INTRODUCTION

In the mid-eighteenth century Britain was the world’s greatest trading nation. Manufacturers exported a wide variety of textiles and hardware. Rich London and Bristol merchants imported tropical goods and more modest provincial merchants dealt in Baltic timber and grain. Two centuries earlier, England had been an economic backwater, exporting unfinished heavy woollen cloth to the Low Countries for further finishing before sale throughout Europe. During the century and a half after 1750, British firms and British investors provided leadership in industrial revolution technology and policy shift that created a fully globalised trading world.

Trade from the mid-sixteenth century to the end of the industrial revolution may be envisaged, somewhat oversimply, in two periods. Until the late eighteenth century, incorporation of the Americas drove change. The British industrial revolution introduced a shorter second period that lasted until about 1850. Late in the eighteenth century, British firms in a few key industries developed technological superiority over producers
elsewhere. As British firms adopted superior technology and competition among them drove prices down, they captured world markets. Since the new cotton textiles depended on a tropical raw material, new import trades grew as well. In 1846 repeal of the corn laws symbolised a shift in policy from mercantilism to free trade. Later in the nineteenth century, a new phase of multilateral globalisation occurred, driven primarily by technology that dramatically lowered transportation costs, reinforced by liberal economic policy and population growth.

THE COMMERCIAL REVOLUTION

The broad dimensions of British trade from the Restoration to the American Revolution are illustrated in Table 7.1 and Figure 7.1 (comparisons over time are not entirely appropriate since the 1660s data relate only to London). Broad trends are clear. Initially Britain exported woollen textiles to Europe. In the eighteenth century, distant markets, particularly in the American colonies, became important. Imports initially came mainly from continental Europe; about half were manufactured goods – mainly linen from north-western Europe – with the remainder split between wine and spirits and various raw materials. By the end of the period, imports from Europe still predominated but manufactured goods had less importance and imports were raw materials – raw silk and dye-stuffs from southern Europe for the textile industries and iron and timber from the Baltic. The most dramatic change in imports, like that of exports, was the rise of distant markets. Initial expansion occurred in oriental goods: spices – particularly pepper – and cotton and silk textiles. In the eighteenth century the imports of new tropical and semitropical staples – sugar, tea and tobacco – grew rapidly to make up nearly 30 per cent of all imports in the 1770s (Davis 1954, 1962, 1973, 1979; Minchinton 1969). The bulk of Britain’s trade remained focused on nearby areas of Europe. Exports remained primarily woollen cloth but some change was underway by 1660. At the beginning of the seventeenth century British merchants exported heavy unfinished woollen cloth to more advanced textile centres in the Low Countries for finishing and final sale. After 1568, revolt in the Spanish Netherlands and the Thirty Years War severely disrupted this trade. Many skilled Protestant craftsmen and merchants escaped the horrors of war and religious persecution on the continent and brought their skills and capital to England. English firms began to produce lighter, more finished, woollen (and worsted) cloth – the New Draperies – and established a flourishing trade with southern Europe independent of the Low Countries.

Although Britain’s European trade developed and remained the source of most trade, the rise of long-distance trade attracted the attention of contemporaries and historians. These trades introduced exciting new
<table>
<thead>
<tr>
<th></th>
<th>1663 &amp; 9 (London only)</th>
<th></th>
<th></th>
<th></th>
<th>1699–1701</th>
<th></th>
<th></th>
<th></th>
<th>1772–4</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>2,039</td>
<td>1,846</td>
<td>30</td>
<td>163</td>
<td>4,433</td>
<td>3,772</td>
<td>122</td>
<td>539</td>
<td>9,853</td>
<td>4,960</td>
<td>717</td>
</tr>
<tr>
<td>Europe</td>
<td>1,734</td>
<td>1,562</td>
<td>19</td>
<td>153</td>
<td>3,583</td>
<td>2,997</td>
<td>111</td>
<td>475</td>
<td>8,487</td>
<td>3,816</td>
<td>690</td>
</tr>
<tr>
<td>East</td>
<td>1,512</td>
<td>1,423</td>
<td>19</td>
<td>70</td>
<td>3,045</td>
<td>2,771</td>
<td>89</td>
<td>185</td>
<td>4,186</td>
<td>2,849</td>
<td>189</td>
</tr>
<tr>
<td>Americas</td>
<td>44</td>
<td>15</td>
<td>29</td>
<td>114</td>
<td>31</td>
<td>10</td>
<td>73</td>
<td>1,198</td>
<td>295</td>
<td>148</td>
<td>755</td>
</tr>
<tr>
<td><strong>Imports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>3,495</td>
<td>2,665</td>
<td>409</td>
<td>421</td>
<td>5,849</td>
<td>3,986</td>
<td>756</td>
<td>1,107</td>
<td>12,735</td>
<td>8,122</td>
<td>1,929</td>
</tr>
<tr>
<td>Europe</td>
<td>1,292</td>
<td>1,077</td>
<td>215</td>
<td>552</td>
<td>1,844</td>
<td>1,292</td>
<td>552</td>
<td>2,157</td>
<td>1,364</td>
<td>792</td>
<td>1</td>
</tr>
<tr>
<td>East</td>
<td>292</td>
<td>36</td>
<td>256</td>
<td>630</td>
<td>2,360</td>
<td>2,360</td>
<td>2,360</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>80</td>
<td>80</td>
<td>103</td>
<td>103</td>
<td>33</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pepper</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>80</td>
<td>80</td>
<td>103</td>
<td>103</td>
<td>33</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>848</td>
<td>848</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>292</td>
<td>36</td>
<td>256</td>
<td>630</td>
<td>2,360</td>
<td>2,360</td>
<td>2,360</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sugar</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>292</td>
<td>36</td>
<td>256</td>
<td>630</td>
<td>2,360</td>
<td>2,360</td>
<td>2,360</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>292</td>
<td>36</td>
<td>256</td>
<td>630</td>
<td>2,360</td>
<td>2,360</td>
<td>2,360</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tobacco</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>70</td>
<td>1</td>
<td>69</td>
<td>249</td>
<td>249</td>
<td>249</td>
<td>249</td>
<td>519</td>
<td>1</td>
<td>1</td>
<td>518</td>
</tr>
<tr>
<td>Europe</td>
<td>422</td>
<td>421</td>
<td>1</td>
<td>904</td>
<td>884</td>
<td>1</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East</td>
<td>422</td>
<td>421</td>
<td>1</td>
<td>904</td>
<td>884</td>
<td>1</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>422</td>
<td>421</td>
<td>1</td>
<td>904</td>
<td>884</td>
<td>1</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Devis 1954, 1962.
goods – printed calicos and silks, porcelain, sugar, tobacco and tea – to everyday use in the eighteenth century and expanded European horizons (see chapter 13). The trade demanded large capital and new forms of organisation. The East India and West India merchants epitomised new wealth, sophistication and political influence that had accumulated in London as a result of a commercial revolution.

The Spanish and Portuguese discovery of sea routes at the end of the fifteenth century created the long-distance trades to the Orient and to America. The voyages of discovery had been motivated by the search for new routes to Asia and brought eastern goods to Europe. Dutch merchants, despite the revolt against Spain, quickly re-established their mercantile presence in the Iberian peninsula and came to dominate trade by the late sixteenth century. The Portuguese initially attempted to restrict the growth of Asian trade to maintain prices and profits, but Dutch and British competition led to dramatic decline in the European prices of Asian goods. In England the price of pepper – the main spice from the East – fell to less than a quarter of its 1570 price by 1660 (Clark 2001b: 60).

The trade tapped into existing networks in Asia but became dominated by the great Dutch and English East India companies whose success rested on institutional and financial innovations. The Dutch East India Company led the way early in the seventeenth century by displacing the Portuguese in the Spice Islands and innovating in business structure. In 1612 the company shifted its organisation from adventures in individual voyages – as had long been common in European long-distance trade – to a company with a permanent capital that was not redistributed to the investors at the end of each voyage. The British company soon adopted similar structure (Neal 1990). The companies’ success rested on mobilising the large capital that supported permanent presence in the east. The heavily
capitalised companies required not only profitable trading ventures but also a secondary market for company shares. This market developed in the already quite sophisticated seventeenth-century Dutch and English capital markets. The Dutch company’s control of Java and the Spice Islands forced the British to relocate to India – a second-best solution – and obtain spices by Asian trade. The companies flourished for two centuries on the basis of their organisational skill and military strength, their trading monopolies and the success, particularly of the English company, in developing European markets for Indian cotton textiles and Chinese tea.

Europe's Asian trade exhibited a peculiarity that is as central to its understanding as the institutional innovations of the East India Companies. While Europeans eagerly imported eastern goods, little corresponding eastward flow of European goods developed. Instead, trade was financed by an eastward flow of gold and silver that many Europeans (and subsequent historians) found disturbing. In fact, trading had become multilateral and the bullion and specie came from America. European demand for eastern goods was certainly high, but Asian demand for bullion and coin was so great that the rise of European trade with the east should be seen primarily as a consequence not of trade routes to the east but of the discovery of America.

European discovery of America had extraordinary repercussions on world trade. The dramatic conquest of Mexico (1519–22) and Peru (1531–5) established Spanish dominance and incorporated the Americas into world trade. The changes that followed were unlike anything that occurred before or since. International trade reflects an equilibrium in which traders in different countries engage in profitable exchange. Although at times political events create large adjustments, trade usually evolves gradually as new technologies reduce production and trading costs and as political changes ease or hamper exchange. America was quite different. Eurasian and American societies had developed in isolation. In the Americas, Europeans found that, sometimes after protracted periods of discovery and development, they could produce four principal commodities at much lower cost than previously prevailed in Eurasia. Chronologically the first was the humble codfish of the northern continental shelf – to which we will return briefly. The most spectacular was precious metal – silver and gold. A century or so after the conquest, the great plantation crops of sugar and tobacco became important.

The Conquistadores plundered native treasures, but the great bullion flows from America were mined. American deposits were far richer than any remaining in the Old World. Table 7.2 presents estimates of the annual flow of bullion to Europe; about 2 million rix-dollars of additional silver annually flowed directly to Manila from Mexico around 1700 (Attman 1986; Giraldez and Flynn 1994). The bullion flows were large. In the mid-1780s all British domestic exports were worth about £11.4 million or
48.5 million rix-dollars; so bullion shipments from America had a value equal to about half of British exports.

Gold and silver were monetary metals and could be easily sold (or equivalently, used to purchase goods) world-wide. The increase in money drove down its real value through price inflation and the purchasing power of silver in Europe declined to approximately a third of its pre-discovery level in the sixteenth and seventeenth centuries. The monetary use of gold and silver was not confined to Europe so, as their value in Europe fell, European traders found that profits could be made using silver and gold to buy goods elsewhere. If we assume roughly that monetary demand was proportionate to population so that additions to the money stock would eventually distribute themselves in proportion to population, we can begin to appreciate the nature of early modern trade between America, Europe and Asia. America, with only about 2 per cent of world population, was clearly going to sell most of the gold and silver it mined to the rest of the world for other goods. The output of the American mines, of course, flowed initially in colonial trade to Spain and Portugal – the Spanish crown collected 20 per cent as tax. However, the population of Spain and Portugal did not exceed that of the Americas in 1600 and so very little of the bullion remained in the Iberian peninsula. Much spread to the rest of Europe as Spanish Habsburg monarchs fought expensive wars against the Protestant Reformation. Most of the rest bought European goods for consumption in the peninsula and in America. But western Europe was only a small part of the monetised economy of the Old World. Economically advanced China and India each had a population twice that of western Europe, and the population of eastern Europe, the Ottoman Empire and the trading states of central Asia approximately equalled that of western Europe. American treasure spread throughout these Old World societies in an exchange of specie from Europe for valuable, easily transportable goods from Asia.

The inherent logic of the distribution of the extraordinary windfall of rich American mines was reinforced by domestic developments in China. Kenneth Pomerantz has recently summed up the situation (2000: 159–61):

### Table 7.2 Circulation of precious metals, 1550–1800 (millions of rix-dollars per year)

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
<th>Shipments to Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spanish America</td>
<td>To Spain</td>
</tr>
<tr>
<td>1550</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>1600</td>
<td>11–14</td>
<td>10</td>
</tr>
<tr>
<td>1650</td>
<td>10–13</td>
<td>8–9</td>
</tr>
<tr>
<td>1700</td>
<td>12</td>
<td>10–12</td>
</tr>
<tr>
<td>1750</td>
<td>18–20</td>
<td>10–15</td>
</tr>
<tr>
<td>1780</td>
<td>22</td>
<td>15–20</td>
</tr>
<tr>
<td>1800</td>
<td>30</td>
<td>20–5</td>
</tr>
</tbody>
</table>

From roughly 1400 on, China was essentially remonetizing its economy after a series of failed experiments with paper money and a grossly mismanaged copper coinage . . . Silver was becoming the store of value, the money of account (and often the actual medium) for large transactions, and the medium of state payments for this huge and highly commercialized economy. The enormous demand for silver this created made it far more valuable in China (relative to gold and to most other goods) than anywhere else in the world: and China itself had few silver mines. Consequently, China was already importing huge amounts of silver (mostly from Japan, and to some extent from India and Southeast Asia) in the century before Western ships reached Asia. When Westerners did arrive, carrying silver from the richest mines ever discovered . . . they found that sending this silver to China (whether directly or through intermediaries) yielded large and very reliable arbitrage profits – profits so large that there was no good reason for profit-maximizing merchants to send much of anything else . . .

We need to see silver itself as a good: a refined product with a mineral base, which was well suited to an important function and which the West could produce far more cheaply than any place in Asia (excepting, in certain periods, Japan).

. . . What is important here is a more specific point: that the West's huge comparative advantage in the export of silver sucked in trendsetting prestige goods from Asia. This helps to explain why so many other exotic goods flooded into Europe – they paid for silver.

It is only a slight exaggeration to characterise the first trading impact of the European discovery of America as an exchange, in China, of American silver for oriental luxury goods. The exchange was enormous because of both a discontinuous expansion of the supply of silver from America and an expansion of demand for silver in China. The trade was fundamentally multilateral. Spanish America demanded European goods that passed through Spain but to a considerable extent were imported from elsewhere, including Britain. Trade with Spain provided other Europeans with the bullion that they traded to the east. The Chinese obtained silver by selling goods both directly to the European East India Companies and by exchange through South Asia. From the British point of view, this Asian intermediation occurred via the East India Company that sent silver to India. Indians then sent silver to pay for Chinese exports (Chaudhuri 1978, chs. 1 and 8; Flynn 1986; Doherty and Flynn 1989).

THE AMERICAN TRADE

In the eighteenth century, two American crops – sugar produced on the slave plantations of the West Indies and tobacco from Virginia and Maryland – played a greater role in British (and European) trade than did all trade to the east. The Europeans introduced sugar cane from the Mediterranean, but the sugar trade depended unambiguously on American resources. Before Columbus' voyages, sugar was expensive – a spice or medicine of the well-to-do and item of ostentatious consumption
by kings and princes (Mintz 1985: 44–90). The Spanish and the Portuguese introduced sugar into the Canaries and Madeira in the fifteenth century and began the practice of importing African slaves to provide labour. While the price fell somewhat, sugar remained extremely expensive. Columbus introduced sugar into the West Indies and the Portuguese began cultivation in northern Brazil about a generation later. Informed investors quickly realised that with a suitable labour force the West Indian islands and north-eastern Brazil could produce large quantities of sugar at a cost far below the pre-Columbian European price. The history of the Caribbean for the next two centuries is largely that of exploiting opportunities for sugar cultivation with capital and labour imports (if one is willing to encompass the slave trade in such an anodyne phrase).

Tobacco, a New World plant, was the Americas’ other great export staple. Initially it was a medicine in Europe, widely grown in small quantities in the Caribbean and elsewhere in the mid-sixteenth century. The English settlers began growing tobacco at Jamestown shortly after its founding in 1607 and it proved extremely productive. The Chesapeake colonies became the major tobacco producing areas of the seventeenth-century world and the rapid expansion of tobacco exports caused tobacco prices to fall steeply after the first decade of the seventeenth century. West Indian planters abandoned the crop to concentrate on sugar, and after 1630 the islands quickly transformed from a principally white society with a mixed agriculture to slave-plantation-based sugar cane monoculture. In the Chesapeake, tobacco was grown on farms that ranged from small family plots to considerable plantations. The labour force, expanded by immigration, remained overwhelmingly white until the end of the sixteenth century (85 per cent of the 1700 population was white). Soon thereafter, large slave imports began, and by 1780 black slaves made up nearly 40 per cent of the population (McCusker and Menard 1985: 136).

The stages of the exploitation of both tobacco and sugar were similar. Both started as scarce luxuries that fetched high prices in Europe. Production in America, although it carried with it the vast uncertainty of an unexplored environment, promised high profits to those who would succeed. These uncertain but promising conditions still prevailed around 1625 when new English colonies on Barbados and in Virginia began sugar and tobacco production. A hundredweight of sugar from Brazil cost between £4 and £5 in London early in the seventeenth century. By about 1660, the price had fallen to around £2 per cwt but sugar remained very profitable and cultivation expanded rapidly in Barbados, the Leeward Islands and Jamaica. The price fell below £1 in the 1680s (Sheridan 1974; McCusker and Menard 1985: ch. 7). Tobacco’s seventeenth-century history was similar. In the 1620s it sold as high as 20 pence per pound in the Chesapeake, but by the 1680s it had fallen to a penny a pound (McCusker and Menard 1985: ch. 6). In the eighteenth century, price stabilised and the American colonies continued to increase exports of sugar.
and tobacco. Sugar was the more spectacular, with Britain’s imports growing 17.5 times or at a rate of 4 per cent per year in the seventy-five years leading to the American Revolution, while tobacco shipments grew at about 1.6 per cent per year for more than a threelfold increase. Important differences existed between the two staples, however. Tobacco’s growth depended on finding markets elsewhere in Europe. Sugar from the British colonies, in contrast, went almost exclusively to Britain, drawn to a large extent by the spectacular development of tea drinking that accompanied the fall in the retail price of tea.

Although tobacco was widely grown, by 1740 the Chesapeake shipped as much tobacco as Spanish, Portuguese, Turkish, Russian, Dutch and German sources combined (Price 1964: 500). The British Acts of Navigation stipulated that tobacco had to be shipped to a British port in the first instance, but most was then re-exported — two-thirds by the 1710s and over 85 per cent by the 1770s (Price 1973: 849). About a third of the re-exports went to northern and central Europe via Dutch ports, and 20–30 per cent was bought by the French tobacco monopoly. British consumption increased only slightly faster than population and probably more slowly than national income.

The spectacular growth of sugar, on the other hand, was entirely domestic. Sugar re-exports amounted to 75 or 80 per cent of the amount retained for home consumption at the end of the seventeenth century but sugar from the British West Indies lost its competitive position, particularly to sugar from the French island of Saint-Domingue (modern Haiti). By the middle of the century, the British trade statistics show re-exports equal to about 10 per cent of imports but this sugar sold in Ireland — a market reserved to sugar from British colonies by British legislation. Elsewhere in Europe, French sugar was cheaper. Why then did the trade in sugar from the British West Indies increase so rapidly even though the retail price, which had fallen spectacularly in the seventeenth century, probably increased slightly? Per capita consumption on the eve of the American Revolution was about twenty times the level it had been at the beginning of the century. The explanation rests in another important connection between American and Eastern trade — tea.

The British East India Company started shipping of tea directly from Canton at the end of the eighteenth century. As early as 1724, a London merchant observed: ‘The Consumption of Sugar in England, by the great use of Tea and Coffy is very much encreased, of late, especially by the cheapness of Tea which will alwise enlarge the Consumption.’ Tea followed the familiar pattern of initial high prices that encouraged the expansion of the trade followed by fall in the price and the growth of consumption. The price fell from about £3.5 a pound at its first introduction in 1652 to about £1 at the end of the century (Sheridan 1974: 28). In the eighteenth century, tax dominated the British retail price and, not surprisingly, stimulated widespread smuggling, which clouds
our knowledge of the tea market. In the 1720s and 1730s taxes on tea considerably exceeded price net of taxes that the East India Company received at its sales. None the less, the price of tea after paying taxes fell quite dramatically, to a little below 40 per cent of its 1725 price in the early 1770s (Cole 1958, 1975; Mui and Mui 1975). Contemporaries estimated that consumers sweetened a pound of tea with between 12 and 16 pounds of sugar. The cost of the combination was overwhelmingly tea. At wholesale prices in 1725, one pound of tea cost over 132 shillings while adding 12 pounds of sugar brought the cost just over 150 shillings. The price of sweetened tea fell by about 1.2 per cent per year from 1725 to the early 1770s, implying a very high price elasticity of demand for tea of about 9. This was the period during which the British developed their extraordinary demand for sugar (Myntz 1985: ch. 7 explores the evolution of sugar consumption, which peaked in 1901 at more than 90 pounds of sugar per capita).

The American mainland colonies need integration into this story of staple trades. They were key markets for British exports and, after all, they became a great economic power in a few generations after the American Revolution. By 1770, the non-staple, non-slave colonies north of Maryland contained two-thirds of the white population, if only 45 per cent of the total population, of British America (including the West Indies). These colonies played a key role in the eighteenth-century diversification of Britain’s exports by developing multilateral trading opportunities that arose from the staples. Although woollen textile exports grew, by the 1770s other exported manufactured goods exceeded them in value. Some two-thirds of the export of the ‘new’ industrial goods went to America. Without the northern mainland colonies, the exchange of British manufactured exports for tropical imports could not have developed to the extent that it did. In the early seventeenth century, the West Indian colonies became essentially sugar cane monocultures that depended on imports from the northern American mainland colonies for a large portion of their food and raw materials but purchased only limited amounts of manufactured goods.

New England – although its original financiers had hoped to profit on American resources – was not settled for staple production. The region lacked valuable minerals and was unsuitable for staple agriculture. The Puritan commonwealth, none the less, drew immigrants during the ‘great migration’ in the troubled 1630s leading up to the outbreak of the English Civil War, and its 13,500 population in 1640 surpassed the 8,100 in the tobacco region of the Upper South. Thereafter New England attracted few immigrants but a high birth rate caused population to grow at an annual rate of 2.7 per cent from 1640 to 1770. New Englanders, although non-economic considerations dominated their motivations, needed exports and they developed them in multilateral opportunities that Atlantic trade presented. Fishermen from Europe’s Atlantic
littoral fished the Grand Banks cod and sold their catch in Spain and the Mediterranean in the sixteenth century. New Englanders quickly exploited this resource, which provided them with a staple-like export (Grafe 2001). In addition, they sold food (particularly dried fish), timber and, increasingly importantly, shipping and other mercantile services to the British West Indian sugar colonies.

The middle colonies lacked New England’s early religious impetus and developed somewhat later; the British captured New York from the Dutch in 1664 and Pennsylvania was established in 1682. They had better agricultural potential but still they too lacked staple exports that could be sold profitably in Europe. Their eighteenth-century expansion also rested on multilateral trade in Britain’s Atlantic Empire. Colonists financed imports of manufactured goods from Britain by selling flour, grain and meat to West Indies plantations and with income earned from shipping and commercial activities based in Philadelphia and New York (Shepherd and Walton 1972; McCusker and Menard 1985).

Britain occupied the central position in a multilateral world trading system that developed from the exceptional seventeenth- and eighteenth-century American opportunities in mining and then in sugar and tobacco. By the late seventeenth century, Britain’s growing long-distance trade had developed a pattern that persisted for a century and a half. Imports, consisting heavily of tropical primary staple products, were paid for by exports of manufactured goods and the earnings from shipping and other international services. Multilateral trading was central to the pattern. Much of this trade occurred within the British Empire, at least nominally directed by the mercantilist regulations of the British Acts of Navigation, which like other European powers’ mercantile regulations controlled long-distance trade with the east and the Americas. The mid-seventeenth-century British Navigation Acts were designed to protect British shippers from Dutch competition – at that time the world’s leading commercial and shipping economy. The acts stipulated that goods from Asia, Africa and America could be imported into Britain and her possessions only in British ships. Imports from European ports could only be carried by British ships or ships of the country of the imports’ origin. Further certain ‘enumerated’ colonial staples – particularly sugar, tea and tobacco – had to be shipped to a British port, even if their ultimate market was elsewhere, and colonial imports of European goods had to pass through a British port. The acts certainly created artificial ties between the colonies and Britain, and British shipowners and merchants expanded under the shelter they provided from competition from more efficient Dutch competitors (Harper 1939). A disproportionate share of British exports sold in the mainland colonies in North America. Americans outside the staple producing colonies of the South paid for British goods by selling agricultural goods to the West Indies and to southern Europe. The northern mainland colonies sold more than half their export in the West
Indies – principally, but not exclusively, to British sugar colonies. The pattern did not, however, completely derive from mercantilist regulation. New England and Newfoundland fish, the grain of the middle colonies and the rice of the lower South also found eager buyers in southern Europe. In turn, payment for these exports contributed to England’s access to Spanish and Portuguese American silver and gold that were exchanged for textiles and tea in the trade to India and China. Trade with Africa, although relatively small in the context of total trade, played an important multilateral role because the African slave trade provided the labour needed to expand the American plantations. Europeans bought slaves from African slave traders with manufactured goods from Europe and Asia.

THE INDUSTRIAL REVOLUTION AND TRADE

Following the cotton spinning innovations of the late 1760s, technology drove developments in British trade. Improved production methods allowed British firms to capture export markets with cheaper goods while the cotton industry’s essential raw material created a huge new import trade with the American South. The great industries of the industrial revolution – cotton, iron, engineering and coal – were deeply involved in trade. And their growth made 1840 Britain an urban industrial society. Great industrial cities – Manchester and its ilk – were much smaller than London to be sure, but of a new character, with factories and proletariat and the absence of a traditional establishment. Manchester’s industry was created by the technology of Arkwright, Crompton and Watt and by foreign trade. Nearly two of every three pounds of yarn and yards of cloth were exported and all the raw cotton arrived in Liverpool. This urban industrial society, so dependent on trade, shook the foundations of Britain’s aristocratic society. A factory-owning middle class with growing economic power had already forced reform on parliament and now agitated for free trade. Their employees, the new ‘proletariat’, raised more radical demands in the People’s Charter – manhood suffrage, secret ballot, equal electoral districts, abolition of property qualifications for MPs, payment for MPs, and annual parliaments.

Inventions reduced cotton yarn cost in 1820 to less than a fifth of its 1780 level (Harley 1998). Spinners happily sold to foreigners seeking cheap yarn. Similarly, Britain’s new coke-based iron technology lowered costs in metal-using industries, stimulating sales at home and abroad. The introduction of railways overseas, beginning in the 1830s and accelerating in the following decades, created large overseas markets for Britain’s low-cost iron rails (Fremdling 1977). At mid-century, British firms so dominated the world’s modern industry that many contemporaries, and historians after them, talked of a British monopoly. Paul Bairoch (1982: 288–97) has calculated that in the middle third of the nineteenth
century Britain produced some two-thirds of the world’s output of ‘new technology’ products. During this period, the exports of textiles and other goods cheapened by Britain’s new industrial technology (aggregated at, say, 1800 prices) grew much faster than either ‘real’ national income or ‘real’ industrial production aggregated at the same prices.

The growth of exports was not confined to the goods of the famous industries of the industrial revolution. Some have suggested that this should be taken as evidence to support an older view of the industrial revolution, which sees technological change cheapening British industrial goods generally, and to challenge the recent view that sees technological change largely confined to the famous industries (Temin 1997). However, the expansion of trade is consistent with the recent view of localised technological change. British population grew very rapidly, creating an expanding demand for imported food. The famous industries’ large exports were driven by falling prices and so they earned much less from overseas than the expansion of the volume of their exports would seem to indicate. Furthermore, cotton required massive imports of raw materials. As a result, exports of other traditionally exporting industries also expanded to help to finance growing import demand (Harley and Crafts 2000).

**REPEAL OF THE CORN LAWS**

In the middle of the nineteenth century the politics of trade shifted as Britain led the dismantling of the restrictions of eighteenth-century mercantilism. The repeal of the corn laws in 1846 was the great symbol. Britain’s political consensus shifted radically from supporting a trade policy of protecting vital interests – particularly the landed interest and those of East and West Indian traders – to a commitment to free trade.

Repeal of the corn laws presents something of a paradox. It radically changed the politics of tariffs, but actually tariffs fell only slightly and the ratio of tariff revenue to the value of imports actually remained higher than in France until the 1870s (Nye 1991; Irwin 1993). None the less, ‘free trade’ – which meant foreswearing the use of tariffs to protect domestic interests although retaining some for revenue – took on a near constitutional status in Britain that removed the possibility of protective tariffs from usual political discussion. Britain’s leaders changed policy in response to various forces: industrialisation and urbanisation altered British society; growing population, both in Britain and elsewhere, changed the economics of the grain market (Fairlie 1965, 1969); the Reform Act of 1832 altered the politics; agitation outside of parliament became more effective; economic crises demanded action from the administration.

Eighteenth-century mercantilism was a complicated amalgam of ideas and policies. The Acts of Navigation, tariffs, bounties and prohibitions
became an almost incomprehensible collection of statutes from an age in which ‘the British parliament seems rarely to rise to the dignity of a general proposition’. Two separate principles motivated regulation; either it protected domestic interests or it provided revenue for the state; occasionally it did both. The Navigation Acts were valued because they strengthened the shipping and trading that supported maritime interests that underlay the successful ‘blue water strategy’ in the eighteenth-century wars against France. Duties on spirits, tobacco, tea and sugar complemented similar excise taxes and provided about a quarter of government revenue (Brewer 1988: ch. 4). Early in the eighteenth century, however, protection of special interests became entrenched and most of the regulations, at least measured by simple counting, aided interest groups (Davis 1966). Agriculture – the great interest of the aristocratic classes that ran the state – received aid through export bounties at times of low domestic price and duties that protected from cheap imports. The Customs protected British textile manufacturers from Irish linen and Indian cotton, ironmasters from cheap Swedish iron, and much else. Adam Smith heaped scorn on this policy in *The Wealth of Nations*: ‘It cannot be very difficult to determine who have been the contrivers of this whole mercantile system: not the consumers . . . whose interests have been entirely neglected: but the producers, whose interest have been so carefully attended to’ (1976 [1776]: 626).

Under ideological attack such as Smith’s, administrators in the 1780s began tentatively to simplify and rationalise the customs, without changing the basic philosophy. Revenue needs of the Napoleonic Wars interrupted these stirrings of rational tariff policy. The income tax – ‘the oppressive and inquisitorial tax’ to contemporaries – was repealed with the peace, but other war taxes remained to pay the debt incurred in financing the war (over half the budget down to the 1850s). Protection of interests as well as revenue continued to shape tariff policy. Parliament reacted to sharp post-war declines in grain prices with new protective corn laws. High wartime duties on timber had both raised revenue and, through strong discrimination in favour of Empire timber, promoted a Canadian timber industry that joined the West Indian sugar planters as an interest to be protected. Policies to protect established interests generally recommended themselves to Britain’s aristocratic political elite; they had been badly frightened by revolution in France.

Rationalisation of the tariff structure resumed in the 1820s with the removal of contradictory or inoperative duties, but even this modest programme was far from complete in 1840. On the eve of the move to free trade the tariff remained complex and consciously protective of British interests (Davis 1966; Clapham 1926). The tariff contained prohibitions on imports of live or dead meat, duties on ‘slave-grown’ sugar two or more times higher than those on sugar from British colonies, drawbacks on timber for use in the mines of Cornwall or in churches, eighty-odd different specifications of skins – from badger to weasel – with associated
duties, export duties on coal and wool, and over 2,000 import duties on items ranging from agates to zebra wood. But as sources of revenue many duties were superfluous; seventeen of 721 articles in the tariff schedule produced 94.5 per cent of the tariff revenue (Parliamentary Papers 1840: 102).

Political and economic events brought the tariff to the forefront of parliamentary concern in the early 1840s. Severe economic recession created distress in manufacturing districts and, by curtailing revenue from customs and excises, brought a crisis in government finance. Distress strengthened the already powerful political challenge, mainly outside of parliament, to the corn laws – a particularly iniquitous tax on the poor’s food for the benefit of the rich. In 1842 Prime Minister Peel acted decisively to strengthen government finance and unexpectedly reintroduced the income tax, which provided revenue that permitted tariff reform; the corn laws and the timber duties were modified. Return of prosperity allowed Peel to undertake further tariff reform in 1845 – including the removal of the import tax on raw cotton and lowering of the sugar duties.

Distress convinced Peel that protecting the agricultural interests with tariffs on food was both morally wrong and in the long run politically unsustainable; the majority of his Tory party, however, remained committed to protection. In the fall of 1845 bad weather brought on a food crisis by seriously damaging the grain harvest and spreading potato blight throughout northern Europe. This forced Peel’s government to act. It became apparent that the potato blight would bring famine to Ireland in the New Year. The government split; Peel and most of his closest associates advocated immediate repeal but failed to convince their fellows. The government resigned, only to resume office when the opposition Whigs failed to form a government. Peel then brought repeal before parliament in face of opposition from most of his party, securing passage with opposition support (Gash 1986: chs. 9, 10, 15, 16).

Repeal had great political impact (Gash, 1986: 714):

It is easy now to see how contemporary opinion exaggerated the effects, both baneful and beneficial, of the repeal of the corn laws. But the significance of the action taken by Peel in 1846 was symbolic; and as a symbol it was rivalled only by the Reform Act of 1832 as the decisive event in domestic politics in the first half of the nineteenth century. The Reform Act had been a gesture of deference to public opinion and the enhanced stature of new political classes. After 1832 the aristocracy continued to govern the country but it governed on trust. In that situation there were two dangers that might have destroyed the good effects of reform. One was that the aristocracy might be unable to carry out its trust for lack of internal cohesion; the other that it would fail to recognise the terms of its trusteeship. By 1845 the corn laws had been elevated in the public mind into a test of governmental integrity. Peel’s response and the sacrifice it entailed did more than anything else to heal the social breach and restore public confidence in the good faith of a system which was still essentially oligarchic.
Almost immediately Benjamin Disraeli, who emerged as the leader of the protectionist majority of the Tory party that split from Peel, recognised that the reimposition of protection would subject the established order – the Tory’s overwhelming concern – to savage and perhaps fatal popular attack (Blake 1966: 278–84). On the other side of the House, Whigs, Radicals and Peelites, despite their many differences, all opposed protectionism.

Repeal of the corn laws did not immediately end Britain’s tariffs. Import duties on consumption goods continued to provide a large portion of government revenue but the principle of removing protective tariffs had been achieved and only consolidation remained. Gladstone’s 1860 budget, and the associated Cobden–Chevalier Free Trade Treaty with France, removed the last vestiges of the protective system. The British Customs had been transformed from its Byzantine eighteenth-century structure to revenue duties on a little more that a dozen imports. Tariffs on sugar (complicated by West Indian interests and Brazilian slavery), tea and coffee, spirits, wine and tobacco remained important in a tax system that included comparable excise taxes on domestic production. These duties, as the French in particular pointed out with respect to wine, continued to distort trade and protect some British interests (Nye 1991), but return to old-style protection was politically precluded in Britain for two generations. Britain’s unwavering free trade supported expansion of world trade for more than half a century.

TRADE AND GROWTH

The development of Britain into the first modern industrial economy occurred in tandem with the expansion and increasing sophistication of its foreign trade and growth is, after all, our primary interest in studying British economic history. Many commentators have posited a causal link from trade to growth, even suggesting that growth depended on trade. From the mid-seventeenth century onward, British trade expanded and diversified. Merchant wealth and financial sophistication developed in private merchant firms and in great trading corporations, like the East India Company, engaged in long-distance trade to the Orient and America. The ‘Commercial Revolution’ developed the legal, financial and commercial institutions that supported the subsequent ‘industrial revolution’ (see chapters 6 and 8). During the industrial revolution the great progressive industries – textiles, metal working and coal – grew by selling world-wide. The correlation between British exports and incomes suggests dependence. Eighteenth-century Britain surpassed Holland as the mercantile and commercial capital of Europe; the industrial revolution occurred in Britain and not in Holland. Britain’s nineteenth-century place as ‘workshop of the world’ rested on the great export industries.
Statistics appear to confirm the impression of trade's importance (Crouzet 1980). The proportion of national income derived from exports and spent on imports nearly doubled relative to national income during the eighteenth century (despite a sharp setback during the American War of Independence when exports fell by more than a quarter). The ratio of trade to national income continued to grow in the nineteenth century, although somewhat surprisingly it hardly increased during the industrial revolution itself, when British cotton textiles firms quickly found large overseas markets for products of their improved technology, but did so at sharply lower prices. Imports, of course, increased along with exports. Britons in the heyday of Victoria's reign spent at least one out of every four pounds on foreign goods, a higher share than in France or Germany, and much higher than in the United States. Some three-quarters of all imports were foods and raw materials and imports were frequently the major, or even only, source of supply.

Britain was the pivot of international trade and events affecting her trade, such as the commercial revolution in long-distance trade or the move to free trade in the middle decades of the nineteenth century, might be expected to react on the British economy for good or evil with special force. In the decade 1876–85 (the earliest dates with usable statistics) Britain exported about 38 per cent of manufactured goods in world trade; a few decades earlier, the share had no doubt been larger (Hilgerdt 1945: 157–8). This position of dominance was unique, approached but not equalled even by the United States, whose share in world manufactured exports peaked at 27 per cent in 1950. Only after the First World War did the United States exceed Britain in exports of all kinds (with American wheat and British coal included in the accounting) and only after the Second World War in total exports of manufactures (Maizels 1963).

THE IMPORTANCE OF TRADE AND WHY BRITAIN DID NOT ‘DEPEND’ ON TRADE

Britain and the world, then, appear to have been mutually dependent, yet the size of trade is not necessarily a good guide to its importance. Trade alters economic structure as trading economies allocate resources in response to trading opportunities, and certainly trade promoted British industrialisation. In the eighteenth century Britain purchased tropical goods like sugar and tobacco by producing more manufactured goods and exporting them to customers, particularly in America. In the nineteenth century, industrial exports purchased a wider range of food and raw materials. We need, however, to be careful in talking about the dependence of an economy on trade. A careless reading of the statistics suggests that removing trade might have cut national income by 25 or 30 per cent and British wheat consumption (for example) by 80 per cent – after
all, these were the shares of foreign supplies in national income and in
wheat consumption. The volume of a trade, however, is a poor guide to
how much the economy’s prosperity depends on it. The issue is simplest
to see in the case of a single commodity. Victorian Britain, denied imports
of wheat, would grow more wheat and other home-grown foods with the
resources that had previously produced exports to pay for foreign wheat.
Foregoing wheat from the fertile plains of Illinois or the Ukraine would
have a cost, but the loss to British wellbeing would be much less than
the whole value of the wheat imported.

The reasoning here is characteristically economic, focusing as it does
on the alternatives to acquiring goods by trade. A stress on exports rather
than imports as the things-to-be-desired is non-economic. One hears it
said, for example, that Britain had to import corn and timber and wine
in order to give foreigners the wherewithal to buy British manufactures.
A person or nation fully employed, however, yearns to acquire goods, not
to get rid of them. Exports are an unfortunate sacrifice that people or
nations must make to acquire imports for consumption. As Adam Smith
remarked in his attack on the mercantilist doctrine that an excess of
exports over imports should be the goal of policy: ‘Consumption is the
sole end of and purpose of all production . . . The maxim is so per-
fectly self-evident, that it would be absurd to attempt to prove it’ (Smith
1976 [1776]: 625). Correct determination of the contribution of trade to
economic welfare involves estimating the loss involved in reallocating re-
sources devoted to the production of goods for export and instead using
them to produce substitutes for domestic imports.

Although the volume of trade is an inappropriate yardstick, the gains
from trade properly conceived may still seem large. For example, O’Brien
and Engerman (1991) argue that export industries employed an increasing
proportion of the labour force in the eighteenth century which the econ-
omy would have had trouble employing in the absence of growing trade.
If so, reducing trade would have eliminated jobs in export industries and
the workers would have produced goods of much lower value than the
imports obtained by trade. It is not entirely clear whether O’Brien and
Engerman feel that, even in the long run, markets in the early modern
British economy lacked the flexibility to reallocate resources to domestic
use or whether they feel that their productivity in alternative uses would
have been very low.

In a somewhat different vein, Kenneth Pomeranz (2000) has recently
argued, comparing China and Europe, that Britain’s ability to trade man-
ufactured goods for food and raw materials with America was key to the
success of the industrial revolution, because it released Europe from bio-
ological limits to growth. The argument seems overblown. The great food
imports came late in the nineteenth century, well after the industrial
revolution; much of Europe imposed tariffs to frustrate American food
imports; and much of Britain’s food and raw material imports did not
come from American sources. None the less, it is useful to investigate
the likely magnitude of income loss that could have occurred if exports
had been unavailable as a means of acquiring imports.

Calculating the benefits of trade, or alternatively the cost of abandon-
ing it, is of little significance in itself, for no historical issue turns on
the literal abandonment of British foreign trade, but it provides useful
background to more modest experiments in counterfactuals and checks
exaggerated opinions of Britain’s dependence on trade. Foreign trade can
be viewed as an industry that produces imports, say wheat, in exchange
for sacrifices of exports, say cotton cloth. The ‘productivity’ of this indus-
try is the rate at which a quarter of wheat exchanges for yards of cloth,
i.e. the ‘terms of trade’. The price of Britain’s exports of cotton cloth,
iron, coal, shipping services and so forth divided by the price of imports
of wheat, lumber, tobacco, raw cotton and so forth is the terms of trade,
and indicates the amount of imports a unit of exports can buy. The gains
from trade depend on the extent that trade changed the terms of trade
between goods imported and exported and on the importance of the for-
eign trade ‘industry’ relative to other, domestic, industries. The ratio of
exports (or imports) to national income rose from about 0.08 early in the
eighteenth century to about 0.30 by the end of the nineteenth. If trade
made imported goods 10 per cent cheaper, and the share of trade were
0.19 of income (its average for the two centuries), national income would
rise on this account by no more than (10 per cent) * (0.19), or 1.9 per cent.

The matter of concept settled, the remaining question is the difficult
counterfactual one of how much the terms of trade would have moved
had Britain lacked trading opportunities. Clearly, without trade the price
of now-abundant exportables like cloth would have fallen relative to the
price of now-scarce, land-intensive importables like wheat. In other words,
the terms of trade would have deteriorated. How much? Since no such
event occurred we cannot answer this question precisely, but the ac-
tual course of the terms of trade over the nineteenth century, shown in
Table 7.3 and Figure 7.2, gives some guidance. The massive fall from 170
in 1820 to 100 in 1860 resulted from Britain’s ingenuity in making ex-
ported cotton cloth cheaper, which more than overcame the effect of the
push of population in Europe against supplies of grain. The (smaller) rise
thereafter was a consequence of the full

<table>
<thead>
<tr>
<th>Year</th>
<th>Terms of Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1820</td>
<td>170</td>
</tr>
<tr>
<td>1840</td>
<td>130</td>
</tr>
<tr>
<td>1860</td>
<td>100</td>
</tr>
<tr>
<td>1880</td>
<td>110</td>
</tr>
<tr>
<td>1900</td>
<td>130</td>
</tr>
<tr>
<td>1910</td>
<td>130</td>
</tr>
</tbody>
</table>

of a rise in the price of German toys relative to British clocks, perhaps 10 per cent, would have been necessary before domestic production would have replaced shipments into or out of Britain. But quite a large rise would have been necessary to stop wheat and raw cotton coming in or textiles going out, so powerful were the forces of specialisation in these goods. With a tariff of 40 per cent, British farmers fed the nation in years of good harvest under the corn laws. A doubling of the price of cotton cloth exports during the cotton famine caused by the American Civil War sharply reduced exports but only by a third, but the experiment is flawed because the prices of Britain’s competitors in this market went up as well. As an illustration we may consider that a prohibition of trade might have reduced the price of exportables relative to importables by, say, 50 per cent. The share of imports in income to multiply the 50 per cent would be half the way from zero, under the prohibition, to the 25 per cent that actually occurred in 1860. Self-sufficiency in 1860, then, would have cost Britain only (50 per cent) \( \times (0.125) \) or about 6 per cent of national income.

Six per cent of national income – or even, if, improbably, the terms of trade effect were twice as great, 12 per cent – looks small beside bold metaphors of Britain’s ‘dependence’ on foreign trade. Indeed, the calculation is worthwhile only to loosen the grip of the metaphor (for other attempts see Kravis 1970, 1973; Crafts 1973). Even on the absurd premise of no foreign trade at all, Britain’s loss would have been small relative to nineteenth-century growth of about 2 per cent per year that increased income some sevenfold. True, had Britain suddenly been denied all trade by strike or edict, the immediate effects would have been larger (cf. Crouzet 1958, 1964; Olson 1963). The experiment relevant to all the history of this period except times of war and blockade, however, is not a sudden denial of trade but a failure of it to grow over a long term. It is precisely the steady and rapid growth over two centuries that has led people to attribute to foreign trade a major role in economic growth.

The previous calculations focus on the gains trade provides from reallocating resources in response to comparative advantage. Unfortunately, economists have long recognised that such reallocation, on which their techniques focus, does not explain very much of the economic growth we
observe in modern economies. It is possible to imagine forces that would have increased trade’s long-run influence. This is particularly tempting in Britain’s case since we often loosely, but mistakenly, use the term ‘industrialisation’ as a synonym for modern economic growth. The empirical impact of possible dynamic influences, however, was probably small. Like many traditional historical narratives, some modern analytical models emphasise learning by doing as an important source of technological change and hence growth (Helpman and Krugman 1985). However, trade implies not only that some industries grow relative to the size they would have been without trade but also that some are smaller. Therefore a net gain in technological progress requires that the gains from learning in the expanding industries exceed the losses from failing to learn in the industries from which resources were drawn. The dynamic British industries would have been large even if they had not captured export markets, and there is no evidence that the expansion from trade contributed learning that would not have occurred in somewhat smaller industries. Expanding trade could also have increased growth, if by chance the people enriched by the extension of foreign trade, such as East and West Indian merchants, cotton manufacturers and coal owners, saved or invested more than the people impoverished by the trade, such as timber owners and silk manufacturers. New industries probably had more scope for learning by doing, and income earners more orientated towards capitalist expansion may have saved and innovated more than those orientated towards aristocratic privilege, but there is no persuasive evidence that these effects were large. Britain was left with, say, its 6 per cent – no trivial sum, to be sure, but measured against the whole rise in output per worker of roughly 80 per cent from 1855 to 1913, only one thirteenth of the story.

MERCANTILISM, TRADE AND GROWTH

Britain’s transformation from an economic backwater into Europe’s leading economy with sophisticated commercial and financial institutions and a large manufacturing sector occurred during the mercantile era of growing long-distance trade. Two important issues have long attracted historians’ attention. First, trade developed in the context of mercantilist imperial regulations, conflict and warfare among European empires. How much of Britain’s success depended on policies that supported military and naval success? Second, Britain’s – and more widely, Europe’s – growing trade was intertwined with imperialism. In the New World, the conquerors displaced indigenous societies and enslaved the population to exploit the mines. When the indigenous societies failed to provide adequate labour, they imported as many as 10 million African slaves for labour. In the east, the Dutch controlled the Spice Islands and the British developed hegemony in India. In the centuries that followed, Europeans became spectacularly richer while the peoples that fell under European
control did not. Were European success and non-European stagnation two parts of a single process in which Europeans became rich by exploiting the rest of the world (Williams 1944; Wallerstein 1980)? Temporal relationships have led many to conclude that success in war and imperial exploitation were keys to Europe’s economic success, but more careful examination of the historical details and economic connections casts doubt on these positions.

In the eighteenth-century imperial wars, Britain adopted a ‘blue-water strategy’ that exploited its island position. The navy protected the British Isles from invasion and harassed French trade while the British subsidised continental allies to fight land campaigns against France. The ‘blue-water strategy’ was expensive, since fleets required greater and more sustained outlays than armies and subsidies required large amounts of cash at short notice. Success rested on Britain’s superior ability to tax and to borrow at least as much as on its island position (Baugh 1988, 1998; Brewer 1989; O’Brien 1998, 2000; chapter 8 below). Shipping and commerce were central to the strategy’s success. Merchant shipping provided the manpower for wartime fleets. Duties on imports provided significant, but by no means overwhelming, revenue. Probably more important, the commercial establishment in London lent large amounts to the government on short notice – an indispensable British asset in time of war.

Even though British politicians paid close attention to trade and shipping interests, it would probably be incorrect to place excessive emphasis on power politics in the development of British trade, and by possible extension, on growth. Despite naval domination in most of the wars, Britain gained little territory and the loss of the thirteen mainland American colonies, the greatest territorial change in eighteenth-century empires, went decisively against Britain.

The eighteenth-century British Empire was not exceptionally large or prosperous. The Spanish, French and English sugar islands in the West Indies all had about the same population (300,000 to 350,000 around 1750). The British islands were high-cost producers, unable to compete with the rapidly growing output of French Saint-Domingue without protection. During the eighteenth century, French trade to the West Indies grew more rapidly than British, and merchants in the French Atlantic ports dominated the re-export, of sugar and coffee to northern Europe (Crouzet 1996). Even in 1750, Spanish America’s population of 10.5 million provided a much larger market than British America’s 1.5 million. Portugal’s colony in Brazil had a population equal to that of all of British America. The British Empire’s size or trading contribution can hardly have made the decisive contribution to Britain’s lead in the emergence of modern economic growth.

Somewhat ironically, the northern mainland American colonies – undesirable from a mercantilist view and established well before Britain became an aggressive participant in European imperial conflicts –
provided the main support to the trading pattern that accelerated Britain’s industrialisation. By financing their imports by selling food, raw materials and commercial services to the staple exporting colonies they allowed Britain to expand exports of manufactured goods other than the traditional woollen textiles to a much greater extent than would have been possible with only bilateral trade. The French Empire, in contrast, had considerable difficulties supplying food and raw materials to its sugar colonies and failed to develop export trades in manufactured goods comparable to Britain’s. However, the independence of the thirteen colonies hardly affected trade. Attempts to limit American trade with the West Indies failed because West Indian interests depended on American imports. British exporters retained their American markets after Independence. Re-emergence of European war in 1793 following the French Revolution only reinforced the American connection for Britain’s manufactured exports to the Americas. American neutrality expanded multilateral trade to the Caribbean and South America and Britain’s exports surged (Cuenca Esteban 1997).

Europe’s imperialistic military success, the horror of the African slave trade, and global inequality of incomes today, have led some scholars to maintain that the tropical trade of the seventeenth and eighteenth centuries rested on Europeans’ aggressive exploitation of power and that in the process Europe extracted resources from the rest of the world that made a unique contribution to Europe’s growth. The modern debate on this issue still refers to ‘Capitalism and Slavery’ (see Williams 1944, an Oxford doctoral thesis written by Eric Williams, later the first prime minister of Trinidad and Tobago). Williams argued that the slave trade and the sugar plantations yielded great profits that played a key role in the mobilisation of capital for Britain’s industrial revolution. Williams’s view is now seen as overblown and the slave trade as not exceptionally profitable, but debate continues (Inikori 1987; Solow 1991a; Morgan 2000). Barbara Solow (1985) presents calculations that show that slave profits equalled a large portion of industrial investment, but this calculation is misleading. It rests primarily on the fact that the investment requirements of the British industrial revolution were very small relative to national income or the incomes of property owners. Solow’s slave-related profits grow from under three-tenths of 1 per cent of national income in the late eighteenth century to close to 1.5 per cent by 1770, but total income from wealth was close to half of Britain’s national income. Consequently, her calculation would be duplicated for many other potential investors without providing any useful clues. It is hard not to agree with the recent assessment made by David Eltis and Stanley Engerman – two leading scholars of the slave economies of the Caribbean – that ‘sugar cultivation and the slave trade were not particularly large, nor did they have strong growth-inducing ties with the rest of the British economy’ (2000: 123).
The Navigation Acts forced colonial trade through Britain, potentially enriching Britain at the expense of the colonies. In sugar, the most valuable of the traded staples, however, mercantile restriction hurt British income for the benefit of West Indian plantation owners by reserving the British market to high-cost British colonies. Sugar from the French colonies would have saved British consumers money. Mercantilist restrictions that required colonists to purchase manufactured imports from Britain seem to have had little effect. The American colonies continued to purchase almost exclusively from Britain after Independence just as they had before. The Navigation Acts’ requirement that tobacco sold in continental Europe pass through British ports distorted trade in Britain’s favour. The distortion has been studied by economic historians interested in the role of economic grievances in the American Revolution in classic studies in the New Economic History that combine clearly specified models with detailed historical data (Thomas 1965; McClelland 1969; Thomas and McCloskey 1981). The cost to the colonies was small and the gain to Britain even smaller. The extra expenses of shipment were not large and were balanced by the considerable credit and marketing services that British, particularly Scottish, merchants provided to the Chesapeake planters. After Independence British merchants continued to handle a substantial portion of American tobacco exports to continental Europe (Davis 1962).

A broader set of connections to European imperialism and European growth has been suggested by a ‘global economy’ literature that raises a large number of issues beyond the profitability of the slave trade (Wallerstein 1980). These writers see the increase in the economic and political power of merchants engaged in long-distance trade and the rise of port cities and their associated manufacturing hinterland as key features in the social and economic transformation of Europe into a capitalist society. These arguments rest on still poorly articulated and largely untested views of the dynamics of growth that require a very large weight to be placed on small parts of the early modern economy. After all, trade was a relatively small part of even Britain’s economic activity and the long-distance trade to Asia and the Americas was a small part of trade. It is hard not to agree with O’Brien’s (1982) conclusion ‘that the periphery was peripheral’ in the development of modern economic growth in north-western Europe.

**TRADE AND THE INDUSTRIAL REVOLUTION**

Exports are often seen as crucial to Britain’s growth during the industrial revolution. They increased much faster in volume than total output and the most dynamic industries exported very large proportions of their output. Some commentators have concluded from this that the demand for
these exports was a crucial causal factor in growth (Cuenca Esteban 1997).

This conclusion is almost certainly inappropriate. Calculation of volume, or ‘real’ values, by aggregating quantities at the unchanged prices of a base year is an indispensable tool for removing distortions that arise in periods in which the value of money changes such, as during the inflation caused by American treasure in the sixteenth and seventeenth centuries. But when the relative prices of goods change radically, ‘real’ values have ambiguous meaning. During the industrial revolution exports grew not because foreign demand for British goods at the prevailing price increased, but because technological improvements caused a fall in prices that attracted foreign buyers. As Figure 7.3 shows, because prices fell the value of the larger volume of exports actually grew more slowly than the value of total output over the period 1800 to 1830.

We sometimes see reference to Britain benefiting from a monopoly in industrial revolution industries, but this is unfortunate; there was clearly no monopoly despite Britain’s dominance. Firms were small and entered the British industry easily. As a consequence, technological improvements lowered costs, and competition caused prices to fall as well. Lower prices passed the benefits of technology to consumers; the foreign two-thirds of cotton textile customers shared the benefits equally with domestic customers. Competition among firms meant that the British gained little from the rapidly growing exports but the rest of the world gained from cheap textiles. Had the British industry been able to act as a monopolist and sold at a higher price, Britain would have benefited more.

Cotton textiles that British firms exported earned foreign exchange that bought raw materials and foodstuffs. In the twenty-five years after the Napoleonic War, technological progress reduced the capital and labour needed to spin and weave a piece of cotton cloth in Lancashire by nearly half, and competition among firms drove textile prices down in step. In 1840 an exported piece of cloth could purchase only half the foreign goods it had commanded at war’s end (Imlah 1958). Because price declines and exports transferred benefits of technological change to foreign consumers, conventional aggregation of national income overstates the benefits to Britain of the cotton industry’s growth. Table 7.4 illustrate the magnitudes involved. In 1841 Britain produced 5.2 times the

Figure 7.3 Exports as proportion of national income, 1700–1913
Table 7.4  Cotton textile production and consumption yielded, 1815–41: effects of terms of trade

<table>
<thead>
<tr>
<th>Quantities</th>
<th>Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1815</td>
</tr>
<tr>
<td>Output</td>
<td>100</td>
</tr>
<tr>
<td>Raw cotton</td>
<td>25</td>
</tr>
<tr>
<td>Consumption</td>
<td></td>
</tr>
<tr>
<td>Cotton</td>
<td>40</td>
</tr>
<tr>
<td>Imports</td>
<td>35</td>
</tr>
<tr>
<td>Aggregate consumption</td>
<td>Index, 1815 = 100</td>
</tr>
<tr>
<td>1815 prices</td>
<td>75</td>
</tr>
<tr>
<td>1841 prices</td>
<td>55</td>
</tr>
</tbody>
</table>

Source: See text.

About 60 per cent of output was exported in both years. Think of the foreign exchange earned from the export sales first paying for the industry’s imported raw cotton, with the remainder purchasing imports for consumption. In 1815, raw cotton imports cost about a quarter of the industry revenue; in 1841 the proportion was somewhat higher at 31 per cent. About 35 per cent (60 per cent minus 25) of the output in 1815 was exported for foreign consumption goods. In 1841 about 29 per cent of a much larger output was exchanged for such consumption goods. This was 4.3 times as many textiles as in 1815 but these exchanged for only 2.15 times as many foreign goods because revenue from a given piece of cloth could now purchase only half as many imports. The cotton textiles produced increased more than fivefold, but the consumption (British-consumed cotton goods and imports) it provided increased less than fourfold. The growth of exports increased the industry’s size and social impact but had modest impact on national income.

Repeal of the corn laws has also at times been seen as making a major contribution to British growth. The height of the tariff and its changes are illustrated by the ratio of tariff revenues to the value of imports in Figure 7.4 (the measure misses the effect of outright prohibitions or duties so high as to be prohibitive). In 1841, import duties equalled 35 per cent of the value of imports and by 1881 they had fallen to only 6 per cent. Peel’s political change, however, contributed only modestly to this decline. More than three-quarters of the revenue before 1846 came from the duties on sugar, spirits and wine, tea and coffee, and tobacco, which remained after repeal (‘that the labouring classes should bear their share of the burden in a form in which it will be palpable and intelligible to them’, as Gladstone said in presenting his 1860 budget). These revenue tariffs were able to decline between 1841 and 1881 because government expenditure declined from 9 per cent of income to 6 per cent and imports rose from 12 per cent of income to 30 per cent (in part owing to falling tariffs). Import duties could have fallen to about 9 per cent of imports and still have provided the same share of government revenue. By 1881, new tax sources – primarily income tax and estate duties – provided a little over a fifth of revenue and a shift of tax burden from customs duties to excise taxes further lowered customs duties to 6 per cent of the value of imports (McCloskey 1980: 309–13).

Trade theories help to evaluate the impact of repeal and emphasise that the impact on the distribution of income is greater than on its size.
The categories of the simple theory of trade – importables, exportables and non-traded goods – corresponded well in Victorian Britain to agriculture (including some mining), manufacturing, and the residual sector, services. The early 1840s tariff raised the price of land-intensive raw materials and food relative to the price of manufactures and services, as would be expected of a tariff designed by committees of landlords in parliament and imposed on the imports of a nation buying little but raw materials and food from the rest of the world. The first effect of free trade is obvious: removing high tariffs reduced British landlords’ income relative to their countrymen. Political argument at the time took it as axiomatic that what landlords lost the workers would gain, because protection of British corn producers was a tax on the mainstay of the workers’ diet. In the event the real wages of workers did rise sharply after the 1840s but real rents of landlords did not fall until a generation later. Neither event is strictly relevant, however, for history was not a controlled experiment in which all factors except tariffs were held constant. In fact it is unlikely that a controlled experiment would have produced the symmetry contemporaries expected because landlords and workers were not in fact symmetrically located in the British economy. Removal of tariffs affected both the prices of goods and the incomes of labourers, capitalists and landlords. Landlords were located, of course, in agriculture and their incomes would fall. But workers were not committed to one vulnerable sector and were located everywhere: in the very agriculture made worse off by the fall of protection, in manufacturing made better off, and mostly in the vast sector of goods and (especially) services that did not cross Britain’s borders. Most of the distributional consequences of the fall of protection was to shift income from wealthy landlords committed to (importable) agriculture to wealthy capitalists committed to (exportable) manufacturing, and even this was no dramatic amount.

Contemporary critics of the corn laws, and later historians, emphasised that agricultural protection was a tax on food and saw its impact working through the cost of living. The corn laws made grain expensive. The poorest classes spent nearly half their income on grain-based food while the richest spent only a negligible portion. One calculation suggests that the higher prices of corn probably decreased real wages of unskilled workers around 1830 by between 12 and 24 per cent (Williamson 1990b).
This calculation is uncertain (it probably overestimated the decline of grain prices by failing to consider an increase in prices in the Baltic), but the tax on food had large distributional impact.

The tariff also affected the size of national income but even the direction of this effect is in doubt. Free traders past and present have had no doubts whatever. Just as an individual who restricts his dealings with the rest of the world is worse off, so too, they argued, is the nation. British landlords may be made better off by a tariff on corn, but because the nation as a whole must be worse off with less access to corn, the loss to the rest of the nation is necessarily larger. But the argument is flawed. A monopolist can raise the price of what he sells and his income by withholding supply; so can a country. As we have seen, technological leadership gave Britain’s cotton textiles, iron and machinery dominant positions during the industrial revolution but competition among small firms ensured that technology lowered prices rather than increased firms’ profits. The tariffs of the early nineteenth century provided Britain with some monopoly advantage in these new industries by restricting British willingness to accept foreign goods. Since Britain was the dominant supplier and the main buyer of many foreigners’ exports, foreigners faced with the tariff received less cloth and iron for their exports and Britain’s terms of trade were better than they would have been. By abandoning protection Britain magnanimously chose not to exploit its unique position of mid-century market power. Paradoxically, protection began to recover its political appeal only at the end of the century, when potential monopoly was gone forever. In the time of greatest enthusiasm for free trade the usual argument is probably the reverse of the truth. The move towards free trade in the 1840s and 1850s probably reduced Britain’s national income slightly (McCloskey 1980; Irwin 1988; Crafts and Harley 2003).

CONCLUSION

Britain’s early modern economic growth intertwined with an international economy that was undergoing epochal change. Expanding foreign trade accompanied the increasing sophistication of the British economy in the century before the industrial revolution. Furthermore, the rapid growth of the industries that transformed the British economy and its society in the early nineteenth century in response to the new technologies of the industrial revolution owed much to export markets.

International trade unambiguously enhanced Britain’s industrialisation. The opportunities that Columbus’s discovery of America presented to the Eurasian economy profoundly affected Europe’s relationship with the rest of the world. A new multilateral network of trade developed and comparative advantage in this context promoted British industrialisation.
Initially, American treasure sent to the Iberian peninsula purchased British textiles. In the eighteenth century, Britain financed sugar and tobacco imports by selling a multitude of manufactured goods to the North Americans, who supplied food and timber to the West Indies. Finally, when the industrial revolution greatly cheapened British textiles and hardware, firms in these industries found their products in demand world-wide. By exporting manufactured goods, in most cases in multilateral trading networks to buy imported foodstuffs, including tropical sugar and tea, the British economy became much more industrialised than it would otherwise have been.

Trade undoubtedly stimulated Britain’s industrialisation, but it is much more difficult to develop causal connections from trade growth to the emergence of sustained modern economic growth. Specialisation and trade, of course, provided gains for the economy, but quantifying these gains shows them to have been quite small compared to the growth that emerged after the industrial revolution. Certainly there may have been gains from developing new industries and from the rise of specialised urban traders and financiers but we do not have any reliable way to measure these effects and they are likely to have been small. Certainly, growth caused some trade and the reverse is less clear. Most obviously, during the industrial revolution innovations cheapened goods, and exports grew in response. Earlier, Britain’s exceptional eighteenth-century success in emerging as a powerful state in international politics and a great commercial power was as much an implication of the positive forces that were causing economic growth as a cause of those forces. After all, the opportunities that presented themselves to Europe after Columbus discovered America were not particularly directed towards Britain.