

Introduction

Pen over Plough

It was the goddess Ceres who first gifted the secrets of agriculture to humankind, according to classical mythology as told by Virgil and Ovid.¹ In one story borrowed from Greek myth, Ceres (originally Demeter) gave Triptolemus her chariot drawn by winged dragons to spread the knowledge of agriculture among men and women, symbolised in art as the handing over of sheaves of corn.² This ancient tale of the origins of cultivation was given a striking new twist in the frontispiece to the agricultural treatise *The Compleat Body of Husbandry* in 1756, captioned ‘The Goddess Ceres in her Chariot drawn by Dragons, Teaching Mankind the Art of Husbandry’ (see Figure 0.1). It depicted Ceres presenting a scroll with the book’s title to a ploughman, and thereby symbolised the transfer of knowledge as flowing through the written word. In doing so, the treatise harnessed the potency of classical myth to declare that writing was the primary vehicle for agricultural knowledge. While the engraving was in part self-aggrandisement, it was a rare illustration of the emerging idea that the practical knowledge to grow crops and raise livestock was best acquired from books.

This was a controversial idea in early modern Britain. Consider the following words of a countryman in dialogue with a courtier, imagined by a court poet in 1618.

What more learning have we need of, but that experience will teach us without booke? We can learne to plough and harrow, sow and reape, plant and prune, thrash and fanne, winnow and grinde, brue and bake, and all without booke, and these are our chiefe businesse in the Country ...³

The countryman further explains that the only motive he has for ‘learning’ is to be able to engage in activities directly requiring reading and

¹ ‘It was Ceres who first taught to men the use of iron ploughs’ (line 148): Virgil, *Georgics*, trans. Peter Fallon (Oxford World Classics; Oxford, 2006), 10. See also Ovid’s *Fasti: Book IV* (lines 401–5).

² Barbetta Stanley Spaeth, *The Roman goddess Ceres* (Austin, 1996), 17, 37.

³ Nicholas Breton, *The court and country* (London, 1618), fo. 11.



Figure 0.1 'The Goddess Ceres in her Chariot drawn by Dragons, Teaching Mankind the Art of Husbandry', engraving printed as frontispiece in Thomas Hale, *The Compleat Body of Husbandry* (1756), by Samuel Wale (painter/draughtsman) and Benjamin Cole (printmaker).

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writing, such as making wills. The pen and the plough seem to belong to different worlds. Husbandry does not deal in words, so what help is a book? If the labours of husbandry are learned through experience, then an instruction manual is superfluous.

These two fragments, and the gaps in time and perspective between them, prompt a series of questions about agricultural books in the seventeenth and eighteenth centuries. Who valued books as a source of knowledge about farming; when and why did they come to do so; and what historical processes drove such transformations? While agricultural historians have been willing to criticise the value of individual agricultural books, their general value as a medium for transmitting farming knowledge is rarely questioned. This is despite the frequent recognition that for centuries most farmers have been deeply sceptical about what they could learn from farming books. Such scepticism continued even with the expansion of literacy into the nineteenth and twentieth centuries – although it has been suggested that by 1850 all English farmers were ‘aware that they could no longer ignore written information on agriculture, whatever their continued misgivings about “book-farming”’.⁴ Such misgivings are taken seriously in this book. It offers a new history of why, how and for whom books became a key source of knowledge about farming in Britain over the early modern period.

It is a history that links knowledge, power and capitalism. The formation of agrarian capitalism in Britain is usually told as a story about markets, land and wages, but it was also about knowledge, books and expertise. Up to the sixteenth century, men and women had learned to farm through their labour, acquiring the customary knowledge passed down from generation to generation, mostly without the aid of the written word. Writing and farming were predominantly distinct skills possessed by distinct classes. Yet between the sixteenth and the nineteenth century, agriculture was transformed through a polarisation in landholdings, evolving from a landscape dominated by small family farms to one dominated by large capitalist farms using hired wage labour. This demanded a reorganisation and redistribution of agricultural knowledge among rural society, as the people making decisions about how to farm were less likely to be the same people executing those decisions.

⁴ Nicholas Goddard, ‘Agricultural literature and societies’, in G. E. Mingay (ed.), *AHEW: 1750–1850 Vol 6* (Cambridge, 1989), 370. See also: ‘[f]ew Scottish farmers in 1700 would have been likely to admit that they could learn anything about their business from books’. G. E. Fussell and H. Fyrth, ‘Eighteenth-century Scottish agricultural writings’, *History*, 35 (1950), 49.

However, this profound social transformation has been obscured by the dominant historical narratives of agricultural ‘improvement’, ‘revolution’ and ‘enlightenment’, which all present a linear progression of knowledge. In these narratives, agricultural books are understood solely as drivers of technological change by disseminating useful knowledge leading to increases in productivity, with only occasional hints about the social conditions or effects. Yet when we examine these satisfied tales about new flows of knowledge we invariably find they rest upon an implied social hierarchy. This is explicit in one triumphalist account of how the enlightenment stimulated economic growth in agriculture and industry, described as an elite-driven phenomenon: ‘what the large majority of workers knew mattered little as long as they did what they were told by those who knew more.’⁵ But how were such hierarchies of knowledge established, both practically and ideologically, such that historians could later investigate how knowledge ‘trickled-down’ the social order? And what if, in the case of early modern agriculture, we tend to find workers who knew more than their social superiors?

To answer these questions, this study adopts a new sociological approach to early modern agricultural knowledge and literature. It examines how books disrupted and reordered the social system of agricultural knowledge – how knowledge was produced, stored, transferred, acquired, exercised and legitimated – subordinating a communal, labour-based system to an individual, book-based system. It argues that the printing of agricultural knowledge was both stimulated by and a contribution to a reorganisation of knowledge aligned with the emerging social relations of agrarian capitalism. Printed agricultural treatises and manuals were in part a tool in the appropriation and codification of the customary art of husbandry possessed by practitioners in the interests of those in managerial positions such as landowners, estate stewards and large tenant farmers. The proliferation of agricultural books, especially in the eighteenth century, facilitated the growing separation of intellectual and manual labour as part of a process by which an educated and mostly landowning elite gained greater control over cultivation. Since women performed around a third of all agricultural work in the sixteenth and seventeenth centuries, the control exercised by male authors necessarily entailed the masculinisation of customary knowledge, which assisted the increasing exclusion and marginalisation of women in farming.⁶

⁵ Joel Mokyr, ‘The intellectual origins of modern economic growth’, *Journal of Economic History*, 65 (2005), 301.

⁶ For recent evidence on women’s work: Jane Whittle and Mark Hailwood, ‘The gender division of labour in early modern England’, *ECHR*, 73 (2020).

Together these processes can be characterised metaphorically as the ‘enclosure’ of customary knowledge. While it is not meant in a strict sense, the choice of metaphor is intended as a serious provocation.⁷ It forms the title of this book for three reasons. Firstly, it provides a stimulating analogy. The enclosure of land took many different forms, for different reasons and through different mechanisms, which varied greatly between regions and across centuries.⁸ But it typically involved a physical process of creating a boundary around an area of land, and more importantly a legal process of switching from multiple rights of use to exclusive rights of ownership. Enclosure meant the transformation of land from a communally managed resource requiring some collective decision-making to a privately managed resource allowing individual control.⁹ Similarly, agricultural books facilitated a shift away from a communal to an individualised system of knowledge, as custom – the accumulated resource of a community – was packaged into a private resource for the individual cultivator. The analogy evoked here is not with the quasi-mythologised version of enclosure as a singular event that severed a past rural idyll from industrialised modernity, but instead as a set of gradual processes through which the management of land was transformed and contested, and as a synecdoche for the structural shifts in landownership, which concentrated land in fewer hands.¹⁰ Similarly, the enclosure of customary knowledge in agricultural books gradually transformed the management of knowledge, and printed books were only the most conspicuous (and inherently best documented) of diverse trends that concentrated knowledge and expertise in fewer heads. Since books are usually presumed to be natural liberators of knowledge, the enclosure analogy purposefully re-frames books as devices that can help to control knowledge.

⁷ For a more direct study of the link between enclosure and knowledge, see Elly Robson, ‘Improvement and epistemologies of landscape in seventeenth-century English forest enclosure’, *Historical Journal*, 60 (2016).

⁸ Tom Williamson, ‘Understanding enclosure’, *Landscapes*, 1 (2000).

⁹ For the best holistic account of enclosure, see Jeanette M. Neeson, *Commoners: common right, enclosure and social change in England, 1700–1820* (Cambridge, 1996). For a critique of Neeson, see Leigh Shaw-Taylor, ‘Parliamentary enclosure and the emergence of an English agricultural proletariat’, *The Journal of Economic History*, 61 (2001); Leigh Shaw-Taylor, ‘Labourers, cows, common rights and parliamentary enclosure: The evidence of contemporary comment c.1760–1810’, *Past & Present*, (2001). See also J. R. Wordie, ‘The chronology of English enclosure, 1500–1914’, *ECHR*, 36 (1983); Robert C. Allen, *Enclosure and the yeoman: The agricultural development of the south midlands 1450–1850* (Oxford, 1992).

¹⁰ Briony McDonagh and Stephen Daniels, ‘Enclosure stories: Narratives from Northamptonshire’, *Cultural Geographies*, 19 (2012).

Secondly, however, these processes are not merely analogous, but linked symbiotically in the formation of a capitalist mode of agriculture. The social reorganisation of the land and the social reorganisation of knowledge were necessary corollaries. The campaigns for ‘improvement’ encompassed reform of both land and knowledge: its initial sixteenth-century meaning covered ways for landlords to maximise estate revenues, including enclosure, before expanding in the seventeenth century to mean the application of better ideas to intensify farming methods. Improvement, therefore, constituted a twin challenge to both customary rights and customary knowledge. Indeed, a key justification for enclosure was to allow improving landlords and entrepreneurial farmers to implement new farming techniques; cooperative field management using customary methods was to be replaced by private field management using improved methods. The shift from custom to improvement required both land and knowledge to be consolidated and packaged accordingly.¹¹ Farming books were highly conducive to a competitive system of farming, as individual market-oriented cultivators with full control over their fields could both acquire and apply knowledge independently from custom.

The role of knowledge has been neglected in the old ‘transition’ debates about the long-term development in Europe from a peasant to a capitalist economy.¹² Yet knowledge can be viewed as a factor of agricultural production alongside land and labour – in fact, this study traces how knowledge was extracted and controlled separately from labour. To exert full control over agricultural production, it is advantageous to control knowledge of cultivation. Knowledge must, therefore, be included in narratives of capitalist development. Rural proletarianisation was a process in which commoners not only lost access to land but in which over generations their knowledge itself was increasingly transferred to and exercised by those for whom they were forced to work for wages – or, perhaps more accurately, in which knowledge was controlled and exercised by a shrinking minority as rural communities became increasingly polarised. In this light, it is only a slight simplification to describe the gathering of knowledge collectively

¹¹ In a virtuous feedback loop, enclosed fields provided the basis for the rationalisation and experimentation in which new knowledge could be developed: ‘[f]arms had to be changed to make them knowable’. Simon Schaffer, ‘Enlightenment brought down to earth’, *History of Science*, 41 (2003), 260.

¹² For a comprehensive discussion of this debate, see Ch. 1 in Jane Whittle, *The development of agrarian capitalism: Land and labour in Norfolk 1440–1580* (Oxford, 2000).

produced by past generations in texts predominantly for large tenant farmers and landowners as a hidden form of ‘primitive accumulation’.

Thirdly, the analogy indicates the scale and significance of the historical change described here. The social reorganisation of knowledge was a centuries-long process that fundamentally altered rural relations and merits equal attention to landownership from historians of early modern Britain. It also links to a modern phenomenon subject to fierce debate: the phrase ‘enclosure of knowledge’ usually refers to the growth of intellectual property rights in the knowledge economy, seen as comparable to earlier enclosures of common land.¹³ Specifically, it resonates with debates about the enclosure of indigenous agricultural knowledge around the world by corporations.¹⁴ The story here is not about legal rights over knowledge, but a broader story in which the codification of customary knowledge and its deracination from labour was a preliminary step that made the commodification of agricultural knowledge possible. We do not need to sentimentalise the lost wisdom of past generations to recognise the profound change that occurred.¹⁵

By explicitly connecting questions of knowledge to questions of economic power, this book contributes to – and challenges – the rapidly growing number of histories that explore the nexus of early modern books, knowledge and expertise. The complex negotiations between theory and practice, between head and hand, are a common theme in studies of early how-to books.¹⁶ However, too often these are abstracted from the material interests of the actors and inattentive to their place in the social and occupational hierarchy. The organisation of knowledge cannot be understood separately from the distribution of power in early modern society. It is not simply that knowledge bestows power, but that power demands knowledge. In this case, those with the greatest power over the land sought to monopolise knowledge of how to use it in order to fully exercise and extend that power.¹⁷ In this way, the history of early modern

¹³ For example, Ugo Pagano, ‘The crisis of intellectual monopoly capitalism’, *Cambridge Journal of Economics*, 38 (2014).

¹⁴ Laurie Anne Whitt, ‘Biocolonialism and the commodification of knowledge’, *Science as Culture*, 7 (1998).

¹⁵ As cautioned recently in Francis Dolan, *Digging the past: How and why to imagine seventeenth-century agriculture* (Philadelphia, 2019), 2.

¹⁶ For example, Matteo Valleriani (ed.), *The structures of practical knowledge* (Switzerland, 2017).

¹⁷ On how a similar dynamic linking natural knowledge and political authority in colonial expansion, the ‘imperialism of “improvement”’, see Richard Drayton, *Nature’s government: Science, imperial Britain, and the ‘improvement’ of the world* (London, 2000), xv.

agricultural knowledge parallels histories of early modern medicine. Just as a professionalised and scientific medicine challenged folk medicine and vernacular knowledge, so a professionalised and scientific agriculture challenged ‘folk husbandry’.¹⁸

The intervention made here can be summarised by a small revision to an important essay by Joan Thirsk, titled ‘Pen and Plough’, which painted a harmonious picture: ‘the plough is placed alongside the pen, for, in fact, most writers handled the tools of both trades’. Thirsk cautioned us not to impose our expectation of specialisation and divide the writers from the farmers.¹⁹ While she is correct that these were not exclusive activities, it is a fundamental mischaracterisation to imply that writing and farming were in some way socially equivalent. Writing was not simply added to farming practice; instead, the agricultural author sought to displace and subordinate the common farmer as the acknowledged expert. This book, therefore, tells the story of how the pen mastered the plough.

The rest of this introduction lays the groundwork for a new interpretation of the history of agricultural books and knowledge in early modern Britain. First, it offers a critique of the standard research paradigm, which is termed the *enlightenment model*. It argues that the enlightenment model only evaluates the role of books with respect to technological change and is insensitive to early modern social relations. The model is unable to explain many features of agricultural books in its own terms and thus provides an inadequate theoretical framework. At best it offers a partial account and thus unwittingly distorts our understanding, but at worst it is actively complicit in rehearsing the polemical creations of eighteenth-century propagandists. Hence the need is established for a new approach to explore the cumulative social impact of printed agricultural knowledge. Second, it explains the research method and scope, focused on British agricultural books printed between 1660 and 1800. Since the structure of the book is thematic, it presents a broad survey of agricultural books and authors to serve as a reference for the analysis in specific chapters. Finally, it ends with a summary of how the core argument is developed over seven chapters.

¹⁸ Mary Fissell and Roger Cooter, ‘Exploring natural knowledge: Science and the popular’, in Roy Porter (ed.), *Cambridge history of science: Vol 4: Eighteenth century science* (Cambridge, 2003), 146–51; Andrew Wear, *Knowledge and practice in English medicine, 1550–1680* (Cambridge, 2000), 65.

¹⁹ Joan Thirsk, ‘Plough and pen: Agricultural writers in the seventeenth century’, in T. H. Aston et al. (eds), *Social relations and ideas: Essays in honour of R.H. Hilton* (Cambridge, 1983), 299.

Agricultural Enlightenment: A Critique

A full understanding of the history of agricultural literature has been hindered by the broader research paradigm of the ‘agricultural revolution’. The classic idea of the agricultural revolution refers to a rapid increase in productivity and output over a few decades, sometime in the seventeenth or eighteenth century, accompanied by sweeping transformations in the organisation of farming.²⁰ The fundamental question driving almost all studies of agricultural literature has been: what contribution did books make to the ‘agricultural revolution’, meaning what contribution did books make to the dissemination of knowledge leading to increases in agricultural productivity?

The notion that an increase in agricultural publishing was advancing the art of agriculture was itself claimed by agricultural authors themselves in the eighteenth century, which became widely accepted in the nineteenth century.²¹ In 1854, an agricultural bibliography aimed to show how the progress of agriculture was assisted by ‘the writings of theoretical and practical men’.²² A successor bibliography in 1908 declared that ‘books and journals promoted the advancement of the art more than any other means’.²³ The assertion of a causal link between the publication of books, the spread of knowledge and technological improvements solidified into a truism. Twentieth- and twenty-first-century studies have offered variations on this theme, producing increasingly critical and sophisticated studies within the same general framework. Historians have been examining the contours of the self-image constructed by agricultural writers in the eighteenth century rather than subjecting that self-image to critical analysis. Our view of agricultural literature has been shaped by the agenda of its advocates, even when some of their specific propositions are challenged, in a similar way that many early histories of enclosure were shaped by the views of the enclosers.²⁴

G. E. Fussell, who dominated studies of early modern agricultural literature between the 1930s and 1970s, did not dwell on the wider social impact, but continued to connect ‘advance in practice’ with the ‘large increase in

²⁰ Mark Overton, *Agricultural revolution in England: The transformation of the agrarian economy, 1500–1850* (Cambridge, 1996).

²¹ For example, see John Sinclair, *Code of agriculture* (2nd edn; London, 1819), iii; John Loudon, *An encyclopædia of agriculture* (London, 1825), 41.

²² John Donaldson, *Agricultural biography* (London, 1854), 1.

²³ Donald McDonald, *Agricultural writers, from Sir Walter of Henley to Arthur Young, 1200–1800* (London, 1908), 4.

²⁴ Neeson, *Commoners*, 7.

the number of books.²⁵ The first extended assessments came in the 1980s.²⁶ Pamela Horn posed the question of ‘how far did [literature] assist the spread of agricultural improvement?’²⁷ Joan Thirsk’s essay on seventeenth-century writers attempted to ‘understand the role of books of husbandry in advancing agricultural improvement’, while her essay entitled ‘Agricultural Innovations and their Diffusion’, covering 1640–1750, was largely concerned with the development of agricultural literature.²⁸ Similarly, Nicholas Goddard’s essays assessed how successful literature had been in advancing scientific methods in late eighteenth- and early nineteenth-century farming.²⁹ The approach was taken to the extreme by Richard Sullivan who used the number of agricultural publications as a measure of technological development.³⁰ More recently, Heather Holmes’ sophisticated analysis of the eighteenth-century circulation of Scottish agricultural books aimed to facilitate the assessment of ‘the role of print in spreading innovation and good practice’.³¹ Elsewhere, she analysed publications explicitly as one channel for the dissemination of agricultural knowledge in Scotland.³² All these studies focus on the question of how agricultural books were motivated by, and contributed to, technical ‘improvements’ in agricultural production, and thus situate books within debates about knowledge diffusion.

This approach has significant theoretical and empirical weaknesses. The theoretical failings will be explored in Chapter 1, but fundamentally

²⁵ G. E. Fussell, *More Old English farming books from Tull to the Board of Agriculture, 1731 to 1793* (London, 1950), iii. See also G. E. Fussell, *The Old English farming books from Fitzherbert to Tull 1523 to 1730* (London, 1947); G. E. Fussell, *The Old English farming books, Vol III 1793–1839* (London, 1983).

²⁶ For a study of the diffusion of agricultural knowledge throughout sixteenth-century Europe by surveying the distribution of treatises, see Corinne Beutler, ‘Un chapitre de la sensibilité collective: la littérature agricole en Europe continentale au XVI^e siècle’, *Annales*, 28 (1973).

²⁷ Pamela Horn, ‘The contribution of the propagandist to eighteenth-century agricultural improvement’, *Historical Journal*, 25 (1982), 320.

²⁸ Thirsk, ‘Plough and pen’, 295. Joan Thirsk, ‘Agricultural innovations and their diffusion’, in Joan Thirsk (ed.), *AHEW: 1640–1750 Vol 5 / 2. Agrarian change* (Cambridge, 1985). Same framing later in Joan Thirsk, ‘The world-wide farming web, 1500–1800’, in John Broad (ed.), *A common agricultural heritage? Revising French and British rural divergence* (Exeter, 2009).

²⁹ Nicholas Goddard, ‘The development and influence of agricultural periodicals and newspapers, 1780–1880’, *AgHR*, 31 (1983); Goddard, ‘Agricultural literature’. See also Nicholas Goddard, ‘“Not a reading class”: The development of the Victorian agricultural textbook’, *Paradigm*, 1 (1997).

³⁰ Richard J. Sullivan, ‘Measurement of English farming technological change, 1523–1900’, *Explorations in Economic History*, 21 (1984).

³¹ Heather Holmes, ‘The circulation of Scottish agricultural books during the eighteenth century’, *AgHR*, 54 (2006), 45.

³² Heather Holmes, ‘The dissemination of agricultural knowledge 1700–1850’, in Alexander Fenton and Kenneth Veitch (eds), *Scottish life and society: A compendium of Scottish ethnology: Vol 2 Farming and the land* (Edinburgh, 2011). Similarly, see T. C. Smout, ‘A new look at the Scottish improvers’, *Scottish Historical Review*, 91 (2012), 146.