

Seventeenth-Century Agriculture and Social Change

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THIS essay is an attempt to analyse in more detail than hitherto agricultural developments in the seventeenth century, and to present them within a more clearly defined social and geographical framework. The whole century is recognized as a period of economic and political crisis. Agriculturally, this crisis is most readily attributable to the relentlessly falling prices of grain, which posed long-term problems of readjustment to specialized grain growers. But these were only one group among many engaged in agriculture. How did the thousands of farmers who were engaged in other branches of the farming business fare during the seventeenth century? The answer is that some of them met the new circumstances with solutions which were economically successful and far less destructive of the small farmer than those adopted in the specialized corn-growing areas. Thus the farming systems of England became more sharply differentiated economically and socially; and the stage was prepared for changes in the eighteenth century which wrought an agricultural revolution in arable regions and an industrial revolution in pastoral ones.

During the first half of the seventeenth century, fears at the overproduction of grain and its low price commanded the forefront of the stage in all government discussions on agriculture, and particularly during the troubled depression years of 1620-4.¹ In fact, these fears were exaggerated and premature, and they turned to alarms at grain shortage between 1630 and 1632 and in the late 1640's. But the idea of giving some financial encouragement to corn growers was being canvassed by the middle of the century—by Henry Robinson² in a pamphlet written in 1652 if not earlier—and after the Restoration farmers were constantly urged to export grain overseas so that corn production could be maintained and its price improved. After 1673 farmers received bounties for so doing.³ This effort to maintain grain prices proved vain, however, and they fell steadily between 1660 and 1750.⁴

¹ W. Notestein, F. H. Relf, and H. Simpson, *Commons Debates, 1621, 1935*, IV, p. 105.

² Henry Robinson, *Certain Proposals in Order to the People's Freedom and Accommodation, 1652*.

³ *Statutes of the Realm*, v, p. 781.

⁴ A. H. John, 'The Course of Agricultural Change, 1660-1760', in *Studies in the Industrial Revolution*, ed. L. S. Pressnell, 1960, p. 134 *et seq.*; W. G. Hoskins, 'Harvest Fluctuations and English Economic History, 1620-1759', *A.H.R.*, XVI, i, 1968, graph facing p. 15. But see also M. Flinn, 'Agricultural Productivity and Economic Growth in England, 1700-60: a Comment', *Jnl Econ. Hist.*, XXVI, i, 1966, p. 97, who argues for only a slight secular downward trend in grain prices, 1660-1720.

But many corn growers were also wool producers, and in this role they also had cause to complain for low wool prices persisted for most of the century. Rising wool prices which had characterized the sixteenth century were at an end by 1603 and a debate on falling prices had begun by 1610. A sharp crisis accompanied the outbreak of the 'Thirty Years' War, for it abruptly reduced the demand for cloth in Europe, spreading unemployment among the clothworkers, and quickly reacting upon the wool growers. Thus the shrillest and most alarmist complaints from the countryside in the years 1618-24 came, not surprisingly, from a sheep-corn area, the Lincolnshire wolds, where Sir William Pelham of Brocklesby described small tenants giving up their farms and selling their bed straw for food, eating raw dog flesh and horse flesh for very hunger.¹ It was one of many episodes in the corn-sheep areas which gradually drove the small farmer out of existence.

Grass sheep farmers, however, were almost equally distressed by the cloth crisis, and the complaints of both groups were represented in the report of the Northamptonshire justices of the peace in 1620. Wool, they told the Privy Council, was the chief commodity of the county, yet it would not sell at the lowest price. Compared with this misfortune, the low price of barley was a minor matter; indeed, the latter was rather welcomed since it allayed the discontent of the poor, the "tumultuacious levelling" of 1607 being still green in the memory.²

Low wool prices remained a source of anxiety for the rest of the century. Spanish wool was a strong competitor with English wool both at home and overseas. Yet the government persisted in curtailing the market for English wool by prohibiting exports. After the passing of the Irish Cattle Act in 1666, Ireland was forced to turn from cattle to sheep production and her wool also competed successfully against English wool. English wool prices followed a long downward trend after the Restoration, interrupted only during periods of temporary shortage.³

Stock farmers and dairymen benefited from a sustained demand for meat and other livestock products which caused prices to maintain a steadier level over the century as a whole.⁴ The interests of rearers and graziers were not equally served, however. Already in 1621 the scale of imports of Irish cattle was being criticized as a drain on the bullion reserves of the nation. With butter, they were said to cost £10,000 a year.⁵ In the course of the next generation, Irish cattle were increasingly blamed for the stationary or falling level of rents for

¹ P. J. Bowden, *The Wool Trade in Tudor and Stuart England*, 1962, p. 186; Joan Thirsk, *English Peasant Farming*, 1957, p. 193.

² P.R.O., SP 14/113, no. 21.

³ Bowden, *op. cit.*, pp. 46-8, 213-17, 230; P.R.O., SP 29/176, no. 130; CSPD 1673-5, pp. 169-70; Bodleian MS. Top. Kent, A 1, fol. 26; John, *op. cit.*, p. 142.

⁴ *Ibid.* ⁵ Notestein, Relf, and Simpson, *op. cit.*, IV, p. 105.

good grazing land, which seriously hit the incomes of the gentry. Graziers, it was argued, were failing to take up pastures because they were unable to compete with the Irish producers. The remedy adopted at the Restoration was an act in 1663 imposing a duty on imported fat cattle and sheep, followed by the Irish Cattle Act of 1666 which prohibited all livestock imports, both lean and fat, from Ireland. This greatly diminished the supplies of lean stock in England and had the effect of driving up the prices of store animals, greatly to the profit of the rearers of cattle in highland England, Wales, and Scotland. Counties like Devon, Lancashire, and Northumberland benefited at the expense of the graziers of the Midlands and the south who had to pay higher prices for lean stock than ever before.¹ Thus for a time the profits of meat production were redistributed in favour of the highland rearers at the expense of the lowland graziers. The vociferous complaints against the Irish Cattle Act did not die away until the early 1680's, when in fresh discussions on the merits of the act none could be found to support its repeal.² Yet there is no evidence that Midland graziers found the going easier.³ Around London, however, specialized fattening procedures were evidently producing substantial profits: for example, bullocks which were bought up, stall fed for a year in the Home Counties, and sold fat were yielding high returns while calf fattening was a remunerative speciality in Suffolk and Essex.⁴

Prices of dairy produce, like those of meat, also held up better than grain. In the middle of the century, Sir Richard Weston confidently maintained that the produce of meadows, namely, butter, cheese, tallow, hides, beef, and wool, were all of greater value than corn.⁵ But the dairymen were not unaffected by short-term difficulties. From East Anglia they were unable to get their produce away to London by coastal vessels in 1630 because of the Dunkirk privateers preying on the east coast.⁶ The Irish Cattle Act in 1666 caused Irish farmers to turn from cattle production for the English market to dairying whereby they captured English markets for dairy produce in Flanders, France, Portugal, and Spain.⁷ This development injured the dairy producers of the south and east and, according to J. H. Clapham, killed England's export trade in butter.⁸ Nevertheless, butter and cheese were easily transported inland, the home

¹ P.R.O., SP 29/176, no. 130; Bodleian MS. Top. Kent, A 1, fol. 26; Roger Coke, *A Discourse of Trade*, 1670, p. 33; 'The Grand Concern of England Explained. . .', 1673, *Harl. Misc.*, 1746, VIII, p. 534.

² John Houghton, *A Collection for the Improvement of Husbandry and Trade*, ed. R. Bradley, 1727, II, p. 3.

³ Tenants were extremely reluctant to take up land at Ashby de la Zouch, Leics., a grazing parish on the Hastings family estates, in the years 1685-9. I owe this information to the kindness of Mr Christopher Moxon.

⁴ Houghton, *op. cit.*, I, pp. 285, 297, 300.

⁵ Samuel Hartlib, *His Legacie*, 1651, p. 49.

⁶ P.R.O., SP 16/162, no. 41.

⁷ Coke, *op. cit.*, p. 34.

⁸ J. H. Clapham, *A Concise Economic History of Britain*, 1957, p. 285.

demand was insistent, and prices remained stable after 1665.¹ Moreover, in the neighbourhood of towns, and particularly in London, milk sales rose markedly as increasing numbers of pedlars hawked it through the streets. A London milkwoman in the 1690's sold on average sixteen pints of milk a week to each of her customers.²

These brief remarks do no more than draw attention to some facets of agricultural development which come to light in contemporary pamphlets, newspapers, and Parliamentary debates. But they are valuable in directing attention at branches of the farming business other than corn growing: each farming type had its own chronology of crises; each crisis threw up different problems for different specialists. Thus, legislation on Irish cattle imports exerted different effects on the rearers of stock (primarily a business of the highland zone of England) and on the graziers (mostly based on the Midlands and south); the evident difficulties of corn producers in selling grain in a saturated market implies differences between the fortunes of farmers cultivating high-grade crops on the most fertile soils and of those producing inferior qualities of grain on the less fertile ones; the hazards of war and changes of policy towards Irish food imports damaged the dairymen of East Anglia and the south at one moment and the West Midlands dairymen at another.³ And throughout the century it is evident that farmers near towns had a more buoyant market than those at a distance. In short, we can discern differences in the nature and gravity of the seventeenth-century crisis based on geography and farming types.

These, however, are not the only means to a more refined analysis of seventeenth-century agricultural trends. Given the predominance of large farmers in the specialized corn-growing areas and the numerical preponderance of small farmers in the pastoral districts, the geographical differences clearly carry social implications as well. And wider perspectives open up when we consider the contemporary literature on agriculture, offering advice to farmers facing the economic problems of their time. Some suggestions, like the growing of vegetables, were immediately within the grasp of the small farmers with little or no capital; others, like the watering of meadows, lay only within the grasp of the rich gentleman or yeoman who could afford to wait years for the full return on his investment. To separate the factors which facilitated agricultural improvements in some places and obstructed them in others, and to

¹ John, *op. cit.*, p. 144.

² Houghton, *op. cit.*, I, p. 410.

³ One of the arguments against the Irish Cattle Act was that much pasture had been turned from breeding to dairying purposes before the Irish Cattle Act and such land was now being hit by the competition of Irish butter. I assume that this is a reference to lands in the West Midlands, where there is positive evidence of this change of farming system (see *supra*, pp. 91-2). That Irish butter and cheese were the cause of the low prices of the English product was, however, contested by Houghton. —John Houghton, *A Collection of Letters for the Improvement of Husbandry and Trade*, 1681, I, no. 9, 19 Oct. 1682, p. 87.

measure the ramified consequences of this uneven development, is a complex and ambitious undertaking, especially since farming systems were so numerous and varied. Yet we know that in the end the choices made by different types of farmers shaped conditions in the eighteenth century for an industrial revolution in pastoral areas and an agricultural revolution in arable ones. Thus, as a first step, it should not be impossible to separate, if only in a generalized way, the social and technical factors which changed the structure of English farming regions between 1600 and 1700 and set certain rural communities on paths which diverged ever more sharply after 1750. This should clear the way for local studies which can probe the problem more deeply, and in due course make possible a more far-reaching comparative analysis.

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Specialist corn growers have received most attention from historians because their history is among the best documented and lends itself most readily to generalization. Moreover, bread was a staple food and so bread producers have always been regarded as the central pillar of the farming structure. The growers of high-quality grains for food and drink were found on the wolds and downlands, on the loams and brecks of East Anglia, and in the vales and lowland plains. The life of such communities was centred upon villages which are also deemed typical of the English rural scene. Presided over by the squire, all classes—yeomen, husbandmen, cottagers, labourers, and paupers—were represented in the one community. By the sixteenth or seventeenth centuries, such villages usually lacked any considerable reserves of waste land waiting to be brought into cultivation and so increased production was possible only by intensifying cultivation on the existing land.¹ Much ingenuity was shown in achieving this. A steady increase took place in the proportion of land given to fodder crops, which fed more stock which manured the land more effectively, and so produced more corn. The Lincolnshire hills and vales yield plentiful evidence of this development.² In the common fields of Oxfordshire the self-sown leys which were used to feed more stock in the 1630's gave way in the second half of the century to deliberately sown grasses such as rye grass, trefoil, lucerne, clover, and particularly sainfoin.³ Somewhere between 1650, when Sir Richard Weston wrote his propaganda in favour of clover, and 1662 the

¹ A more detailed analysis is contained in Joan Thirsk, ed., *The Agrarian History of England and Wales, IV, 1500-1640*, (henceforth A.H.E.W. IV), 1967, pp. 1-112. Cf. also E. L. Jones, *Agriculture and Economic Growth in England, 1650-1815*, 1967, pp. 154 *et seq.*

² Thirsk, *English Peasant Farming*, p. 192.

³ Michael Havinden, 'Agricultural Progress in Open-Field Oxfordshire', A.H.R., IX, ii, 1961, pp. 74-7.

price of seed fell from 2s. a pound to 7d. Men had learned to thresh the seed for themselves and no longer relied entirely on Dutch imports. Thus clover became a practical proposition, which Andrew Yarranton could with some assurance recommend to West Midlands farmers below the rank of rich gentleman and yeoman. For this reason, clover spread more widely after the 1660's.¹ At the same time, turnips, which were first popularized as a field crop in Norfolk and Suffolk by the Flemish aliens in the early seventeenth century, were grown more freely on the lighter loams by the middle decades, and, like clover, they improved the performance of the livestock side of arable farming and so indirectly the corn yield.²

Meanwhile a search was under way for better varieties of seed that would yield heavier crops of corn. We probably do not know one-tenth of the experiments that were going on. Robert Plot wrote of more productive strains of wheat and barley which were cultivated in Oxfordshire and slowly, too slowly for his taste, spread to other counties in the course of the seventeenth century.³ It is pure luck that Plot happened to record these facts; they must represent a minute proportion of new strains of traditional crops being exploited at this time in the arable centres of England.

The main improvements listed in reply to the questionnaire put out by the Royal Society in 1664 described better rotations in the arable fields, more generous use of fertilizers on the arable, more use of the sheepfold as a fertilizer, and the careful choice of seed. Questions were put about meadows and pastures but the answers that have survived were brief, and only enumerated the traditional remedies for poor quality grass.⁴ Nevertheless, it was in these corn-growing areas that the watering of meadows took hold in the 1630's, spreading through Wiltshire, Berkshire, Dorset, Hampshire, and later into the Midlands.⁵ Like so many of the innovations in corn-growing regions, it is associated with substantial farmers and the owners of great estates. The first watering of meadows by artificial dykes had been devised by Rowland Vaughan,

¹ Andrew Yarranton, *The Improvement Improved. A Second Edition of the Great Improvement of Lands by Clover*, 1663, pp. 4, 44, 31; P. E. Dove, *Account of Andrew Yarranton. The Founder of English Political Economy*, 1854, p. 8; Bodleian MS. Aubrey 2, fol. 152; G. E. Fussell, 'Adventures with Clover', *Agriculture*, LXII, no. 7, 1955, p. 343. The quality of the imported seed in the 1650's was very variable and Walter Blith urged growers to send a reliable man to the Low Countries to buy it, another impracticable suggestion to the small farmer.—W. Blith, *The English Improver Improved*, 1652 edn, p. 179.

² E. Kerridge, *The Agricultural Revolution*, 1967, pp. 270-6.

³ Thirsk, A.H.E.W. IV, p. 168. It is perhaps significant that the early ripening variety of barley used in Oxfordshire which could be sown and returned to the barn in nine or ten weeks—ideal in wet and backward springs—had been introduced to Oxfordshire from Patney in Wiltshire, which was an estate belonging to the Earl of Craven.—R. Plot, *The Natural History of Oxfordshire*, 1676, pp. 152-3; Bodleian MS. Aubrey 2, fol. 84.

⁴ Royal Society, *Georgical Enquiries*, Classified Papers, x(3).

⁵ E. Kerridge, 'The Sheepfold in Wiltshire and the Flooding of the Water Meadows', *Econ. Hist. Rev.*, 2nd ser., VI, 1954, pp. 286-9; *idem*, *Agricultural Revolution*, pp. 266-7.

a substantial gentleman farmer living in the Golden Valley of Herefordshire. The digging of the trenches for watering cost him many hundred pounds and it is not surprising that he could not persuade others in the valley to follow his example. His description of his neighbours makes it clear that he lived among small dairymen who were busy with their cheese and butter making from May to July and wove hemp and flax in winter. They could not have afforded such expensive innovations.¹ Hence the idea was taken up among wealthier farmers in the corn-growing regions, on the chalk downlands of Salisbury plain where the Earl of Pembroke owned estates, and subsequently in other counties further east. Sir Richard Weston adopted the idea on his lands in Surrey and spent £1,500 on it, not to mention the costs of litigation with his neighbours who claimed damage to their lands by flooding.² In Wiltshire Dr Kerridge has found manor courts agreeing upon co-operative schemes for watering their meadows. But since it remains doubtful how many small husbandmen could have afforded to be involved in such a costly enterprise, it may be that by this time such Wiltshire villages had already succeeded in driving out the small occupier. This would be consonant with Dr Kerridge's general observation that by 1657 the watering of meadows "was normal amongst gentlemen farmers and cultivating land owners."³

Zeal for experiments together with the capital to back them were conspicuous among substantial yeomen and gentry on the most fertile cornlands of the kingdom, and it is no accident that the two outstanding farm account books that have survived from the seventeenth century were written by men farming lands in these districts: Robert Loder at Harwell on the Berkshire downs, and Henry Best at Elmswell on the Yorkshire wolds.⁴ The agricultural revolution of the eighteenth century was likewise publicized by the same class of men farming similar soils. Jethro Tull's *Horse-Hoeing Husbandry* emerged from experience of farming in Berkshire at Crowmarsh Gifford (on the Thames near Wallingford)—superb corn-growing country, producing grain for the London market. After his book was published, Tull moved to a hill farm on the chalk downlands between Berkshire and Wiltshire—an arable, sheep-corn area. Turnip Townshend was similarly concerned with the improvement of potential arable land at Rainham, near Fakenham, on the brecklands of Norfolk, which when consolidated by sheep and improved by their manure became fertile granaries of corn. Considerably later in the eighteenth century Thomas Coke worked on the same principles in the same countryside.⁵

The logic in this enthusiasm for more intensive arable farming in a period of

¹ E. B. Wood, ed., *Rowland Vaughan, His Booke*, 1897, pp. 30-1.

² P.R.O., E 178/5669.

³ Kerridge, *Agricultural Revolution*, pp. 254, 262 et seq.

⁴ G. E. Fussell, ed., *Robert Loder's Farm Accounts, 1610-20*, Camden Soc., 3rd ser., LIII, 1936;

C. B. Robinson, ed., *Rural Economy in Yorkshire in 1641*, Surtees Soc., xxxiii, 1857.

⁵ Lord Ernle, *English Farming Past and Present*, 1936 edn, pp. 170, 173-4, 218.

stagnating prices lay—for farmers on the light lands of the downs and wolds and brecklands, at least—in technical necessity. The sheep-corn system was ideal on these soils and no other commended itself as a substitute. The readiest solution to falling profits, namely, more intensive and more efficient production of the same commodities, was well within the capacity of the large farmer. The consolidation and enclosure of land and the engrossing of farms were all means to this end. Moreover, by growing more fodder crops, more sheep could be kept on the hills and more cattle in the vales, and thus the sources of income were diversified. In certain geographical situations, other solutions, involving the use of more distant grazing lands as a supplement to the resources of the hill farms, were favoured. Gentlemen farmers on the Lincolnshire wolds and the Kesteven heath rented marshland and fenland to fatten cattle which they could not finish on their home pastures. This practice continued throughout the seventeenth century and only slackened off in the eighteenth when hill farmers recognized the value of growing turnips at home for stock feeding. The renting of these distant pastures was not within the means of the small husbandman.¹

In the clay vales farmers had more alternative choices in the changing economic circumstances of the seventeenth century. They were not inescapably tied to corn growing, but could enclose their land and turn it to grass. On heavy soils this was an attractive solution, particularly as it solved the problem posed by high wages, of which lowland farmers generally complained in the second half of the seventeenth century.² "Pasturage is more profitable than tillage," wrote one pamphleteer in 1654, "why should they [i.e. the enclosing farmers] not have liberty to lay down their arable land for grass."³ In fact, they continued to do just this in many parts of the East Midlands—in Leicestershire, Northamptonshire, and north Buckinghamshire. It is roughly estimated that nearly a quarter of Leicestershire was enclosed in the seventeenth century.⁴ The pamphlet controversy for and against enclosure between two Leicestershire parsons, John Moore and Joseph Lee, in 1653–4 seems something of an anachronism in seventeenth-century England—for public opinion was generally moving in favour of enclosure so long as it safeguarded the interests of the poor commoners—yet it did not appear so in the East Midlands; here enclosure was still a lively present issue.⁵

¹ Thirsk, *English Peasant Farming*, pp. 176–7.

² Coke, *op. cit.*, p. 15; Bodleian MS. Top. Kent, A1, fol. 26; *Plain English in a Familiar Conference betwixt three Friends, Rusticus, Civis, and Veridicus, concerning the Deadness of our Markets*, 1673, p. 6.

³ *Considerations concerning Common Fields*, 1654, p. 21.

⁴ *Leics. V.C.H.*, II, pp. 204, 223.

⁵ John Moore, *The Crying Sin of England of not caring for the Poor*, 1653; *idem*, *A Scripture Word against Inclosure*. . . , 1656; *idem*, *A Reply to a Pamphlet entitled Considerations* . . . , 1656; *Considerations concerning Common Fields*, 1654; J. Lee, *Vindication of a Regulated Inclosure*, 1656; *A Vindication of the Considerations concerning Common Fields and Inclosures* . . . , 1656. See also W. E. Tate, *The English Village Community*. . . , 1967, p. 77.

There is general agreement among those who have worked on particular parishes and estates in the arable districts of England that these economic changes caused land to become more and more concentrated in the hands of the larger farmers. A. H. Johnson who many years ago sought to explain the decline of the small landowners found evidence for it between the sixteenth and the mid-eighteenth centuries, and more particularly between 1688 and 1750, in Oxfordshire parishes generally, and on various estates in Norfolk, Sussex, Kent, Wiltshire, the Isle of Wight, and Leicestershire.¹ It is noticeable that his evidence was drawn from the best corn-growing regions. His comparisons were of a rough and ready kind, but the difficulties in estimating changes in the number of owner-occupiers during the seventeenth century have discouraged others from attempting other large comparisons. Most modest examples from single parishes, however, have shown the same trends.

At Sherington in Buckinghamshire, for example, modest freeholders who had been gaining ground in the late sixteenth century when manorial lords sold out their interests, and who continued to flourish until the 1660's, were driven out by indebtedness between 1660 and 1710. The engrossing of holdings proceeded apace and many merchants and town dwellers became owners.² At Chippenham in Cambridgeshire, where the common fields were not enclosed until 1791, large farms nevertheless grew at the expense of the rest during the seventeenth century. Circumstances in this case suggest that it was not always debt that drove men to sell. Rents were falling, and the weight of taxation borne by owners of land was rising. Since there were sound arguments for becoming a tenant rather than an owner in the second half of the seventeenth century, the three Chippenham farmers who sold out farms of between 120 and 155 acres apiece in 1696 to enable the lord to create a park may have made their choice deliberately and willingly.³

Some gentle propaganda in favour of small farms began to flow in the late 60's and early 70's from people familiar with conditions in the lowland zone, who viewed with increasing anxiety the fall of rents. Sir Thomas Culpeper, junior, in the preface which he wrote in 1668 to his father's *Tract against the High Rate of Usury* described the increase of large farms as more appropriate

¹ A. H. Johnson, *The Disappearance of the Small Landowner*, 1963 edn, pp. 132-8

² A. C. Chibnall, *Sherington. Fiefs and Fields of a Buckinghamshire Village*, 1965; Margaret Spufford, reviewing the above in *A.H.R.*, 16, 1, 1968, p. 72.

³ Margaret Spufford, *A Cambridgeshire Community, Chippenham from Settlement to Enclosure*, Leics. University, Dept. of English Local History, Occasional Paper, no. 20, 1965, pp. 45-6, 48-9. For evidence of the continued decline of the small farmer in the first half of the eighteenth century, see G. E. Mingay 'The Size of Farms in the Eighteenth Century', *Econ. Hist. Rev.*, 2nd ser., XIV, 1962, pp. 481-4. Cf. also the statement of William Ellis that it is doubtful "whether since the early part of the eighteenth century it has profited the man of middle acres to own the land he farms." Cited in Charles Wilson, *England's Apprenticeship*, 1965, p. 252. See also H. J. Habakkuk, 'La Disparition du paysan anglais', *Annales E.S.C.*, 20e année, 1965, no. 4, pp. 649-63.

to New England than Old England, and mourned the diminution of small ones. Carew Reynel believed that "the smaller estates the land is divided into the better for the nation, the more are maintained, and the land better husbanded."¹

The decline of the small landowner in the seventeenth century, then, was a feature of specialized arable regions, and also of vale lands newly enclosed for pasture, not, as we shall see presently, of traditional pasture-farming districts. The smaller farmer was being driven out by a combination of factors, notably the technical economies possible in large-scale cereal production, or in conversions to pasture, sluggish grain prices, and the high cost and quantity of labour in corn growing. Capital was essential both to the farmers who chose to intensify grain production and to those who chose to turn over entirely to grazing. Not surprisingly, it was from among these farmers, and not from the ancient pasture-farming communities, that the livestock improvers like Robert Bakewell and the Culley brothers emerged in the eighteenth century.² They had been nurtured in communities so structured as to promote the interests of the thrusting and ambitious improver.

This generalized conspectus of arable-farming regions in the seventeenth century takes its guide lines from the examples of the best corn-growing lands and the most ordered village communities. It omits certain variants: these were the villages with less fertile soils which continued under arable cultivation without yielding great rewards to their cultivators; crops other than corn could quickly win general favour if they prospered in the environment. The variant villages, socially speaking, were those which lacked the controlling influence of a squire, either because the ownership of land was divided among several lords of almost equal status, or because the village entirely lacked a lord (this could occur if the manorial rights were sold up and the manorial courts ceased to be held), or because the manorial lord allowed things to slide through sheer negligence. Many such communities maintained a strong freeholder class, which ruled the village when necessary, but which failed, often from self interest, to check the influx of immigrant cottagers and squatters. These became the 'open' villages of the eighteenth century, providing much-needed casual labour for the farmers in the 'closed' villages roundabout. Wigston Magna, Leicestershire, is one such example: it solved the problem of employment for its inhabitants by turning to framework knitting, which was already entrenched in forest areas nearby, and which spread in the second half of the seventeenth century into the almost equally congenial environment afforded by such 'open' villages.³ Industries, however, were not the only solution to the problem of

¹ Culpeper, Preface to the 1st edn, 1668; Carew Reynel, *The True English Interest*, 1674, p. 20.

² H. C. Pawson, *Robert Bakewell*, 1957, pp. 18 *et seq.*; D. J. Rowe, 'The Culleys—Northumberland Farmers, 1767–1813', forthcoming article in the A.H.R.

³ W. G. Hoskins, *The Midland Peasant*, 1957, pp. 97–110, 228.

employment in such communities. Another solution lay in the cultivation of special, labour-intensive crops.

Pamphlet literature during the seventeenth century recommended with growing conviction and growing precision the cultivation of specialized cash crops, commanding a high and profitable price at the markets. These were fruit and vegetables; herbs and spices for cooking and medicinal purposes, such as saffron, caraway, mustard, and liquorice; industrial dyes such as woad, weld, madder, and safflower; flax and hemp for cloth weaving; mulberries for feeding silkworms; and teasels which were used for brushing up the nap of cloth and were considerably cheaper than wire cards. The first exhortations to grow these crops were made by men who had travelled in European countries, particularly Flanders and France, and drew object lessons from their observations. Some were cloth merchants who readily saw the commercial advantages of producing flax, hemp, and dyes at home instead of importing them; others were gentlemen who collected unusual plants and foods for their gardens and dining tables and either bought them from special importers in London or sent their gardeners abroad to collect them.¹

The lessons were only slowly driven home. When the example of the Dutch was preached to Englishmen in the early 1620's as a model to be copied for alleviating the economic crisis, the cultivation of flax, hemp, and tobacco at home were principally commended as a means of saving on foreign imports. The obvious remedies for the sick economy at that time seemed to lie in increasing the volume of trade and improving the money supply.² By the middle of the century, however, proposals for overcoming a new and even deeper depression were far more broadly conceived, and gave a prominent place to schemes for the diversification of agriculture. The need to provide more employment for the poor loomed large, and, with this objective in mind, political writers set great store by labour-demanding crops which would increase work on the land and indirectly in industry. Thus Henry Robinson's pamphlet in 1652 entitled *Certain Proposals in order to the People's Freedom and Accommodation* wished to foster weaving industries of silk, cotton, hemp, and flax as well as wool, and to grow most of these fibres at home. To provide additional land for them he urged the more productive use of wastes, which meant, of course, enclosure as a first step. But so long as the commoners' interests were protected, Robinson believed this to be a desirable improvement.³ These two arguments

¹ Mea Allan, *The Tradescants, their Plants, Gardens, and Museum, 1570-1663*, 1964, *passim*. See also *infra*, p. 160.

² Thomas Mun, *England's Treasure by Foreign Trade* in J. R. McCulloch, *Early English Tracts on Commerce*, 1952, pp. 115 *et seq.* It was published in 1664 but was written in 1623.—B. Supple, 'Thomas Mun and the Commercial Crisis, 1623', *B.I.H.R.*, xxvii, 1954, pp. 91-4.

³ Some of the same ideas occur in the earlier pamphlets by Henry Robinson, namely, *England's Safety in Trade's Increase*, 1641, and *Brief Considerations concerning the Advancement of Trade and*

in combination became standard among writers on the economy during the Interregnum and for the rest of the century. Flax and hemp would increase the variety and quantity of domestic handicrafts; dye crops required much hand labour and would also save the cost of imported dyes; vegetables and fruit used land and labour intensively, were in great demand, and extremely profitable. Changes in dietary habits had occurred during the civil wars and people now ate only one main meal a day, consuming less meat and eating more fruit and vegetables.¹ Sales in towns were brisk: Londoners of all classes bought fruit from pedlars and munched it in the streets—like goats, the Venetian Busoni remarked unkindly.²

The literature advocating these crops was voluminous after 1650 and cannot be recited in detail. But two editions of Walter Blith's textbook on husbandry serve as signposts to the success of the propaganda. In 1649 Blith published *The English Improver or a New Survey of Husbandry*, and enumerated "six pieces of improvement." These were (i) the floating and watering of land, (ii) the draining of fens, bogs, and marshland, (iii) the ploughing of old pasture, and enclosure without depopulation, (iv) the careful use of manures appropriate to different soils, (v) the planting of woods, and (vi) the more modest improvement of lands presenting special problems. In 1652 the new edition of this work, entitled *The English Improver Improved*, contained the same recommendations but added "six newer pieces of improvement." These were (i) the growing of clover, sainfoin, and lucerne, (ii) the correct use of ploughs appropriate to different soils, (iii) the planting of weld, woad, and madder, (iv) the planting of hops, saffron, and liquorice, (v) the cultivation of rape, coleseed, hemp, and flax, and (vi) the planting of orchard and garden fruits. In the revised text Blith implied that some at least of these new crops had only just been brought to his notice, perhaps, we may guess, as a result of comments by readers of the first edition. Of weld, he wrote with a trace of pique, "it is my desire to make public whatever comes under my experience, yet this hath been used this many years by many private gentlemen in divers parts but not discovered for public practice. . . I fear men's spirits are strangely private that have made excellent experiments and yet will not communicate."³

Where and by whom were these crops adopted and how did they relieve the problems of corn-growing communities in the seventeenth century? The dye

Navigation, 1649. See also William Goffe, 'How to Advance the Trade of the Nation and Employ the Poor', *Harl. Misc.*, iv, pp. 385-9.

¹ Sir William Coventry, 'Essay concerning the Decay of Rents and their Remedies', 1670, *Brit. Mus.*, Sloane MS. 3828, fols. 205-10. See also 'The Grand Concern of England explained', 1673, *Harl. Misc.*, viii, 1746, p. 544, referring to the "leaving off eating of suppers."

² Ronald Webber, *The Early Horticulturists*, 1968, p. 41.

³ Walter Blith, *The English Improver, or a New Survey of Husbandry*, 1649, title page; *idem*, *The English Improver Improved*, 1652, pp. 224-5.

crops, vegetables, fruits, herbs, and spices were all taken up with alacrity in arable areas. For technical reasons, the dye crops did not generally commend themselves to small growers, and, except in market gardens, were cultivated by more substantial farmers with capital, and even by adventurers who moved around the country renting land for short periods at high prices.¹ Madder, for example, took three years to mature and yield its first crop. Moreover, the best plants had to be brought from Zealand or at least bought in London from an importer. After three years of waiting, the grower preferably needed access to a madder mill for drying and pounding, although as an alternative he could employ women and children to do the job by hand during the winter. At all events, he faced strong competition from the Dutch product, for Zealand madder was noted for its high quality and was imported in quantity. Nevertheless, if successful, madder could yield a profit of £300 an acre after three years, and £160 for an indifferent crop.²

The early attempts at madder growing in England are associated with a London dyer, Mr Minne, who evidently had the capital to invest in a long-term project. Around 1620 he sent George Bedford to study its secrets in the Netherlands and spent £1,000 in nine years keeping him there. When Bedford returned with some plants, he tried to grow them in Romney Marsh, a significant choice of district, for it was a happy hunting ground for outsiders who leased land in the seventeenth century and did not reside there.³ Another adventurer with madder was Sir Nicholas Crisp who set up a madder plantation at Deptford. Later in the century it was grown for a short while near Wisbech, but since Wisbech lies on the edge of the Bedford Level, we may fairly suspect that this was an enterprise promoted not by traditional fen peasants but by some of the big farmers who came into the Level after drainage and took up large tracts of land as a speculative venture.⁴ The only madder growing which was carried on on a small scale occurred in market gardens around towns and mainly around cloth-working centres. Growers cultivated vegetables such as cabbage, kidney beans, radishes, onions, and herbs between the madder plants to yield a harvest in the years before the madder was ready, and since both kinds of plants needed continuous weeding, this system worked well.⁵

Woad was another dye which required capital and had to be grown on a large scale if it was to yield the best profit. "Experiments of a little parcel,"

¹ Kerridge, *Agricultural Revolution*, 1967, pp. 194, 210-11.

² Philip Miller, *The Method of Cultivating Madder*, 1758, *passim*; J. Mortimer, *The Whole Art of Husbandry*, 1707, pp. 123 *et seq.*; Blith, 1653 edn, *op. cit.*, p. 235.

³ P.R.O., SP 16/164, nos. 53 & 53, I-III; L. B. Larking, *Proceedings principally in the County of Kent*. . . , Camden Soc., 1862, pp. 54-5.

⁴ Blith, 1652, *op. cit.* p. 235; Houghton, ed. Bradley, *op. cit.*, II, p. 372.

⁵ W. Coles, *Adam in Eden*, 1657, pp. 584-5; Blith, 1652, *op. cit.*, p. 233.

wrote Walter Blith, were useless; one must grow enough to keep at least one mill at work. It also made heavy demands on labour during the summer for two weedings and at least two cuttings in mid-June and mid-July. Thus clothiers disliked it because it made labour short for spinning in summer. It was therefore not well suited to pastoral areas where the cloth industry was entrenched, and much better suited to arable-farming systems where a summer supply of casual labour was already at hand. In these conditions it was one of the most rewarding crops of any. "The best estates that hath been got in all our rich upland countries," maintained Walter Blith, "have been got by it [i.e. woad]." By this he meant estates in the Midland counties of Northamptonshire, Leicestershire, Rutland, Felde Warwickshire, Oxfordshire, parts of Worcestershire, and Gloucestershire, and in Bedfordshire and Buckinghamshire where woad was incorporated in a system of alternate husbandry, being a good first crop when pasture was being broken up for corn. Its other home was in gardens particularly around cloth towns such as Godalming, Farnham, and Winchester.¹

A dye crop which found a congenial home on upland arable farms was weld, producing a bright yellow dye. It prospered on chalky barren hillsides wherever the soil was warm and dry. Thus it was widely grown on the downlands around Canterbury and Wye where it was inserted into the arable rotation, being sown in with barley or oats one year for a harvest the following year. It did not call for much cultivation while growing, though it was a "ticklish vegetable" prone to blasting and to other accidents if bad weather damaged it in spring. When harvested the stalks simply had to be dried and some of the seed shaken out for the next year's crop. It was a plant which diversified the interests of sheep-corn farmers without posing any special problems of cultivation and harvesting.²

A new dye crop which gained ground notably in the 1660's and 1670's was safflower or bastard saffron. It yielded a reddish pink dye and was much in demand from the silk dyers, who had hitherto obtained the bulk of their supplies from around Strasbourg in Germany. It was an indigenous English plant but it began to be grown more deliberately around London, in Gloucestershire, and in Oxfordshire in an effort to undercut the price of the imported article. Successful growers found it extremely profitable, yielding clear gains of £20-£30 per acre in a year; its only disadvantage was that it was harvested at the same time as wheat. Thus it is not clear whether it was adopted by pasture

¹ P.R.O., SP 14/113, no. 21; Blith, 1652, *op. cit.*, pp. 226-7, 230; L. Meager, *The Mystery of Husbandry*. . . , 1697, p. 106; Guildford Muniment Room, Loseley MS., 1965; 1966, 1-4; Hants. County Record Office, 1583, B. I owe this reference to Miss Adrienne Batchelor.

² John Banister, *Synopsis of Husbandry*, 1799, pp. 197-202. This is the most circumstantial account of weld growing known to me. I wish to thank Mr Dennis Baker for the reference. See also Blith, 1652, *op. cit.*, pp. 222-5; Houghton, ed. Bradley, *op. cit.*, II, p. 459; Mortimer, *op. cit.*, p. 127.

farmers or was taken up by arable farmers with unusually ample supplies of casual labour during the summer.¹

Saffron was a traditional English crop which feared no competitors. It was deemed far superior in quality to any of foreign origin. Its chief use was medicinal, demand was high, and it commanded good prices. It was grown in arable fields, even in common fields, in Suffolk, Essex, and Cambridgeshire, and also in Herefordshire. It called for much hand labour, first in setting the roots in trenches, and then in gathering the saffron every morning for about a month in summer. Clear profit ranged from £3 10s. to over £30 an acre.²

Another special crop was liquorice which was grown around towns where plenty of dung was available. Since it stayed in the ground for three summers before the roots grew to any size, vegetables such as onions, leeks, and lettuces were cultivated in between. It was grown in quantity around London, at Godalming in Surrey, at Pontefract in Yorkshire, and around Worksop in Nottinghamshire. In the words of John Parkinson, the herbalist, writing in 1640 it "is much used nowadays to be planted in great quantity even to fill many acres of ground, whereof riseth a great deal of profit to those that know how to order it and have fit grounds for it to thrive in." At the end of the century profits of £50-£100 an acre were quoted in exceptional cases.³

Market gardeners have already appeared in this account as growers of dyes and medicinal crops. But vegetables and fruit were their main livelihood and contemporary descriptions leave no doubt of the remarkable success of this specialized branch of farming. Vegetable seeds were cheaply and easily bought from seedsmen in London and other towns and from country innkeepers.⁴ The land required was small, and every foot was profitably used; fruit trees separated the beds of vegetables. The towns which devoured the produce readily supplied dung for the next season's crops. In short, horticulture was ideally suited to small peasants with little land, no capital, but plenty of family labour, and with easy access to a town. Good market-garden land fetched high rents, but vegetables could be grown on poorer land, richly dunged, and were sown on many strips in common fields. While good-quality produce fetched handsome prices, better returns still came from the cultivation of vegetables

¹ Houghton, ed. Bradley, *op. cit.*, III, pp. 354-5; IV, p. 361; Hist. MSS. Comm., IX, *House of Lords MSS.*, p. 28; Carew Reynel, *op. cit.*, p. 87. A petition against a duty on safflower c. 1670 says that not more than 2,000 lb. were then grown in England compared with 600 cwt which was imported from Germany. This was in the early days of its commercial cultivation in England.—*CSPD 1660-85, Addenda*, p. 505.

² W. Coles, *The Art of Simpling*, 1656, p. 51; *idem*, *Adam in Eden*, p. 172; Houghton, ed. Bradley, *op. cit.*, II, pp. 331-2; IV, pp. 283-7; Blith, 1652, *op. cit.*, p. 244; Mortimer, *op. cit.*, pp. 129-30.

³ Blith, 1652, *op. cit.*, pp. 246-8; Houghton, ed. Bradley, *op. cit.*, IV, pp. 41-3; Mortimer, *op. cit.*, pp. 127-9; John Parkinson, *Paradisi in Sole*, 1656, p. 472.

⁴ P.R.O., SP 46/100, fol. 242, lists an order for vegetable seeds, 1656(?); 1½ lb. of best onion seed cost 5s., ½ lb. lettuce seed 2s., and ¼ peck of radish seed 2s.

for seed.¹ Four or five acres of land used in this way, declared John Houghton, would sometimes maintain a family better and employ more labourers than fifty acres of other land. £100 from an acre was thought a not impossible return.²

The prosperity of the market gardeners along Thames-side is well known but they also thrived in many other districts of the Home Counties and, indeed, all over southern England in the neighbourhood of busy towns. Tewkesbury, for example, produced excellent carrots which were distributed to markets via the Avon and the Severn. In Surrey the gardeners were clustered on the Lower Greensand, on the Bagshot Beds, and on alluvial soils in the valleys of the rivers Mole and Wey. In consequence, the whole county was especially renowned for its "gardening for profit," a reputation which is reflected in numerous tithe disputes relating to vegetables and also to hops, the latter being extensively grown around Godalming and Farnham. A dispute in 1687 at Farnham listed twenty-two people in the parish growing hops and this did not claim to be a complete list. Witnesses alleged that there were forty owners or occupiers of land planted with hops and that they covered between 250 and 300 acres of land. The tithe owners evidently shared handsomely in the benefits for the tithe of 6½ acres of hops was said to be valued at £15.³

Books on horticulture found a ready sale in the second half of the seventeenth century. French works were translated into English and Englishmen wrote their own handbooks, "wrung out of the earth" as one reviewer put it. The work to which this description was particularly applied was *The Garden of England* by Sir Hugh Platt, which incorporated much that he had learned by diligent correspondence and assiduous visits to gardeners around London. Clubs of experts were formed in London, where men received the latest information from other parts of the country and from Europe, and being "apt to essay novelties and rarities" they turned this knowledge to good account.⁴

The intensity of cultivation in the best organized market gardens is illustrated in the probate inventory of Robert Gascoine, a gardener of St Martin in the Fields, who died in February 1718. He had row upon row of cauliflower and cabbage plants—1,000 plants were set in two banks three rows wide—radishes, carrots, colewort, young lettuce, asparagus, onions, spinach, and

¹ The Venetian Busoni said that gravelly land around London was dug out to about 6–7 feet and filled up with the filth of the city, so making it very fertile for garden crops.—Webber, *op. cit.*, p. 51; Mortimer, *op. cit.*, p. 146.

² John Houghton, *England's Great Happiness or a Dialogue between Content and Complaint*, 1677, p. 12; Blith, 1652, *op. cit.*, p. 261; *Philos. Trans.*, x–xii, no. 116, p. 363.

³ *Philos. Trans.*, x–xii, no. 131, p. 796; no. 136, p. 922; Hist. MSS. Comm., *Portland II*, p. 30; P.R.O., E 134, 33 & 34 Chas. II, Hil. 26; 13 & 14 Chas. II, Hil. 7; 21 Chas. II, Trin. 7; 3 Jas. II, Easter 2.

⁴ See bibliography in Webber, *op. cit.*; *Philos. Trans.*, x–xii, pp. 303, 373–4, 922.

artichokes, while fruit trees lined the palings between the beds. Forty rods of asparagus were of the first year's planting, 124 rods were one year old, and 32 rods were ready for cutting, with colewort in the alleys between. In addition other beds of asparagus and lettuce were being forced under glass. The surname of this gardener strongly suggests a French immigrant, but if his expertise and the scale of his enterprise placed him in the first rank of market gardeners, he was not alone. Other gardeners' inventories show the same system in operation, their crops being sometimes more specialized and sometimes less. John Lee of St Martin in the Fields, dying in July 1684, had specialized in asparagus and cucumber as well as growing cherry and other fruit trees between the beds. Curtis Akers of Chelsea in April 1686 was growing herbs, asparagus, carrots, parsnips, and beans. Another gardener in St Martin in the Fields in February 1682 grew only asparagus.¹

This evidence does not give any clue to the total volume of production, nor can we compare the value of vegetables, fruit, and other special crops with the grain, meat, and dairy produce sent to the market by other farmers.² But the weight of contemporary comment leaves no doubt that specialists in these branches of farming weathered the crisis of the seventeenth century with ease. By 1670 Sir William Coventry put the argument in their favour in the simplest cash terms: corn and cattle were being produced to excess and the population was not increasing rapidly enough to consume it all. The solutions to this dilemma were to sell the surplus abroad (corn bounties, in fact, followed soon afterwards), or to increase the population consuming it at home, or to divert land from corn and meat to the growing of other crops, the ones which he most favoured being wood, flax, and hemp.³ Farming textbooks in the second half of the seventeenth century consistently gave specialized cash crops their full share of space and added circumstantial details on yields, labour costs, and the net profit. The correspondence columns of John Houghton's weekly journal, *A Collection for the Improvement of Husbandry and Trade*, contained frequent homilies on their advantages; and the current market prices of saffron, caraway seed, linseed, and mustard were quoted regularly between 1694 and 1697.⁴

Except for hemp and flax, which are dealt with below in the account of pasture-farming regions, all these specialized crops were the produce of arable-

¹ Middlesex County Record Office, M1, 1718/10; 1684/93; 1686/36; 1682/18.

² Gregory King's estimates do not help us to make any very accurate guesses. He estimated the value of hemp, flax, woad, saffron, and dyes at £1,000,000, and the produce of arable land (grains and legumes) at £10,000,000. But hemp and flax are treated in my analysis as the products of pastoral regions, and King omitted vegetables entirely.—George E. Barnett, ed., *Two Tracts by Gregory King*, 1936, p. 36.

³ Brit. Mus., Sloane MS. 3828, fols. 205–10.

⁴ The value of these crops in relieving poverty among the increasing population of the Netherlands is discussed in B. H. Slicher van Bath, 'Historical Demography and the Social and Economic Development of the Netherlands', *Daedalus*, Spring 1968, pp. 612, 614.

farming regions. As we have seen, some were taken up by the market gardeners and other small growers, others were adopted by wealthier and bolder spirits who were prepared to invest capital and take risks, and were assured of adequate casual labour in busy seasons. Such pools of labour were most readily at hand in 'open' villages and it was doubtless in the neighbourhood of such communities that the most successful enterprises were established and maintained.

Further work will undoubtedly yield instructive illustrations of the association between labour-intensive crops and over-populous villages in arable regions. An example from a town in Gloucestershire, however, gives a vivid example of this association, arising through unusual circumstances in a pastoral area. 'Open' communities were not, of course, confined to arable districts; but their labour problems stood out most conspicuously in the latter case because they contrasted strongly with the 'closed' villages round about and because the two types complemented each other economically. There were 'open' villages in pastoral regions, but, as we shall see below, they did not present employment problems that were any different in kind from those of all other pastoral communities. Underemployment was common to them all.

Winchcombe was a market town in the pastoral vale of Gloucester. Its markets had fallen into decay, and it may thus be presumed to have had an economy that was hardly different from that of a village, though its population was larger. Tobacco growing took firm hold, as it did in many other villages in Worcestershire and Gloucestershire. Moreover, the lord of the manor failed to hold any courts or to enforce the bylaws, and uncontrolled immigration into Winchcombe followed. Single family houses were divided into tenements to accommodate two, three, and four families. The houses fell into disrepair and were in danger of falling into the street. Lodgers and beggars thronged the place: according to the poor law overseers there were twenty households of paupers begging for alms for every household able to bestow them. The lord of the manor attempted to remedy this state of affairs in 1662 by imposing entry fines for the first time in many years, and met with indignant resistance from his tenants. The dispute of 1662 was thus concerned with an inquiry into the customs of Winchcombe. "Hath not the neglect of executing the orders and bylaws upon offenders much encouraged the people there to become careless of offending in taking in of inmates and undertenants?" asked the Exchequer commissioners. This was clearly one of the causes of the trouble. But it is impossible for us not to see some association between tobacco growing and the inordinate growth of Winchcombe's population. The lord of the manor had neglected to control movement into the town. The trade of the market was declining. Tobacco was a labour-intensive crop which offered work and cash to all comers. People had crowded into Winchcombe for cheap accommodation and jobs, and the prohibition on the growing of tobacco after 1619 had not

noticeably detracted from its popularity. The planters paid fines and later excise and continued to grow it. In 1652 an Act prohibited tobacco growing afresh, but it was followed by yet another in 1653 allowing offenders to pay excise and quietly harvest their crops. Not so in 1654. The Council of State took the legislation more seriously this time and sent soldiers to destroy the crop. Winchcombe people raised three hundred armed horse and foot to resist the attack, declaring that they were bred to the trade, and "if they lose it they will lose their lives." Signatories to a petition to Cromwell from Winchcombe tobacco growers numbered 110 persons.¹

Tobacco growing was not stamped out until the late 1670's. Winchcombe was left in a pitiful plight, overpopulated and without adequate work. Its inhabitants subsequently resorted to stocking knitting. A visitor passing through the town in 1678 remarked upon the sight of the women folk carrying their puddings and bread to the common bakehouse, smoking and knitting as they went.²

In this account of arable-farming systems in the seventeenth century, three main streams of development may be discerned. On the best corn-growing lands, the large farmers prospered, offsetting the fall of grain prices by growing more grain with greater efficiency and driving out the small growers. In the vales, events followed the same course, except that in some places arable farms were converted to pasture for feeding cattle and keeping sheep. The work that was provided for the agricultural labourer was little enough on pasture farms³ and liable to sudden interruption on arable ones. On suitable land less fertile for corn, special cash crops were grown by men with capital who could rely on the plentiful supply of casual labour from 'open' villages. However, the Diggers in Surrey, Kent, Northamptonshire, and Buckinghamshire who dug up the commons in 1649 during deep economic depression expressed the resentment of many poor labourers in arable areas when misfortune hit their employers and left them both landless and workless.⁴ As for the small farmer in arable areas, he had little hope of survival, except in those districts which were suited to market gardening. Here, indeed, he had positive advantages over his richer and larger competitor.

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¹ P.R.O., E 134, 14 Chas. I, Mich. 31; SP 25, 1, 75, pp. 374-5, 409; SP 18, 72, no. 65; R. Steele, *A Bibliography of Royal Proclamations of the Tudor and Stuart Sovereigns*, p. 150, 30 Dec. 1619, gives the first proclamation banning tobacco growing throughout England and Wales.

² Hist. MSS. Comm., *Portland II*, p. 303.

³ A good example of a corn-growing village which was converted to pasture is the Verney family's home at Claydon, Bucks. It was a 'closed' village in which the rich farmers were graziers and the poor were dairymen. The surplus population which could not find work in the parish or in neighbouring ones drifted to London. I wish to thank Mr John Broad for this information.

⁴ Brit. Mus., Thomason Tracts, E 669 f 15 (21) and (23); Keith Thomas, 'Another Digger Broadside', *Past and Present*, 42, 1969, pp. 57-68.

It remains for us to consider how the peasantry fared in pastoral regions. The pasture-farming regions present a different set of social and geographical circumstances. Grass growing was the primary objective of all farmers but their ultimate goals were varied, and may be broadly grouped under four headings: in the mountains and moorlands of northern England and on the moorlands of the south-west, cattle and sheep were reared; in the vales of the West Midlands and in other areas where the heavy soils lay under permanent grass, dairying was one speciality, rearing and fattening, sometimes in combination, were the others. In forest areas horse breeding and pig fattening played an important role alongside stock keeping; in the fenlands of eastern England and the Somerset Level stock enterprises were mixed.¹

Pasture farmers lived in isolated farms and hamlets as well as in villages, and the population was thus more widely scattered than in the arable lowlands. Manorial courts could not exercise close surveillance over their tenants, and tenants generally held their land by freer tenures. In many of these dispersed centres of settlement, moreover, it is noticeable that the population consisted of one class only; the poor and the rich did not always live cheek by jowl, as in the nucleated villages. In Staffordshire, for example, it is remarkable how many hamlets recorded in the Hearth Tax Return of 1666 consisted either of the rich or of the poor but not of both. In fact in many parishes, some of which had ten or fourteen separate settlements, it was usual to find that half the townships mixed the classes, while in the other half they lived firmly segregated. All in all, the inhabitants enjoyed much greater freedom and this bred in them a fiery spirit of independence, which armed them for struggle. As one nineteenth-century writer expressed it, when comparing this life favourably with that of the inhabitants of the squire's village, "a dominant and resident landowner was the centre of intelligence, of charity, and of social life," but for these advantages there was a social price to pay. "It is as true in the parish as in the nation that a paternal government makes a childish people. A man whose brothers and neighbours are dependent upon him is prone to become overbearing whilst the neighbours and even the brothers are apt to become obsequious." There was little danger of this in the pastoral districts of the kingdom.²

The seventeenth century was a testing time for pasture farmers living in fens and forests. Strife and controversy had surrounded enclosure and engrossing in the arable regions for more than a hundred years. Now the pastoral areas came under attack from the agricultural improvers. "Improvement of the wastes and forests" became the slogan of the age. The Crown led the way in the early decades of the century with its schemes for the drainage of the fens

¹ These farming types are mapped in Thirsk, A.H.E.W. iv, p. 4.

² Joan Thirsk, 'Horn and Thorn in Staffordshire. The Economy of a Pastoral County', *North Staffs. Jnl of Field Studies*, 9, 1969, pp. 3-4.

and disafforestation of the forests, in both of which countrysides it had considerable landed interests. The principal investors in, and beneficiaries from, its schemes were members of the court circle, nobility and gentry, as well as the drainers and their friends. The native peasantry had nothing to gain and much to lose by their designs, for in both forests and fens they were intended to turn pastoral economies into arable ones, and would inevitably have altered the structure of the local communities. The agricultural system in pastoral areas prospered on the basis of certain well-defined conditions. Society was dominated by family farmers; the economy depended on imports of corn from other districts, the use of spacious commons for feeding stock, and the availability of supplementary work in industries of many kinds. The drainers in the fens and the improvers disafforesting the forests did not fully appreciate that the destruction of the old economies meant the destruction of their societies as well; the inhabitants, on the other hand, perceived this instinctively. Most of the riots in the years before the civil war (though not the Midland Revolt of 1607) broke out in pastoral and forest areas, threatened by changes which undermined their whole way of life. The worst outbreaks occurred in the years 1629–32, when the three pillars of the economy—imported corn, spacious commons, and domestic industries—threatened to crumble simultaneously. First bad weather hit the pasture farmers, creating a shortage of hay and cattle feed, and spreading cattle murrain among their herds. Then it spoiled the corn harvests in 1630 and 1632 and made it impossible for some pastoral communities to buy corn at any price. Plague took hold in 1631. And acute unemployment hit the domestic, and particularly the cloth, industries. “Want of work,” bad weather, and the intrusions of drainers and improvers hit the pastoral areas with unprecedented harshness. Hence the many riots in the pastoral and forest districts of Wiltshire, Dorset, Hampshire, Gloucestershire, Worcestershire, and Rutland.¹

The conviction that improvement of the wastes and forests was the first priority in agriculture persisted if anything more strongly during the Interregnum than under the early Stuarts.² The only difference was that writers hedged their recommendations about with safeguards for the commoners. ‘Improvement’ had become a dirty word. “Scarce anyone,” wrote John Houghton later on recalling these years, “durst offer for improvements lest he should be called a Projector as if he came from the fens to borrow 5s. to purchase

¹ H. C. Darby, *The Draining of the Fens*, 2nd edn, 1968, pp. 49–58; P.R.O., SP 16, 185, no. 2; Acts of the Privy Council, 1630–31, nos. 329, 330, 536, 646, 816, 818, 835, 855, 1041, 1057, 1129, 1130, 1156, 1158, 1165. See also E. Kerridge, ‘The Revolts in Wiltshire against Charles I’, *Wilts. Arch. and Nat. Hist. Mag.*, LVII, 1958–9, pp. 64–75.

² For three examples of reports and tracts on this subject, see SP 18/69, no. 6 (‘Proposals by Dr John Parker and Edward Cressett for best Improvement of the Forests’, 1654); Silvanus Taylor, *Common Good or the Improvement of Commons, Forests, and Chases . . .*, 1652; Appendix to Blith, 1652, *op. cit.*, pp. 263 *et seq.*, entitled ‘A Remonstrance . . . for regulating forests, Wastes, or Commons. . .’

£5,000 yearly, so averse were our English then from all care of improvements."¹ The angry commoners instilled a fear which lingered well beyond Houghton's time. It still permeated the atmosphere of debates in the House of Lords on the draining of the fens in 1701 and 1711. The plan to enclose and drain was called "the most arbitrary proceeding in the world. It invades the properties of thousands of people."²

The vision which inspired would-be improvers of forests, fens, and chases during the Interregnum was the prospect of increasing employment. One-fifth more people, argued Silvanus Taylor, might be fed if waste lands were enclosed. But he did not plan or predict the class structure of such communities. The experiments which were brought to conclusion in the fens created large farms running into hundreds of acres, occupied by strangers rather than local inhabitants, including many Dutchmen.³ Thus the crisis of the seventeenth century in these regions was created by short-sighted planners with an obsessive predilection for corn-growing economies, blind to the looming economic difficulties of corn growers elsewhere, and wilfully ignoring the fact that corn-growing systems fostered large farms far more successfully than they sustained small peasants. Their schemes were designed to create class-divided communities of the lowland kind with their due proportion of yeomen, husbandmen, labourers, and paupers, presided over by an affluent gentleman. Fortunately, they did not succeed in moulding much of pastoral England in the image of the arable lowlands.

Outside these disturbed areas, agricultural improvements by pasture farmers were necessarily made at modest cost, did not generally disturb neighbours, and thus leave less trace in our records. The social obstacles to expensive capital improvements have already been illustrated in the experiences of Rowland Vaughan who devised the scheme for watering meadows in the Golden Valley of Herefordshire. He cheerfully spent large sums in order to get his young lambs ready for the butcher a month before his competitors. His neighbours, on the other hand, who were family farmers, dairying in the summer and weaving hemp and flax in the winter, pursued another course of life altogether.⁴

Despite the difficulties, described by Andrew Yarranton, in spreading innovations among farmers without much spare cash for experiments that could

¹ J. Houghton, *A Collection for Improvement of Husbandry and Trade*, 1692, p. 76.

² Thirsk, *English Peasant Farming*, pp. 126-7.

³ P.R.O., SP 46/88, fols. 173 *et seq.*, illustrate the experiences of Rumbold Jacobson, merchant of London and lessee of 428 acres of Hatfield Chase, c. 1640-1. The report in 1654 by Parker and Cressett (see above, p. 168, n. 2), discussing the possibility of improving the forests by leasing out large portions, assumed that the commoners would not take up such leases out of hostility to the whole project, while "others will be very tender of disgusting their neighbours the commoners in hiring it from them."—P.R.O., SP 18, 69, no. 6.

⁴ See *supra*, pp. 153-4.

easily fail, stock in pasture-farming areas benefited from the ley grasses that were improving the feed of animals in arable areas. In general, however, they continued to be fed mainly on grass and hay, though care was devoted to the improvement of the herbage by careful grazing, frequent cutting down of thistles, rushes, etc., and by the application of dung, lime, potash, and ashes, and by drainage with open or covered drains. These measures, which feature prominently in the replies to the Georgical inquiries in 1664, were all traditional, but they nevertheless produced substantial improvements in the feeding capacity of pastures. Walter Blith in 1652 particularly extolled the efforts of farmers in the woodland parts, "as in Worcestershire, Warwickshire, Staffordshire, Shropshire, and Wales-ward and northward," in improving their coarse lands by these traditional methods. He judged the land to be as highly improved as many parts of the fielden country "*and fuller of wealthier inhabitants.*"¹

Little evidence survives concerning the selection and care of stock; but the social structure of pastoral communities affords part of the explanation. They did not produce men who kept accounts or had the flair for publicly advertising their achievements. Samuel Hartlib complained in 1651 that "we advance not the best species," but it is not clear which farmers he had in mind; and he did single out for measured praise the pasture farmers of Lancashire and some other northern countries, who "are a little careful in these particulars."² What is clear is that the pastoral regions, as the main breeding centres for stock, had been responsible for developing a remarkable number of different breeds of cattle, sheep, and horses, which were adapted to suit different environments. If a man changed the environment by improving his land, then he could change the breed of his animals, as farmers of enclosed pastures in the sixteenth century evidently changed the breeds of sheep which they kept.

If we look in vain for spectacular innovations and the willingness to invest capital such as that which possessed corn growers like Henry Best, Jethro Tull, and others, this does not mean that the populations of pastoral areas were living in a derelict and miserable backwater, outside the main stream of enterprise. Traditionally, pastoral areas were the abode of small family farmers and their way of life suited their environment. The common pastures were a community asset available to all, and many farming systems, like dairying and pig keeping, required small capital. But another key to the success of this way of life, which enabled men to weather successfully the seventeenth-century crisis, was the many additional opportunities for earning a living. Some simply involved ex-

¹ Royal Society, *Georgical Enquiries*, Classified Papers, x (3), *passim*. These reports are summarized in R. V. Lennard, 'English Agriculture under Charles II . . .', *Econ. Hist. Rev.*, IV, 1932-4, pp. 23-45; Blith, 1652, *op. cit.*, p. 38, my italics.

² Samuel Hartlib, *His Legacie*, 1651, p. 96. These remarks were made with particular reference to dairy cattle.

exploiting the diversity of natural resources: fishing, fowling, cutting reeds for thatching and for fuel in the fens; timber felling and the manufacture of woodware in the forests. Mining offered work in some areas; in others there were domestic industries such as potting, nail making, metal working, lace making, stocking knitting, and the weaving of woollen, linen, and hempen cloth. In some districts the growth of flax and hemp weaving was facilitated by larger imports of the raw material from the Baltic which was more widely distributed inland as rivers were improved. Nidderdale in West Yorkshire and parts of Derbyshire, for example, enjoyed an easy link with the port of Hull.¹ In other counties the domestic weaving of hemp and flax went hand in hand with an increase in the cultivation of these crops. Some of the propaganda in favour of growing them was directed at counties lacking adequate domestic industries, such as Leicestershire, Northamptonshire, and Oxfordshire.² In fact, however, it was in pastoral areas where handicraft industries were already well established that it spread most successfully, particularly in the West Midlands, in parts of Herefordshire, Worcestershire, Warwickshire, Nottinghamshire, Derbyshire, and Staffordshire.³ Staffordshire, indeed, was described by Robert Sharrock as exemplary in its system of growing these two crops; and it seems legitimate to argue from the increasing references in this county to tithes of hemp and flax in the later seventeenth and early eighteenth centuries that production was expanding.⁴ Other pastoral areas which grew flax and hemp were the marshlands of Thames-side in Essex and Kent, the fens of eastern England and the Somerset Level, parts of Dorset, the Weald of Kent around Maidstone, which was the renowned thread-making centre of the kingdom, and the forests of Northamptonshire. When Sir Richard Weston came back from the Netherlands urging flax growing, he recommended experiments in St Leonards Forest in Sussex.⁵ Like the industrial crops which flourished in arable regions, hemp and flax were universally regarded as profitable ventures: some hemp and flax ground was rented for £3 an acre, labour costs added another £2 or £3, but the crop was worth £10-12. Thus profits were in the region of £5-6 an acre.⁶

In pastoral regions farming combined with industrial employment was almost common form. The combination was well integrated into a life focused on the

¹ Bernard Jennings, ed., *A History of Nidderdale*, 1967, pp. 171-2, 176.

² P. E. Dove, *Account of Andrew Yarranton, the Founder of English Political Economy*, 1854, p. 44.

³ Blith, 1652, *op. cit.*, p. 254.

⁴ Robert Sharrock, *An Improvement to the Art of Gardening*, 1694, pp. 43-4. The evidence for larger crops of hemp and flax comes from the glebe terriers of Staffordshire which refer with increasing frequency, 1698-1735, to tithes of hemp and flax in the parishes of the county. I wish to thank Mr B. B. Evans for assembling this evidence for me and allowing me to use it here.

⁵ Blith, 1652, *op. cit.*, pp. 251, 254; Michael Williams, 'The Draining and Reclamation of Meare Pool, Somerset', Thirteenth Annual Report, Somerset River Board, 1962-3, Bridgwater, 1963, p. 1; Thirsk, A.H.E.W. IV, p. 13; Richard Weston, *Discourse of Husbandry used in Brabant and Flanders*, 2nd edn, ed. Samuel Hartlib, 1652, p. 18.

⁶ Hartlib, *His Legacie*, pp. 40-1; Houghton, ed. Bradley, *op. cit.*, II, p. 389.

family as the wage-earning group. The nailer's forge and the pottery were sheds next door to the farmhouse, while the weaving loom might be in the parlour or chamber or in a separate weaving shed.¹ A rare glimpse of the detailed programme of daily life is offered in the diary of a farmer-weaver in 1782-3 who worked out of doors one day till three o'clock and then wove two yards of cloth before sunset. On wet days he might weave eight and a half to nine yards. One Christmas eve he wove two yards before 11 a.m. and spent the rest of the day doing winter jobs around the house and midden. In addition, he had occasional work on other people's farms, hauling timber, preparing a calf stall, fetching and carrying with his own horse and cart, and picking cherries.² The variety of work compensated for the absence of some material comforts. Indeed, the use of the term 'by-employments' for the industrial occupations of pasture farmers may convey a false impression. They were not accidental or subsidiary, secondary, or a miserable makeshift. They were an integral part of the pastoral way of life. They remain so in many pastoral regions of England, though the numbers of people so occupied form such a small proportion of the total population that they are not seriously considered.³ But in countries where peasant-workers still represent a much larger slice of the population, this way of life is recognized and studied as a permanent social and economic phenomenon with merits of its own. In Poland, for example, it is agreed that the family budget of the peasant-worker at the present time is decidedly larger than that of the farmer of a medium-sized holding with only his land to support him.⁴ In England today it is reasonable to regard the peasant-worker as a negligible element in rural society, but not so in the seventeenth century. Indeed, we may guess that such farmers must have comprised somewhere near half the farming population of the kingdom. The economy and fortunes of this group deserve more attention than has yet been given to them for theirs is a different story with a different chronology from that of the small owner-occupier and small tenant in arable regions.

It is too early to make dogmatic generalized statements about the economic fortunes of traditional pasture-farming areas in the seventeenth century or about the size of their populations. But there are suggestive clues to some economic trends. Multiple sources of income attracted immigrants to the pastoral areas. Numerous contemporaries remarked (usually with disapproval)

¹ Cf. Marie B. Rowlands, 'Industry and Social Change in Staffordshire, 1660-1760', *Trans. Lichfield & S. Staffs. Arch. & Hist. Soc.*, ix, 1967-8, p. 39.

² Quoted by Edward Thompson in 'Time, Work-Discipline, and Industrial Capitalism', *Past and Present*, 38, pp. 71-2.

³ They represented 11.2 per cent of the total number of occupiers of land in England and Wales in the National Farm Survey of 1941-3.

⁴ Władisław Adamski, 'Investigations on Off-Farm Income in Poland', summary of a paper read to a seminar at Birmingham University on Peasant Farming in Europe, March 1968.

on this migration, particularly into the forests and fens of the Midland, southern, and eastern counties. Against this background the Act of Settlement in 1662 takes on a special significance. Its preamble refers to the movement of people from parish to parish "to settle themselves where there is the best stock, the largest commons or wastes to build cottages, and the most woods for them to burn and destroy." Roger Coke, writing eight years after the passing of this Act, believed it to be without effect: squatters on the waste were increasing daily.¹

In some places we can measure a substantial growth of population at least until the Act of Settlement. In others it continued into the early eighteenth century. In part of the Lincolnshire fenland, for example, numbers almost doubled between 1563 and 1723, whereas in arable parts of the same county the population at these two dates was more or less the same. Warwickshire figures of average populations in arable and forest areas do not illustrate growth rates but they do demonstrate the larger populations living in the forests: the average size of communities in old enclosed arable parishes in 1663 was 46 households, in unenclosed arable parishes 54 households, and in pastoral (Arden) parishes 120 households.²

Professor Everitt's comparison of labourers with less than an acre of land in the period 1500-1640 shows a considerably higher proportion in fielden parishes (72 per cent) than in fell parishes (65 per cent) or forest parishes (44 per cent), and of course, in fell and forest regions the common rights that went with land were much more valuable.³ Among the more substantial peasants an increase, rather than a decrease, took place in the number of landholders in the course of the seventeenth century. In the forest of Pendle, Lancashire, for example, the number of medium and small copyholders increased markedly. In four stock-rearing communities in Pendle the 55 copyholders in 1608 more than doubled to 129 in 1662.⁴ In Nidderdale, Yorkshire, a noticeable decline in the average size of farms had taken place by the late seventeenth century.⁵ In Rossendale, Lancashire, 72 copyholders in 1507 had increased to 200 by 1608 and to 314 by 1662. The increase was partly brought about by the enclosure of waste land, partly by the subdivision of existing farms. Land was being distributed among more and more people (engrossing was practically unknown), and the process was not reversed in Rossendale even in the eighteenth and nineteenth centuries. After the introduction of cotton

¹ Thirsk, A.H.E.W. iv, pp. 409-12; Coke, *op. cit.*, p. 16.

² Thirsk, *English Peasant Farming*, pp. 141, 168-70; J. M. Martin, 'The Parliamentary Enclosure Movement and Rural Society in Warwickshire', A.H.R., xv, i, p. 20.

³ Thirsk, A.H.E.W. iv, pp. 400-6.

⁴ Mary Brigg, 'The Forest of Pendle in the Seventeenth Century', *Trans. Lancs. and Cheshire Hist. Soc.*, cxiii, 1961, p. 72.

⁵ Jennings, ed., *op. cit.*, pp. 147, 171-2.

manufacture, holdings became more, and not less, minutely subdivided. A rough calculation suggests that the proportion of holdings of less than fifteen acres was two-fifths in the seventeenth and two-thirds in the nineteenth century.¹

In other pastoral areas comparisons over time are not possible, but it is clear that at the time of the Parliamentary enclosures many pastoral parishes still had a remarkable number of small proprietors. At Foleshill in Arden, Warwickshire, in 1775 794 acres were divided between 107 different proprietors. In the fenland of Holland, Lincolnshire, Gosberton had 160 landowners in 1798, Quadring over 150. Small peasants were not noticeably losing their hold on the land, and in some places they were strengthening it in the sense that more people were acquiring a small stake in the soil.²

Most writers in the second half of the seventeenth century explicitly or implicitly held the belief that pasture farming was more profitable than corn growing. Charles Davenant, using Gregory King's figures on land use and yields, offered the opinion in 1699 that "it seems more to the national interest of England to employ its land to the breeding and feeding of cattle than to the produce of corn."³ This general supposition invites belief because it accords with the general trend in agriculture throughout western Europe between 1650 and 1750.⁴

In England pasture farmers enjoyed an assured and relatively stable market for their produce, and solved the problem created by the dwindling size of their holdings by undertaking more industrial employment. These developments caused some writers to press the novel argument that pasture farming supported a larger population than corn. Reckoning in the work created by crops like wool, hemp, and flax, it was plausible. A Gloucestershire agriculturist who had promoted hemp and flax growing argued the case from his own practical experience. He calculated that forty acres of flax would employ more than 800 people for a year, and, even allowing a wage bill of 8d. a day for 300 men, 6d. a day for 300 women, and 3d. a day for 200 young people, it would still yield more profit to the sower than 160 acres of corn or grass.⁵ Sir Richard Weston claimed that one acre of flax was worth four to five acres of corn; and

¹ G. H. Tupling, *The Economic History of Rossendale*, Chetham Soc., n.s., 86, 1927, pp. 76, 235, 95, 227-9.

² J. M. Martin, 'Warwickshire and the Parliamentary Enclosure Movement', Birmingham University Ph.D. thesis, 1965, pp. 80-1; David Grigg, *The Agricultural Revolution in South Lincolnshire*, 1966, p. 84. Cf. the saying that the Isle of Axholme had so many freeholders that whoever got the Isle could get the county.—Francis Hill, *Georgian Lincoln*, p. 30.

³ Charles Davenant, *An Essay upon the Probable Methods of Making a People Gainers in the Balance of Trade*, 1699, pp. 88-9.

⁴ B. H. Slicher van Bath, *The Agrarian History of Western Europe, A.D. 500-1850*, 1963, pp. 206-17.

⁵ P.R.O., SP 14/180, no. 79.

to prove that pastoral regions generally provided more work than corn lands he turned to the examples of Normandy, Picardy, and Lombardy in France, Holland, Friesland, Zeeland, and Flanders—all pastoral regions which, he claimed, were the most populous places in Europe. Dairy farms occupying 100 acres of land employed many more hands than 100 acres of the best corn land; even sheep keeping, while it depopulated the countryside, nevertheless kept a great many people in working the wool into cloth.¹ John Houghton in 1692 argued along the same lines. Did not the wool and skins produced by an acre of pasture create greater employment than tillage? He had made some calculations and promised some time to print them.²

While the evidence is circumstantial and fragmentary it seems reasonable to suggest that the pasture-farming regions of the kingdom in the seventeenth century presented a picture of greater economic prosperity for larger numbers of people than the arable regions. The rebuilding of peasant houses in the north and west which took place generally after the Civil War period may perhaps be deemed a further reflection of this prosperity.³

The merits of the dual economy of pastoral regions were frequently misunderstood. Defoe gives us one of the few portraits of the farmer-leadminer's life in the Derbyshire Peak. The sight of a family living in a cave with little ready cash filled him with horror. The wife was inordinately grateful when he and his friends tipped the loose change from their purses into her hand. And yet he had to admit that the cave was clean though simple; the children were very bonny, the wife was comely. A close of corn at the door was ready to be harvested. A cow, thin though it was, grazed at hand and pigs rooted about nearby. Bacon hung in the roof. The husband worked in the mines, and when the wife was free, she washed ore.⁴ This was clearly a poor family by the standards of pasture-farming communities generally, but it was not the abject hopeless poverty of landless, and frequently workless, labourers who formed a growing proportion (at least a third and more) of the population of arable villages in the lowlands.

The most sympathetic and understanding observer of this economy in the later seventeenth century, however, was the Puritan divine, Richard Baxter. Indeed, he is an explicit exponent of the more general argument advanced in the paper. In 1691 he wrote his last treatise, *The Poor Husbandman's Advocate to Rich Racking Landlords*. Baxter came from Kidderminster in Worcestershire, a thickly populated region of peasant workers of every kind, metal workers, nailers, potters, miners, leather workers, and glass workers. He had also lived in

¹ Hartlib, *His Legacie*, pp. 55–6. Hartlib listed the commodities got from cattle (meaning cattle and sheep) as cloth, stuffs, stockings, butter, cheese, hides, shoes, and tallow.

² Houghton, ed. Bradley, *op. cit.*, I, p. 49.

³ M. W. Barley, *The English Farmhouse and Cottage*, 1961, pp. 227, 230, 236, 244.

⁴ D. Defoe, *A Tour through England and Wales*, Everyman edn, II, pp. 161–3.

and around London, in Westminster, and in Acton, Middlesex. His plea to landlords to show generosity and mercy to husbandmen was not a petition on behalf of all husbandmen, but only on behalf of what he called the racked poor; *not*, he observed, the market gardeners of the Home Counties who, though they paid double rent for their grounds, had a treble opportunity to improve them. (These are some of our arable farmers producing labour demanding crops.) "Nor do I speak of those tenants that have some small tenement of £5 or £10 per annum and have besides a trade which doth maintain them." He instanced here weavers, butchers, tailors, joiners, and carpenters. Elsewhere he spoke of the comparative security of life of the nailers, spurriers, swordsmiths, scythe-smiths, and sword makers around Dudley, Stourbridge, Birmingham, Walsall, Wednesbury, and Wolverhampton. In short, his was an impassioned plea not for peasant-workers in pasture-farming regions, or for arable farmers growing special cash crops, but for the poor husbandmen in the traditional corn-growing districts, whence the small landowners were fast disappearing, and whence, in his view, small tenants were also being driven by rack-renting landlords.¹

One of the questions that follows from this analysis of social and economic trends in the seventeenth-century countryside is how and why the dual economies in pastoral regions stimulated technical innovation in industry. It is plainly anomalous to expect agricultural innovations of an expensive kind from these regions. The pressure upon industry seems to derive from the very success of the dual economy. As the market for industrial goods expanded, it met labour shortages which peasant workers could not, or would not, satisfy, and which are reflected in the rapid rise in textile wages in the first half of the eighteenth century.² For peasant workers to turn wholly to industry meant surrendering their hold on the land and surrendering, moreover, a life of varied labour as well as independence.³ The advantage to the national economy of factory-based industries may seem clear enough if we take a sternly economic view excluding other considerations, but it was purchased at the price of a traditional, and in many respects congenial, life centred upon a smallholding of land, with its industrial annexe. Throughout the seventeenth century, at least,

¹ F. J. Powicke, ed., *The Reverend Richard Baxter's Last Treatise*, John Rylands Library Publication, 1926, pp. 25-8.

² Professor Crouzet suggests in a recent essay that one of the two most powerful stimuli to technical innovation was the shortage of labour in the handicraft industries of S. Lancs., Yorks., the Midlands, and in the metal-working industries of the Black Country.—F. Crouzet, 'Angleterre et France au XVIIIe siècle. Essai d'analyse comparée de deux croissances économiques', *Annales E.S.C.*, 21e année, no. 2, 1966, pp. 286-7. See also E. W. Gilboy, *Wages in Eighteenth-Century England*, 1934, pp. 191 *et seq.*

³ This is the view of Gilboy, *op. cit.*, p. 143, and is supported by other authorities there cited. See also Crouzet, *op. cit.*, p. 288; N. J. Smelser, *Social Change in the Industrial Revolution*, 1959, p. 77.

the economics of smallholdings in pastoral regions were not such as to drive the peasant worker from the land.

Phyllis Deane has recently described in general terms the causes of the industrial and agricultural revolution. She concluded with certain misgivings about generalizations on a national scale. "The national economy is not always the most convenient unit of economic analysis. The effect of regional variations in economic conditions is that statistics relating to a particular area may give no indication of the comparable movements for the nation as a whole, and that the national aggregates may obscure the trends for regions in which the significant changes are taking place. An attempt to assess the quality and rate of economic change at the national level may not lead to meaningful results whether we are looking for the significant continuities or for the significant discontinuities of history."¹ These reflections justify a first attempt at illuminating "the trends for regions in which the significant changes are taking place." It carries the story only to the end of the seventeenth century. To disentangle regional trends from national aggregates, more detailed local studies are needed which will trace developments in the seventeenth century more precisely and, more important, in the early eighteenth century when a further shift of emphasis took place in the economies of both pastoral and arable regions and the ground was finally prepared for two separate revolutions after 1750.

¹ Phyllis Deane, *The First Industrial Revolution*, 1965, pp. 17-18.