithic settlement (c 1400–1000 BC) in western India came a bone ard-ploughshare and something else that may be an antler seed drill. A short stretch of stone paved road near to Arhus in Denmark that was constructed in the late Iron Age to cross a waterlogged valley was excavated in 1954 and revealed a fragmented paddle spade in the foundation layer, beneath the gravel and cobbles. It had obviously been broken on the spot, in the course of the road's construction. Archaeological investigation of a series of twelve domestic rubbish tips on a farm in York County, Virginia, produced a ploughshare which from the circumstances of the find could be accurately dated to 1670–90. As such it provides the earliest material record of a seventeenth-century American plough and opens up further work on plough origins and diffusion in this period.

ROY BRIGDEN

Notes and Comments

GEORGE WASHINGTON PIONEER FARMER

Mount Vernon, Virginia, the home of George Washington, will be the site of a two-day conference on November 8 and 9 1993, that explores biological thought and agricultural practice during Washington's life and times. A number of papers illustrating the plant and animal husbandry of the eighteenth century and American links with European agriculture are to be presented and discussed by a panel of experts. A keynote address and reception will take place at the National Museum of American History in Washington, DC on the evening of November 8. Those wishing to attend should contact Mr Terry Gibson, Mount Vernon Ladies Association, Mount Vernon, Virginia 22121 USA.

THE HISTORY OF LINCOLNSHIRE

The Society for Lincolnshire History and Archaeology formed a History of Lincolnshire Committee in 1966 with the aim of publishing a twelve-volume history of the county from prehistoric to modern times. Under the general editorship first of Dr Joan Thirsk, and later of Professor Maurice Barley, ten of the twelve volumes have now been published, and the other two are in active preparation. It is hoped to complete the current series in the next three or four years.

While the 'History of Lincolnshire' series has provided a much needed overview of the county, it is not a definitive study of Lincolnshire in the way that the Victoria County History is elsewhere. To fill this gap the History of Lincolnshire Committee now proposes to launch a new series, to be called 'Studies in the History of Lincolnshire'. The Committee will look to publish substantial scholarly works of c 80,000 words which will illuminate the history of the county at different periods in the past. No attempt will be made to cover fixed periods, as in the present series, although priority may be given to books with a broad spatial coverage, and a reasonably long time span, or on topics demonstrably of wide interest.

Anyone who would like more details of the new series is invited to contact the Committee's chairman, Professor J V Beckett, Department of History, University Park, Nottingham, NG7 2RD.

41ST ANNUAL GENERAL MEETING

The 41st AGM was held at 9.00 a.m. at Gregynog Hall, near Welshpool, on Tuesday 6 April 1993 with Professor Turner in the Chair. Mr Havinden was re-elected as President, Dr Collins was re-elected as Treasurer, Dr Perren re-elected as

Secretary. Prof. Chartres and Dr Phillips were re-appointed Editors of the *Review*. Dr John Broad was elected as a Committee member.

The following addition to the end of paragraph 8 of the Society's constitution was agreed *nemine contradicente*: 'with the exception of the Chairman of the Executive Committee if he or she has not completed his or her three year term of office'.

The Chairman, Professor Turner, presented the Committee's report. One meeting of the Executive Committee and two conferences had been held during the year. An Autumn Conference, organized by Dr Richard Hoyle, had been held at the University of East Anglia on the theme of 'Recent Work in East Anglian Rural History' and a Winter Conference, organized by Dr Peter Dewey, with the Historical Geography Research Group of the Institute of British Geographers in London on the topic of 'Rural Trade and Industry'. The Chairman thanked the staff at Gregynog Hall, and Dr John Walton, Dr David Howell and Dr Tony Phillips for their fine work in preparing what promised to be an enjoyable and memorable conference in such pleasant surroundings.

Professor Turner announced that Dr David Hey will replace Professor Chartres, who wished to retire, as second editor of the *Review* from April 1994. Professor Chartres was thanked for his decade of service as editor, for most of that time without the assistance of a second editor.

Dr Collins submitted the audited accounts as at 31 January 1993, showing a balance of income over expenditure of £11,785. The accumulated surplus now stood at £13,394 compared with a surplus of £1609 of 31 January 1992. There was a problem of outstanding subscriptions amounting to c £2700 due from members who had not up-dated banker's orders when subscriptions were raised. As at 26 March 1993 there were 401 UK Ordinary (net decrease of 9); 65 Overseas Ordinary (net decrease of 8); 147 UK Library & Institutional (net decrease of 3); 117 Overseas Library & Institutional (net decrease of 2). This represents an overall fall of 22 compared with 31 March 1992. The Chairman thanked the Treasurer and his assistants, Mr Arkell and Miss Beazley, for their work on the Society's behalf. Mr Arkell was re-appointed auditor.

Prof. Chartres presented a verbal Editor's report on behalf of himself and Dr Phillips. Volume 40 contained 10 articles, 2 debates, 1 obituary, 3 conference reports, 2 bibliographical pieces and 50 book reviews. Since April 1992 18 articles or short notices had been received. Of these 8 had been accepted, 4 rejected, and 6 were currently with

referees. There was a backlog of material for at least one full issue with at least 25 book reviews. It was agreed to expand the size of the next two issues of the *Review* (Vol. 41, Part II, 1993 and Vol. 42, Part I, 1994) to 112 pages to absorb a backlog of book reviews and take the list of work in progress. Dr Raine Morgan's list of theses will appear in Vol. 41 Part II and Dr Peter Edwards's list of Work in Progress will appear in Vol. 42 Part I. The transfer of printing to Charlesworth had brought financial benefit and he asked for members' reactions to the appearance and contents of the *Review*. So far the sales of the *Fenland Worker-Peasants Supplement* and the *Index* had been disappointing. There was also anxiety about the scope and coverage of articles submitted. It was felt we should try to attract more general articles to compensate for a preponderance of pieces of local interest. Professor Chartres was thanked for his report.

DR JOAN THIRSK

On 9 March 1993, Dr Joan Thirsk, former President of the Society, was awarded the honorary degree of Doctor of Agricultural and Environmental Sciences by the Agricultural University of Wageningen, Netherlands, at a ceremony celebrating the seventy-fifth anniversary of the University's foundation. With characteristic modesty and generosity, Joan Thirsk has asked the Society also the regard itself as honoured by this award. While delighted at this kind thought, both the Executive Committee and the Annual General Meeting wished to share in honouring Dr Thirsk and her work, and added their hearty congratulations.

Dr Thirsk's international and national standing has brought very considerable honour to British agrarian history at all levels. As members will probably be aware, she has been a major figure in the history of the Society, compiling the annual lists of publications for the *Review* from 1955-65, and of 'Work in Progress', 1958-63; as a member of the Executive Committee, and Editorial Board from 1953; Editor of *The Agricultural History Review*, 1964-72; and President, 1983-5. More widely she has been, from 1974, the General Editor of the *Cambridge Agrarian History of England & Wales*, in succession to Professor Herbert Finberg, and of the *History of Lincolnshire*. Beyond her involvement with the Society has been her wide engagement with the world of local history and amateur scholars, which was recognized by the honour of election as Chairman of the Standing Conference for Local History in 1983. Countless scholars, both professional and amateur, in this country and abroad, are indebted to her for help, advice, and encouragement, and the very positive role model she provides.

The signal honour accorded to Joan by

Wageningen is outstandingly deserved, and reflects credit upon the wider field of agrarian history to which she has made such distinguished contributions.

FORTHCOMING CONFERENCES

The 1993 Autumn Conference will be held in York at King's Manor, on Saturday 25 September. The subject of the conference will be 'Aspects of Agriculture and Landscape in Yorkshire, 1300-1750'. These conferences are intended to introduce a range of local themes and speakers to audiences that want to find out more about their local area. If you are a member of the BAHS who lives in and wants to learn more about the agricultural history of northern England, or if you know of any non-members who may be interested in this, then this conference should not be missed. Full details of this one are available from the conference secretary, Dr Christine Hallas, Trinity and All Saints College, Brownberrie Lane, Leeds LS18 5HD.

The next Winter Conference, organized by Dr Peter Dewey, Department of History, Royal Holloway And Bedford New College, Egham Hill, Egham, Surrey TW20 OEX will be on 'Agriculture and the Environment' on Saturday 4 December.

The 1994 Spring Conference will be held at Trevelyan Hall, University of Durham organized by Dr Mark Overton, Department of Geography, University of Newcastle-upon-Tyne, Newcastle-upon-Tyne NE1 7RU from 11-13 April. The field trip will be to the farms at Beamish Museum on 13 April.

Dr David Hey of the University of Sheffield will be organizing the 1995 Spring Conference, which will be held in the general area of South Yorkshire from 10-12 April.

REQUESTS FOR HELP

As part of our service to readers NOTES AND COMMENTS now includes a section under this heading. This is designed for all members of the BAHS, but particularly those who are not attached to an academic institution. We hope this will provide assistance for two types of problem. Firstly, those thinking of carrying out research and who have chosen a topic, but are not too sure where to begin, or want to know who else has worked on that particular subject. And secondly, those who are well into a project but need further information to fill in gaps, or require advice on methodology. From time to time we have published lists of research in progress, but as there are intervals of some time between their appearance it is hoped this spot will fill the gap where someone wants information in the short term. This service is open to all members and if you feel it would be of some

help you are urged to send your name and address, along with your request, to the Secretary of the BAHS, Dr Richard Perren, Department of History, University of Aberdeen, Taylor Building, King's College, Old Aberdeen, AB9 2UB.

'POUR UN RENOUVEAU DE L'HISTOIRE RURALE'

An informal group of French scholars, dissatisfied with what they see as the fragmentation of rural history in France, and its tendency to abandon fields of research germane to rural history, has been established to produce a new scholarly structure for the more effective pursuit of agrarian history. They have particularly noted the intense periodization of French rural history, which inhibits dialogue across those period boundaries, and see such areas as agricultural change, the development of the countryside and of social structure, rural-urban relationships, exchange, the relationship between family structure and the land, rural non-agricultural activities, and protoindustrialization as examples of subject matter that has slipped from the agenda of French 'rural history'.

Accordingly three propositions have been put forward by this informal group of sixteen scholars: to form an association for the history of rural society; to establish a national colloquium as a step towards an international colloquium focused upon the comparative approach to rural history; and to publish a review of rural history. The group is happy to hear views from scholars on these three points, and other matters, and enquiries and comments should be sent to Jean-Marc Moriceau, CNRS (IHMC), 5 allée des Pivoines, 95170, Deuil-la-Barre, France (telephone 44-32-30-39).

RECORDING FARM BUILDINGS: A CONFERENCE

In view of the widespread public concern about the losses from the nation's stock of historic farm

buildings through dereliction, conversion, and demolition, the Royal Commission on the Historical Monuments of England, the Royal Commission on the Ancient and Historical Monuments of Scotland, the Historic Farm Buildings Group, and the Centre for Conservation Studies at the University of York have organized a one-day conference on the subject for 15 January 1994. The speakers will bring together the experiences of all the sponsoring organizations, as well as amateur recorders and the representatives of professional bodies. The conference will present a number of different recording objectives and techniques, principally aimed to facilitate the recording of data of historical significance.

Details of the Conference, and booking forms, can be obtained from Davina Turner, RCHME, Shelley House, Acomb Road, York, YO2 4HB.

AGRIBUSINESS AND INTERNATIONAL AGRICULTURE

The 1994 Symposium on Agribusiness and International Agriculture, sponsored by the Agricultural History Society, will be held at the University of Arkansas, Little Rock, 17-19 June 1994. The symposium is organized jointly by the Department of History and the Center for Arkansas Studies at the University, and will include a tour of the Arkansas Delta with a sample of local cuisine - catfish, chicken, rice, etc - in addition to the programme. The Program Committee is now soliciting offers of papers, and outlines should be sent as soon as possible to: Professor C Fred Williams, Department of History, University of Arkansas at Little Rock, 2801 South University, Little Rock, AR 72204-1099 (FAX 501-569-3039).

Notes on Contributors

DR WILLIAM MATHEW is a Senior Fellow in the School of Economic and Social Studies of the University of East Anglia, where he has taught since 1972. His principal research interests have been British commercial and financial relations with Latin America in the nineteenth century and the economics of slavery in the antebellum South. His publications include *The House of Gibbs and the Peruvian Guano Monopoly* 1981, *Edmund Ruffin and the Crisis of Slavery in the Old South. The Failure of Agricultural Reform*, Athens & London, 1988; and, ed, *Agriculture, Geology, and Society in Antebellum South Carolina. The Private Diary of Edmund Ruffin, 1843*, Athens & London, 1992.

DR MICHAEL TOCH is professor of medieval history in the Hebrew University of Jerusalem, where he has taught since 1978. He has written both Jewish History and on the economic and agrarian history of Germany during the Middle Ages. He is the author of *Die Mittelschichten Nürnbergs im 15. Jahrhundert*, Nürnberg, 1978, and the editor of *Die ältesten Rechnungsbücher des Klosters Scheyern (1339-1363)*, Munich 1994, forthcoming. He is currently working on a history of the late medieval Bavarian peasantry.

DR SUSAN NEAVE is a researcher specializing in landscape and architectural history. Since completing her doctoral research on rural settlement contraction she has acted as historical consultant to a number of bodies including Humberside Archaeological Unit, and is currently assisting with the revision of Pevsner's *Buildings of England* volume

on York and the East Riding. Her most recent publication is a book on *Medieval Parks of East Yorkshire*.

DR GRAHAM ROGERS a graduate of London and Lancaster Universities, is a Principal Lecturer in History at Edge Hill College of Higher Education, Ormskirk, where he has been teaching courses in rural history and history education since 1979. He has published work concerned with nineteenth-century landed society in Lancashire which was the subject of his doctoral research. Subsequently, his research interest has shifted into the early modern period, and he has been working on a study of the social impact of waste land enclosure on Lancashire rural communities.

DR SIMON MOORE is a Senior Lecturer in the department of social science at the College of St Mark & St John, Plymouth, where he has taught since 1992. He is chiefly interested in inter-war domestic policy and Conservative party politics, and has developed a particular interest in agrarian issues. He is currently exploring the political evolution of the forestry commission.

DR JENNIFER BAKER [née Gambier] is part-time lecturer in geography at Exeter College. She is a graduate of the University of Bristol and the University of Exeter where she studied for her PhD. degree in the Departments of Economic History and Geography. Dr Baker's thesis examines the process of tithe commutation in Dorset on which subject she has published two papers in local publications.

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