CHAPTER I

JOHN MARSHALL’S INHERITANCE

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From east to west across the fields of northern Europe flax was grown by peasants. ‘I suppose the cultivation here’—John Marshall wrote in Scotland at the beginning of the nineteenth century—‘is much the same as in Russia. They scratch up a bit of ground and sow flax or corn without any sort of fence to preserve it from the cattle, and when that is exhausted they leave it and choose a bit somewhere else.’¹ For generations the occasional growth of flax had been part of farming. After the harvest, during the winter months, ‘the country people...dress it, spin it, weave it and bleach it, all in their own families’, making a coarse heavy cloth for domestic use.² In some places, making linens had ceased to be simply part of a peasant’s provision for his family. Commerce penetrated first finishing, then weaving, spinning and even the growing of flax. The peasant’s product—as cloth, and later as yarn or flax—went into the market, and districts in northern Europe acquired reputations for materials like Hessians and Osnaburgs which were exchanged at distant places.

The pattern is familiar. What remains obscure in England is the time and place of the transition from predominantly peasant to urban craftsmanship. At the end of the seventeenth century, both peasant and townsman made linens. In the shires, stretching from the south-west to the north-east, smallholders planted flax seed and made their own cloth. Apart from the manufacture of sails in coastal towns, linens were woven in such northern inland towns as Warrington,

¹ John Marshall, ‘Tours’ (Scotland, 1800). Unless otherwise indicated, all footnotes refer to the Marshall MSS. in the Brotherton Library, University of Leeds, or at Derwent Island, Keswick. Neither collection is indexed, and citations are based on the type of document and the date of entry. The business notebooks of John Marshall and his sons (including the former’s experiment and tour books), the partners’ private ledgers for the Water Lane and Castle Foregate mills, business correspondence and miscellaneous papers relating to the Kay case, the labour unrest of 1871–2 and the closing of the mills, are in the Brotherton Library. Correspondence and papers relating to family affairs are at Derwent Island.

² Ibid.
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Knaresborough and Darlington. But whether located in town or countryside, England’s linen manufacture was at that time small and relatively backward. Weavers and bleachers were not sufficiently skilled to produce the fine-spun, well-finished cloths made in parts of the Continent. Hence the upper orders of society in London and the provinces bought German cloth finished in Holland, or, when not prohibited, French linens. Moreover, trade across the ocean was largely in Dutch hands. A House of Commons committee heard in 1751 that ‘none of the English Manufacture was exported until about twenty five years since’.¹ Domestic production therefore was limited by the demand for heavy linens at home, and a growing Irish industry, which in the early eighteenth century had free access to British and colonial markets, hastened to satisfy such demand in England. Despite long-standing encouragement by the state, English farmers remained obdurate and English merchants unwilling to plant more flax and make more linens. Yet within five generations, between 1700 and 1830, an English flax-spinning industry grew up which dominated European production.

England’s linen industry began growing early in the eighteenth century and continued to flourish until the mid-nineteenth century. Two main factors account for its sudden, marked expansion before the introduction of mills and machinery: foreign flax and protection. Linen weavers in the British Isles, except those in Ireland, depended for their raw materials on imports of either flax or yarn. If the cultivation of flax in England had once been widespread, the total amount produced could not have been very large.² Despite official encouragement and the exhortations of philanthropists and farming enthusiasts, the high cost of producing flax, set against the limited demand for it, priced it out of the evolving pattern of commercial farming.³ The crop persisted on a limited scale in only a few areas

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of the north and south-west, and in such districts spinners and weavers were to be found. In the seventeenth century, when woollens flourished in the western Pennines, linens dominated the domestic industry of the lowlands between Preston and Manchester.¹ There, enclosed smallholders and cottagers spun and wove flax grown locally. But, as the industry grew, additional supplies of flax and yarn had to be brought from Ireland and Germany.

Before the mid-eighteenth century, several expanding linen centres came to the fore, usually originating in close proximity to a local crop; ‘eight to ten miles around Knaresborough’, Cleveland, Stockton, and west across the dales to Carlisle and Whitehaven. To the south, Leicester, Derby, Bromsgrove and Reading and, in the south-west, Somerset and Devon had linen-weavers.² At that time, the native crop amounted to no more than a few thousand tons; hence, the development of the industry in the eighteenth century depended on imports, and this in turn promoted growth chiefly in the north. Imported yarns came from Ireland, Scotland and north-west Europe; flax came from Ireland, and especially from the Baltic, where Great Britain had a trading monopoly by the mid-eighteenth century.³ West Riding merchants from Knaresborough and Barnsley rode regularly to Hull to buy Russian flax.

Imported flax and yarn was a necessary but not sufficient cause for growth. In addition the industry needed markets and ultimately, therefore, better skills. Technically, the British trailed behind continental producers, and even coarse native linens cost more to produce than their German counterparts. Consequently the initial growth of the English industry depended on protection to provide markets, although in the long run its fortunes would depend on being able to make better-quality linens.

From early in the eighteenth century, the government granted

¹ A. P. Wadsworth and J. de L. Mann, The Cotton Trade and Industrial Lancashire (1931), pp. 79, 90, 111. See also Sel. Cite. Rep. 1751, p. 293, evidence of John Craven; ‘The Manufacturers in Manchester depend on cotton as well as linen, but the cotton is only a temporary thing’.

² Report from the Select Committee on the Petition of the Dealers in, and Manufacturers of, Linens, 1744. First Series, vol. ii, pp. 65–72. There were at that time a thousand looms in Knaresborough.

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English producers preferential treatment in colonial markets, and exports in general carried a bounty. On this basis the coarse-linen industry developed. Even so, expanding sales abroad was an uphill task. Heavy linens shipped from Whitehaven and Liverpool to the West Indies came into competition with Dutch goods. In 1744 British traders sought a monopoly in that market, and they secured a higher bounty. Irish and Scottish manufacturers also stood to benefit from trade with the colonies and, by the mid-eighteenth century, English producers wanted further discrimination, this time against Irish goods.¹

Access to a growing and increasingly sheltered colonial market was an important factor in the rise of the industry at that time. No less important, especially after the mid-century, was the effort made by English producers to supply a larger proportion of the home market. There, the industry secured protection varying from the outright prohibition of French lawns and cambrics to stiff import taxes. The advantages derived from such trade barriers depended ultimately on the ability of English producers to make high-quality fashion goods, like checks for furniture coverings and table linens, as well as to increase sales of coarse sheetings, shirtings and towellings. Thus many rising linen centres began to specialise in lighter fabrics. The Scottish expansion of the 1730’s consisted of fine linens made in the Clyde valley,² and weavers in Carlisle, Darlington, Stockton and Knaresborough began to make some lighter goods after the mid-century. But the industry was far from standing on its own feet. Complaints about Dutch competition in the home market continued in the 1770’s, despite the fact that the Netherlands’ industry had begun to decline.³

A third, more ephemeral factor in the rise of the linen industry was the short supply of cotton compared with that of flax in the mid-eighteenth century. The fortunes of cotton and flax were of course linked together, usually to the detriment of flax. For much of the eighteenth century, Lancashire manufacturers used flax yarns as warp in weaving union goods. In addition, under certain circumstances,

² Sel. Cite. Rep. 1744. Glasgow had 1500 looms at that date.
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all-linen goods could provide a close substitute for union cottons. Such a situation arose in the mid-eighteenth century. During the 1740’s, when English cotton imports doubled, French, Dutch and Italian buyers entered the West Indian and Mediterranean markets, causing cotton prices to double. For almost half a century, the demand for cotton rose faster than its supply, and this raised the demand for flax yarns and linen goods. In turn, linen prices rose, as for instance during the 1740’s, when Irish prices went up by a fifth. But, for a generation, linen prices rose relatively less than cottons, and linen merchants managed to supplant cotton goods in some tropical markets.

The native linen industry had developed considerably by the third quarter of the eighteenth century. The English domestic market consumed 80 million yards of cloth in 1756. Forty per cent of the supply was retained imports. Ireland and Scotland each provided 15 per cent. The remaining 30 per cent, some 26 million yards, was made in England, indicating an industry with about 10,000 looms. In 1773 Alexander Somerville valued the native flax crop at £300,000, equivalent to nearly 4000 tons of flax, enough to make 8 million yards of linen. The rest of the raw materials used by English workers came from abroad. From 1763 to 1771 imported yarn from the Continent and Ireland averaged 3000 tons a year, sufficient to make 17 million yards of cloth in England and Scotland. Flax imports of the order of 5000 tons or more would have been required to provide the balance of raw materials for current outputs.

Such dimensions are no more than a rough guide. But they illustrate both the relative importance of imported materials, and also the size of the English section of the United Kingdom industry, which John Horner claimed to be on a par with the Irish and Scottish sections by the mid-century. Indeed, at that time, the linen industry in the British Isles did not differ much in size from the cotton industry.

Growth was very rapid in the third quarter of the century. The weight of imported yarn, freed from import duty in 1757, doubled, especially after the duty on foreign linens was raised in 1767. Since

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Irish yarn exports increased at the same time, it appears likely that the growing imports of continental yarns went to English and Scottish looms. (Yarn imports continued to increase until the last quarter of the century, when machine-spinning required the import of more flax. Only then did yarn imports fall—from 17,000 tons in 1771 to 1000 tons in 1830; and flax imports rose correspondingly—from 12,000 tons in 1787 to 50,000 tons by 1830.) Moreover, after 1750 the quantity of foreign linens imported declined whilst the amount re-exported remained constant. Assuming that domestic demand did not decline, this would give English weavers a larger share of the home market. Perhaps five-sixths of English output was by this time bought by fellow-countrymen.

England had a flourishing native linen industry by 1770. Despite its predominantly urban location, the recent growth of the industry saved it from gild organisation and control was in the hands of merchants, like J. J. Backhouse of Darlington who employed sixty weavers, or William Wilson who pioneered weaving and bleaching in Barnsley.1 Such rapid expansion bred optimism, and this encouraged further growth.

In the last quarter of the eighteenth century this situation changed. Early in the 1770's there was a severe trading-recession followed by the revolt of the North American colonies. To offset their loss of trade, English linen-producers urged the government to raise tariffs on imports, a request that was not granted.2 At the same time, the growth of the industry was beginning to affect its methods and location. A textile expansion based on higher productivity invariably disturbs the balance existing between spinning, weaving and finishing. It appears likely that when the flying shuttle increased a weaver's output and thus raised the already high ratio of spinners providing yarn, cotton and worsted manufacturers had some difficulty in finding the extra labour required. Indeed the flying shuttle could

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only be fully exploited where extra yarn was forthcoming either from imports or by an increase in the number of native spinners, drawn perhaps from a wider area. What happened in the linen industry remains obscure: at Darlington and Knaresborough, merchants put out flax to domestic spinners farther afield, sometimes competing with cotton and worsted manufacturers in their search for labour. Concurrently, newer centres like Barnsley relied more on imported yarns, and this solution offered the best prospects for expansion. The disadvantage of ‘putting-out’ farther afield was not so much that it involved extra travelling, took more time and added to costs, because the marginal expenses involved in travel were not costed and consequently labour costs per bundle of output did not rise. The real shortcoming was that a weaving centre dependent on nearby rural spinners was more likely to be limited in the rate of its expansion.

More urgent and decisive in affecting the fortunes of the linen trade were the technical changes taking place in the cotton industry, whose growth had been held back partly by a limited supply of raw material and weak warp yarns. By the 1770’s machinery was in operation which could spin this short, even and elastic fibre. Coarse yarns suitable for warp could be made on Arkwright’s small multi-spindle frames, and the invention of the mule in the 1780’s led to the production of fine yarns. Simultaneously, as plantations spread in central America, the supply of raw cotton increased. These changes affected linen interests in two ways. First, their customers had a substitute. Cotton manufacturers no longer wanted warp yarns, a loss felt mainly by spinners outside England. At the same time, cotton cloth routed linens in tropical markets and jeopardised the sales of some linens, chiefly foreign ones, at home. One merchant claimed that, at the light end of the trade, ‘cotton goods are much used in place of cambrics, lawns and other expensive fabrics of linen’.1 This was an ill omen. Later, when slavery flourished once again in the southern states of the U.S.A., cheap cottons imperilled linen production everywhere. Meantime, in the 1780’s, though the sales of English linens were not immediately affected, the prospects of the industry were much less promising than they had been a generation

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earlier. Henceforth English linen producers would have to contend more with competition from native cottons than from foreign linens.

In the second place the swift expansion of the cotton industry, the increased output of goods at lower cost, and the fortunes made by such cotton manufacturers as Arkwright, were both an example and a challenge. By clinging to old methods, linen producers might last a little longer. By seeking new techniques, they could hope for riches; expansion, and ultimately survival, would depend on the manufacture of cheaper linen yarns.

This challenge was felt most in north-eastern England and Scotland. The growing cotton industry had a large appetite for productive resources, and mills in Lancashire, the Clyde and Lagan valleys employed women and children who had previously spun flax yarns at home. Linen producers did not offer such high wages as cotton manufacturers, whose labour cost per unit of output fell steeply with new methods. Accordingly the linen industry declined in Lanca­shire, north-east Ireland and western Scotland, a phenomenon duly noted by John Marshall on his early tours.

Since the cotton trade is introduced much less yarn is spun in the neigh­bourhood of Lisburn and Belfast… The cotton manufacture extends principally to the north of Carrickfergus, Coleraine, and some to London­derry. It increases and will, in a few years, drive linen out of this neigh­bourhood… [and in the south-west of Scotland] the fine cotton and muslin manufacturers have nearly driven out linen from this side of the Island.¹

Lanarkshire, which in 1727 produced 272,000 yards of linen cloth, more than a tenth of Scotland’s output, made only 23,000 yards in 1822, less than 0·1 per cent of Scottish production.²

A response to these forces affecting the linen industry would not come from cotton towns like Belfast and Glasgow, nor from those districts in Ireland which still produced linens with cheap peasant labour. Those most sensitive to the expansion of linen production and the challenge of cotton, who discerned the probable direction of change and had the imagination and resources to bring it about, belonged to the weaving towns of eastern Britain.

Two lines of advance seemed feasible. Flax chemically treated

¹ Marshall, ‘Tours’ (Ireland, 1803); (Scotland, 1800 and Ireland, 1803).

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could be made to resemble cotton. When flax was boiled in a saline solution, the gummy substance holding the small ultimate flax fibres together was neutralised and after that the fibres could be spun like cotton. But the effect was to halve the weight of flax, and turn 'good flax into bad cotton'. Alternatively, existing cotton machinery could be adapted to spin a long, uneven, and inelastic fibre. This solution was pioneered in Darlington, where linen production had developed as a subsidiary industry during the eighteenth century about the time it waned farther inland at Barnard Castle. A linen merchant and banker in Darlington, James Backhouse, helped John Kendrew, a glass-grinder at the Low Mill, and Thomas Porthouse, a watchmaker, to register a patent in June 1787 for flax-spinning machinery. The equipment, comprising drawing frames with drums large enough to roll out long flax fibres and a spinning-frame with four spindles, was modelled on cotton machinery, which Kendrew knew about at first hand.

Darlington, a town with only 4000 inhabitants, soon had a linen industry larger than that 'of any town in England'. Spinning-mills on the river Skerne supplied some 500 weavers with yarns which formerly had been spun in the surrounding villages. Their yarns at the commencement were no better than those which were spun at the common hand-wheel; but they were produced at much greater abundance and at less expense. In the early 1790's weavers throughout Yorkshire and in Durham and Cumberland were using Darlington yarns.

Although Kendrew and Porthouse were the first to respond successfully to the challenge, they did not themselves benefit greatly. After a few years in partnership they separated; Kendrew had a mill at Houghton, and Porthouse one at Coatham. Neither became rich. The real beneficiary was a young man who in December 1787 sought their permission to copy the new patent machinery.

3 Universal British Directory, 2nd ed. (1796).
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Towards the close of the sixteenth century the Aire valley in the West Riding of Yorkshire developed quickly. Villages became more thickly populated, the production of coarse woollen cloth increased, and Leeds, the market centre in the valley where cloth was exchanged and finished, doubled its population in the generation after 1580. When its merchants secured a royal charter of incorporation in 1625, the town had 6000 inhabitants.

The cloth traded in Leeds was made by rural clothiers dwelling in the Pennine foothills to the west of the town. In broad river valleys, families lived in scattered farmsteads and wrested a meagre living from the soil; but higher up the hillsides the soil swept by winds and rain yielded poor crops, and settlers there eked out a living by spinning and weaving wool. Typical of such villages was Yeadon, in the parish of Guiseley, seven miles from Leeds. At the edge of bleak moorland dwelt sixty families occupied as clothiers. Their small stone cottages, placed close together, formed a compact village without a church or overlord.

One family named Marshall multiplied rapidly in Yeadon during the seventeenth century, despite the waning prosperity of the local woollen trade. At the Restoration they occupied nine cottages and two substantial houses, and every year one of them would fill a common office in the township. One Marshall household had in the early seventeenth century acquired a large dwelling, the Low Hall, situated in Nether Yeadon down the hillside. There, surrounded by the agricultural workers of Rawdon who lived in scattered farmsteads and labourers’ cottages, they acquired the status of ‘respectable country gentlemen.’ And in time, this branch of the family exer-


2 John Marshall, ‘Sketch of his own Life’, p. 4. (This 31-page document was ‘extracted from the sketch of his own life’, probably by his grandson S. A. Marshall, c. 1880.) See also Slater, op. cit. p. 184. The Low Hall was sold and re-bought by the family in the 1850’s for £800.