

market forces established themselves in the same measure as population continued to increase. As Jacob Burkhardt remarked, against these two powers there was no defence. That was the bitter experience of all those who lived between 1750 and 1850.

The European economy in the eighteenth century

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A clear view of the economy in the eighteenth century is hard to get, with the Industrial Revolution in the way. Looking back, it is tempting to see the whole century as preparing the ground for factories and machines. Looking forward, the century is often portrayed as the graveyard of the traditional 'moral economy' of self-subsistent peasant farms and guild workshops. The eighteenth century is a sort of border zone, alternately claimed by both pre-modern and modern camps, in which all signposts point to the Industrial Revolution.

A cool look at the timing already shows the cracks in this easy identification of the eighteenth century with either industry or revolution. Only one country industrialized in the eighteenth century: Britain, after about 1760, and then only gradually, in a few exceptional regions and branches of industry. Parts of Belgium and Switzerland, and a few enclaves in France and German-speaking central Europe, saw the beginnings of industrialization around 1800. But industrial take-off in France as a whole is dated to 1815–30, in Germany and Austria-Hungary to 1830–50, in Italy, Spain, Scandinavia, and the Dutch Netherlands only to the period after 1850 or even 1870. Most areas of eastern and east central Europe, as well as many regions of Germany, particularly in the east and south, did not industrialize until after 1880.

In short, reports of the death of the pre-industrial economy before 1800 have been greatly exaggerated. In the closing years of the eighteenth century, most of Europe was touched by factory industrialization only indirectly. Even in Britain, economic and political commentators at the end of the eighteenth century appeared all but unaware of it. In 1776 Adam Smith wrote that 'The capital employed in agriculture . . . puts into motion a greater quantity of productive labour than any equal capital employed in manufactures . . . [and] adds a much greater value to the annual produce of the land and labour of the country, to the real wealth and revenue of its inhabitants.' So astute an observer as Thomas Malthus was, as late as 1799, basing his influential economic and demographic theories on the functioning of a pre-industrial agrarian economy, in which food supply was the single crucial economic variable.

For the eighteenth century, Smith and Malthus were right. Agriculture, not industry, led the economy. Its performance determined the success of industry and trade, and influenced every aspect of society, politics, and culture. Peasant women and men toiling incessantly in fields and barns were so mundane as to be almost invisible; but in eighteenth-century Europe, just as in the twentieth-century Third World, the choice between stagnation and growth lay in their calloused hands. Between 1700 and 1800, agriculture saw much greater changes than industry, so much so that this century is often regarded as that of the 'agricultural revolution'. But this revolution, like the industrial one, was concentrated in certain European economies, although in slightly more of them than England, as we shall see. In other parts of Europe, farm techniques and agrarian institutions were hardly different in 1800 than they had been in 1700—or even in 1500. How the 'agricultural revolution' was encouraged in some European societies, and suppressed in others, is the story told in the first section of this chapter.

Industry, too, changed slowly in most European economies between 1700 and 1800. Manufacturing was widespread in Europe long before the first factories. Craft workshops made a rich variety of goods for local consumption, and 'proto-industries' churned out mass exports for more distant markets. Industries expanded, contracted, and relocated throughout the eighteenth century, and on the whole there were more of them at the end than at the beginning. But change was gradual, not explosive. Techniques, products, and

institutions changed imperceptibly, if at all. While the first mechanized factories were built in some European regions after 1760, hand techniques and guild organizations predominated in most others long past 1800. What caused some areas of Europe to develop centralized, mechanized, and competitive manufacturing in the second half of the eighteenth century, while others sustained the dispersed, manual, and corporative traditions that had characterized industry since the Middle Ages, is the question explored in the second section of this chapter.

In trade, as in industry, the historical spotlight has dwelt on what is visible and seems prophetic. Long-distance shipments by wealthy merchants to exotic destinations have attracted most interest, not so much because they were typical of trade in the eighteenth century, but because colonies and global markets became important in the nineteenth and twentieth. But in 1800 overseas trade, although it had grown since 1700, was still a trickle compared to the flood of commerce among European regions or between towns and their rural hinterlands. Qualitatively, too, the greatest changes occurred not in overseas shipments but in repetitive exchanges of mundane goods over modest distances. In certain parts of Europe, transport improved, permanent shops replaced periodic fairs, peddling and shopkeeping proliferated, and cheap consumer goods were brought within the budgets of labourers and servant girls. Where these cheap and interesting new goods were available, people began to spend more time doing income-earning work and less in leisure, so they could purchase the new consumer items. In other parts of Europe, however, this 'consumer revolution' had hardly begun by the end of the eighteenth century: obstacles to commerce still kept the price of non-local goods so high that only the rich could afford them. The third section of this chapter tells the story of how and why trade became so much more efficient in some European economies between 1700 and 1800, but not in others.

The eighteenth century is usually portrayed as a century of 'revolution': industrial, agricultural, commercial, and, of course, political. But this was a century of economic divergence more than of any common European experience. The so-called revolutions touched only a few societies and regions, while others remained inviolate. Even in those economies that did change, this change had its roots further back in history, while in those that did not, stagnation also

had earlier roots. The key question is what these roots were. Why did pre-industrial economies vary so greatly, and why did they part company even more decisively during the eighteenth century?

The answer lies in the social and political framework within which people made economic decisions. Over the centuries, European societies had developed an array of economic institutions that regulated the allocation of resources: sometimes to ensure their efficient use, more often to control their distribution. Four of these institutions still dominated most European economies in the eighteenth century: the seigneurial system (with wide-ranging powers for landlords), the village community, the privileged town, and the occupational corporation or guild. Markets could work only within the framework of these non-market rules. Governments could regulate the economy only by cooperating with these traditional institutions, or trying to break them down. But, although these institutions existed everywhere in eighteenth-century Europe, their practical powers varied widely. As we shall see, agriculture, industry, and trade followed separate paths in different parts of Europe. This was because landlords, villages, towns, and guilds regulated people's economic decisions differently in different societies. We cannot understand the eighteenth-century economic 'revolutions' until we realize that societies constrained economies as much as economies revolutionized society.

Agriculture

Nowhere was this social framework more crucial than in agriculture, the most important sector of the eighteenth-century economy. Agriculture had a dual importance: for people's survival at the time, and for economic growth in the future. In 1700 agriculture employed four-fifths of all workers in the most highly developed economies such as the Netherlands and England, and more in the less developed east and south of the continent. Agriculture also took up most of the land in the economy. Industrial uses for land were few, since most manufacturing was done in people's houses. Trade and services, which nowadays consume so much land in highways, railways, shopping malls, and housing estates, used almost no land in the eighteenth century: roads were minimal, railways non-existent, permanent

markets rare, and cities small by modern standards. London, Paris, and Naples were by far the largest cities, yet London's population was only 575,000 in 1700 and 900,000 in 1800; Paris stagnated at 500,000 inhabitants for the whole century; Naples had less than 220,000 people in 1700, rising to about 425,000 by 1800. Capital, too, went mainly into agriculture. Farmers' savings were sucked away into repairing buildings, clearing woods, draining marshes, and buying animals. Servants, labourers, cottagers, and even rural weavers saved up to buy farms. Even townsmen often invested the profits of crafts or commerce in land, which in most eighteenth-century economies still offered the best balance between risk and return.

So agriculture consumed most inputs (labour, land, and capital) in the eighteenth-century economy, and this was because it produced the most valuable output: food. As the French royal military engineer Vauban observed in 1707, 'The true wealth of a country lies in plentiful food supplies.' By this he meant not just economic but political wealth. In the seventeenth century, the tiny United Provinces had stood firm against the might of Spain, and one reason was the productivity of its market-oriented farmers compared to Spain's exploited peasants. In the eighteenth century, armies were much larger, and princes demanded granaries to match.

But the average European farming family in 1700 produced only 20–30 per cent more food than it ate itself. This was barely enough to keep society on an even keel. Landlords, churches, and princes extorted most of the surplus in rents, tithes, and taxes. National harvests fluctuated on average 25 per cent from year to year. Regional harvests fluctuated even more, which meant that everybody lived on a knife edge: ordinary people because they might not eat this spring, princes because their unfed armies might mutiny, or their peasants stage a tax revolt. In 1700 European farmers produced just enough to feed most of the population most of the time, plus a surplus divided between forced payments to a tiny stratum of unproductive aristocrats and rulers, and voluntary exchange with a small group of specialized manufacturers and traders. In bad years, it was manufacturing and trade that suffered first: as late as 1850, even in so advanced a north-west European economy as France, a bad harvest always led to a crisis in industry.

For industry or commerce to grow, inputs and outputs had to be released from farming. This is why agriculture was the key to

economic development—a lesson from European history belatedly recognized in recent decades by modern developing economies. Farmers had to produce enough to buy off rulers and priests, insure society against the ever-present risk of harvest failure, and feed more non-farming artisans and traders. And they had to produce this extra food (and more industrial raw materials, too) at the same time as releasing labour, capital, and land for industrial or commercial uses. Early industry and commerce required little land and only small capital investments, but needed large amounts of labour. This labour could move into industry only if it was released from agriculture, and the only way an eighteenth-century economy could afford that was if larger food surpluses became available—either imported from other countries, or produced at home. Imports were scarce: transport costs were high, and even the richest farming regions produced only small surpluses. Only 1 per cent of European grain output was traded internationally in 1700. The Low Countries imported 13–14 per cent of their grain as early as 1600, but they contained only 3 per cent of Europe's population. By contrast, Britain imported a mere 3 per cent of its wheat as late as 1811–30, Germany only 10 per cent of its entire food supply in 1890. This meant food surpluses had to be produced at home. To have an industrial revolution, you first needed an agricultural revolution.

This was the key economic change of the eighteenth century. The Low Countries, the 'miracle economy' of pre-industrial Europe, had already started to revolutionize their farming before 1600. England, the other early starter, followed suit around 1680. In France after 1750, in Switzerland after 1780, and in Denmark and many west German territories after 1790, traditional farming methods were abandoned, agricultural yields rose dramatically, and the landscape and economies of Europe were transformed. The results can be seen in European yield ratios: how much grain you harvested compared to how much you sowed. As Table 3.1 shows, yield ratios were pitifully stable between 1500 and 1820 in most parts of Europe. Only in the Low Countries and England, despite a soil and climate not naturally suited to grain-farming, did yield ratios already lie at a high level before 1600, and improve noticeably from 1650 on. Even the rich soils and beneficent climate of France and the Mediterranean yielded less than seven seeds harvested for each seed sown around 1500. By 1800 this average had hardly improved, with the gains from the agricultural

Table 3.1 Average grain yields in different parts of Europe, 1500–1820 (seed harvested as multiple of seed sown)

Period	North-west corner (England, the Low Countries)	Mediterranean (France, Spain, Italy)	Central and Nordic (Germany, Switzerland, Scandinavia)	Eastern (Russia, Poland, Czechoslovakia, Hungary)
1500–49	7.4	6.7	4.0	3.9
1550–99	7.3	n.a.	4.4	4.3
1600–49	6.7	n.a.	4.5	4.0
1650–99	9.3	6.2	4.1	3.8
1700–49	n.a.	6.3	4.1	3.5
1750–99	10.1	7.0	5.1	4.7
1800–20	11.1	6.2	5.4	n.a.

Notes: Ratios are averaged over the three main arable crops (wheat, rye, and barley). n.a. = not available.

Source: Peter Kriedte, *Peasants, Landlords and Merchant Capitalists: Europe and the World Economy, 1500–1800* (Leamington Spa, 1983; German orig., Göttingen, 1980), 22.

revolution in central and northern France offset by falling yields around the Mediterranean. On the poorer soils of central Europe, yield ratios hovered around 4 between 1500 and 1750, and only gradually rose past 5 between 1750 and 1800. In eastern Europe, despite a rich endowment of prime arable soils, yield ratios actually fell from 4.3 in 1550 to 3.5 in 1750. This was the era of 'refeudalization', when the institutional powers of the great east European feudal landlords enormously increased. Only in the later eighteenth century, as a few of the worst seigneurial constraints began to be reformed (for example, the gradual reduction in serfs' *Robot* (forced-labour) services in the Czech Lands after 1771), did east European yields gradually turn upwards.

As the slow and divergent growth in grain yields illustrates, the agricultural revolution was neither inevitable nor universal. As late as 1787, the English agricultural traveller Arthur Young was astonished to find many regions of France still dominated by 'the common barbarous course' of the three-field system. He was only slightly exaggerating when he concluded that 'agriculture in such a kingdom is on the same footing as in the tenth century. If those lands were then tilled at all, they were in all probability as well tilled as at present.' In Austria, Italy, Sweden, and many east German territories, the

agricultural revolution did not even begin before 1820, in Russia and Spain not before 1860. Just as in the present-day Third World, technical knowledge, population pressure, and the example of other economies was not enough: for agricultural development, the social framework had to change.

The technical problem for eighteenth-century agriculture was simple. Cereals are the most efficient source of food energy, but growing them depletes the soil. Unless nutrients can be restored, harvests fall year after year. There were three solutions to this problem: fertilizing, rotating crops, and resting the land. Each was costly. Chemical fertilizers were unavailable, for eighteenth-century scientists knew too little about plant physiology to devise the right chemical composition. Until German and French chemists made that breakthrough after 1850, organic wastes were the only source of fertilizer. The cheapest was manure. Farmers seldom raised animals purely as food sources, since in 1700 one meat or milk calorie took eight grain calories to produce. Stock were valued mainly as walking manure carts. Other fertilizers—ash, turf, flax waste, pigeon dung, human night soil—either contained fewer nutrients or had to be expensively transported. Animals were the cheapest source of fertilizer, but they were still a major cost: they needed pasture, and that took land away from food crops.

Lacking enough manure to grow cereals continuously, farmers rotated fields through different uses. The most common rotation involved planting a cereal crop (wheat or rye) the first year, a porridge or pancake crop (barley, oats, or millet) the second, and leaving the field uncropped (fallow) the third. The other common rotation alternated a cereal with fallow over a two-year cycle. These rotations had drawbacks, too. The porridge crop was less valuable than the cereal, and fallowing meant that at any one time one-third to one-half of all arable land was producing nothing. Manuring, rotating crops, and fallowing did replenish the soil, but at the cost of reducing crop cultivation.

The agricultural revolution freed farmers from this trap for the first time in history. The 'new husbandry', as it was called in England, replaced the two- and three-field systems with new crop rotations that replenished the soil faster and removed less land from cultivation. The new rotations involved four main innovations. First, they included new crops such as legumes that actually returned nutrients

to the soil. Secondly, they included high-energy (and nutrient-returning) fodder crops such as turnips and clover or, as in 'convertible husbandry', a pasture phase for arable fields, so more manure-producing animals could be raised on much less permanent pasture. Thirdly, the new crop sequences were devised so that each year's crop removed different chemicals from a different soil layer, extending the arable lifespan of the field. Fourthly, thanks to the first three innovations, fallow could be reduced or abolished altogether, so all land was producing all the time.

Escaping from the vicious trade-off between soil depletion and idle arable land was the key. But other innovations helped as well. The spread of non-traditional crops such as potatoes, maize, and buckwheat increased food energy per unit of land. The potato had been known since 1536, but it spread widely in Europe only after 1756 when grain prices began to rise steadily; by 1800, potatoes occupied 15 per cent of the arable land in East Flanders, in Ireland dangerously more. Industrial crops such as flax and dye-plants (madder, woad, and weld), and other cash crops such as coleseed, hops, and tobacco, increased revenue per hectare, enabling more people to live from the earnings of smaller plots. Selective breeding produced bigger cattle, sheep, and pigs. Oxen, which could plough only 0.4 hectares a day, gave way to horses, which ploughed 0.5–0.6. Iron ploughs engineered to reduce soil resistance replaced clumsy wooden ones, increasing ploughing productivity to 0.8 hectares a day by 1800. (This was still much less than the 5 hectares a day achieved around 1850 with the steam plough.) In backward regions, the plough replaced the hoe. Everywhere, the scythe replaced the sickle. The seed-drill replaced broadcast sowing. But these were all peripheral: the new crop rotations were the core change.

The puzzle is not why these innovations were introduced, but why they had not been introduced much earlier. It was not a lack of technical knowledge, education, or the requisite mentality. The basic techniques had been laid out clearly in the agronomic handbooks of Ancient Rome. Precocious estates and regions had used them for centuries, and they were widely adopted in the Low Countries by 1600 and England by 1690. The parts of Europe where they first spread were not those, such as Scandinavia or the German Lutheran territories, where school attendance or literacy rates were highest. Nor were the new practices first imposed on ignorant and reluctant

peasants by an educated and forward-looking elite: they spread initially on small family farms in Flanders and Brabant, and among modest tenant farmers in Norfolk, Suffolk, and Essex. Local studies suggest that, long before the agricultural revolution, small-scale cultivators throughout Europe carefully balanced costs and revenues, responded sensitively to changes in prices, and were keenly interested in increasing profits. The barriers to agricultural innovation were not in people's minds.

Nor was the problem a lack of demand. It is sometimes argued that the Dutch and British agricultural revolutions were kicked off by early population growth and urbanization, which the rest of Europe experienced only in the eighteenth or nineteenth century. Tables 3.2

Table 3.2 Population of different parts of Europe, 1700–1800

	1700		1750		1800	
	Millions of people	% of European total	Millions of people	% of European total	Millions of people	% of European total
<i>North and west</i>	16.0	19.7	18.3	19.4	26.1	21.3
Scandinavia	2.9	3.6	3.6	3.8	5.0	4.1
England and Wales	5.4	6.6	6.1	6.5	9.2	7.5
Scotland	1.0	1.2	1.3	1.4	1.6	1.3
Ireland	2.8	3.4	3.2	3.4	5.3	4.3
Netherlands	1.9	2.3	1.9	2.0	2.1	1.7
Belgium	2.0	2.5	2.2	2.3	2.9	2.4
<i>Central</i>	35.2	43.2	40.0	42.5	53.2	43.4
Germany	15.0	18.4	17.0	18.0	24.5	20.0
France	19.0	23.3	21.7	23.0	27.0	22.0
Switzerland	1.2	1.5	1.3	1.4	1.7	1.4
<i>Mediterranean</i>	22.8	28.0	26.5	28.1	31.2	25.4
Northern Italy	5.7	7.0	6.5	6.9	7.2	5.9
Central Italy	2.8	3.4	3.1	3.3	3.6	2.9
Southern Italy	4.8	5.9	5.7	6.1	7.0	5.7
Spain	7.5	9.2	8.9	9.4	10.5	8.6
Portugal	2.0	2.5	2.3	2.4	2.9	2.4
<i>Eastern</i>	7.4	9.1	9.4	10.0	12.2	9.9
Austria-Bohemia	4.6	5.7	5.7	6.1	7.9	6.4
Poland	2.8	3.4	3.7	3.9	4.3	3.5
<i>Europe</i>	81.4	100.0	94.2	100.0	122.7	100.0

Source: Jan de Vries, *European Urbanization, 1500–1800* (Cambridge, Mass., 1984), 36.

and 3.3 suggest this argument is back to front: population size and cities grew in the Netherlands and England because agriculture grew to feed them, not vice versa. Parts of Italy, Iberia, and even southern Germany had been as highly urbanized as the Netherlands in the late sixteenth century, but stagnated after 1590 because the cities there, instead of offering high enough food prices to induce the surrounding farmers to invest in the new husbandry, used political force to compel farmers to sell their output in the cities. As Table 3.3 shows, England was much less urbanized than average in 1500 and 1600, pulled level with the rest of Europe around 1700, and surpassed it only between 1700 and 1750. The early onset of agricultural

Table 3.3 Urbanization in different parts of Europe, 1600–1800
(% of population living in cities of at least 10,000 inhabitants)

	1600	1650	1700	1750	1800
<i>North and west</i>	8.2	10.9	13.1	13.6	14.9
Scandinavia	1.4	2.4	4.0	4.6	4.6
England and Wales	5.8	8.8	13.3	16.7	20.3
Scotland	3.0	3.5	5.3	9.2	17.3
Ireland	0.0	0.9	3.4	5.0	7.0
Netherlands	24.3	31.7	33.6	30.5	28.8
Belgium	18.8	20.8	23.9	19.6	18.9
<i>Central</i>	5.0	6.0	7.1	7.5	7.1
Germany	4.1	4.4	4.8	5.6	5.5
France	5.9	7.2	9.2	9.1	8.8
Switzerland	2.5	2.2	3.3	4.6	3.7
<i>Mediterranean</i>	13.7	12.5	11.7	11.8	12.9
Northern Italy	16.6	14.3	13.6	14.2	14.3
Central Italy	12.5	14.2	14.3	14.5	13.6
Southern Italy	14.9	13.5	12.2	13.8	15.3
Spain	11.4	9.5	9.0	8.6	11.1
Portugal	14.1	16.6	11.5	9.1	8.7
<i>Eastern</i>	1.4	1.7	2.6	3.5	4.2
Austria-Bohemia	2.1	2.4	3.9	5.2	5.2
Poland	0.4	0.7	0.5	1.0	2.5
<i>Europe</i>	7.6	8.3	9.2	9.5	10.0
British Isles	4.2	6.5	9.4	12.3	15.6
Low Countries	21.5	26.1	28.6	24.7	23.0
Rest of northern Europe	4.3	5.0	6.1	6.5	6.4

Source: Jan de Vries, *European Urbanization, 1500–1800* (Cambridge, Mass., 1984), 39.

innovation there cannot be ascribed to above-average urban demand. Eighteenth-century Prussian and Polish estates experienced an intense demand pull from cities in the Low Countries, but satisfied it by extorting more forced labour from serfs, not by introducing more productive techniques. Most European economies saw fast population growth in the eighteenth century, as Table 3.2 illustrates, but only some introduced agricultural innovations. The others saw living standards fall and paupers multiply. In short, as the examples of twentieth-century Africa and India also demonstrate, population growth and urbanization are neither necessary nor sufficient conditions for agricultural development.

New techniques provided ways of increasing agricultural productivity. Growing demand provided an incentive to do so. But whether people responded to that incentive required something extra: the emergence of social arrangements that did not prevent farmers from changing their practices or—better yet—encouraged them to do so. In the eighteenth century, such social institutions, hitherto found only in the Low Countries and England, began to emerge in the vast majority of west European regions. The new crop rotations, which formed the core of the agricultural revolution, required land, labour, and capital to be used in new ways, and cereal and pastoral surpluses to be exchanged flexibly and freely for goods that the newly specialized farms no longer produced themselves. The social rules governing markets in land, labour, capital, food, and manufactures in each European society decided whether this could happen.

For farmers to introduce new rotations and crops, land had to be used differently. But rulers, priests, landlords, and communities had for centuries regulated how land could be used—whether to ensure its efficient use, or to control who shared the farmer's harvest. Princes, clerics, and feudal lords often levied taxes, tithes, and rents as shares of certain crops. If new crops unspecified in old charters were untaxable, powerful interests resisted their introduction. In Württemberg, for example, as late as the 1820s peasants were still being forbidden to introduce new fodder crops, because the Church wanted them to cultivate traditional cereals that were tithed, and the prince wanted them to grow the sour and unprofitable local wine grapes that paid excise. Landlords also jealously guarded their right to dispossess peasants at will (as in 'refeudalized' eastern Europe) or to repossess farms on the death of the tenant (as with the *mainmorte* rights

increasingly enforced by eighteenth-century French seigneurs). Such insecure tenures discouraged cultivators from investing in soil improvements since, as one seventeenth-century English writer put it, 'a man doth sande for himself, lyme for his sonne, and marle for his grandchild'.

Another problem was that, traditionally, most farmland was open to communal use: the pasture and fallow at all times, and the stubble in the interval between harvest and planting. For a farmer to experiment with the new crops and rotations, these common pastures and open fields needed to be enclosed (in late-twentieth-century terms, 'privatized', with each farmer in the village given a share to use individually). But noble privilege often blocked this. In Spain until the nineteenth century a small group of nobles enjoyed *Mesta* privileges, permitting them to herd thousands of transhumant (seasonally migrant) sheep across communal and private land. Not only did they use their legislative influence to oppose enclosure, but the damage their herds inflicted on the fields reduced incentives for peasants to improve the land, contributing, as one English traveller wrote in 1786–7, to 'the want of cultivation in the interior provinces of Spain'. In Silesia, as late as 1821, when asked why they did not use new rotations that cultivated the fallow, peasants replied that they were 'not allowed to . . . the lord has the right of grazing sheep, and as long as there is stubble grazing, we have to let the fallow lie'. It was where landlords enjoyed few legal privileges (as in Britain and the Low Countries) or lost them through popular revolt or state action (as in revolutionary France and parts of western Germany in the eighteenth century) that land could be used in the new ways required by the agricultural revolution.

Village communities also blocked changes in land use. To operate the traditional two- and three-field systems, villages had often evolved complex rules: compulsory crop-sequencing, extensive communal pastures, common grazing rights on private stubble, and collective coordination of different phases of agricultural work. Where such communal regulation was strong, it was difficult for individual farmers to experiment with new crops or new rotations, especially when these involved converting arable land to pastoral uses. Where only the larger farmers possessed legal title to common pastures and open fields, but cottagers customarily used them for pasture and gleaning, opposition from the land-poor majority could

block enclosure. Strong communities could also forbid land sales to outsiders, as in many areas of western Germany; this hindered land from passing into the possession of those who might have the capital or the knowledge to introduce new techniques. It was therefore no coincidence that the new husbandry was first introduced in Flanders and England, where community institutions were comparatively weak. Only in the later eighteenth century were communal powers loosened in some regions of France, Switzerland, Denmark, and western Germany, so that farmers could experiment with using land in new ways, an essential precursor to identifying which new rotations and crops might suit local conditions. Even in England, understandable opposition from cottagers with use rights over common pastures and open fields, but no property rights to entitle them to a share during enclosure, meant that it took the entire eighteenth century and innumerable individual Acts of Parliament to enclose the land in each village so it could be included in new rotation systems. In most areas of Europe, this process had hardly begun by 1800. As late as the 1790s, communal resistance to the new husbandry in France was still so strong that the Marquise de Marbeuf was brought before a revolutionary tribunal for having taken land away from cereal-growing to sow the new fodder crops, and was sentenced to death for this 'unpatriotic' act.

The new agricultural techniques also required changes in the use of labour. As the French agricultural writer Montlinot wrote of Flemish farmers in 1776, 'if their soil is productive, it is because its gifts are bought by a degree of labour and manuring unthought of in other lands'. Not only did the new crops and rotations require more intensive digging, ploughing, fertilizing, and weeding, but higher grain and milk yields created more work in harvesting, threshing, butter-churning, and cheese-making. Peasants needed to use their own family's labour more intensively and to employ plentiful and flexible supplies of servants and day labourers. But traditional agrarian institutions often blocked efficient labour use. In eastern Europe, eastern Germany, Italy, Iberia, and parts of Scandinavia, between 1600 and 1800 the process of 'refeudalization' strengthened landlords' legal rights to compel peasants to perform forced labour on the demesne (the part of the estate farmed directly by the landlord for his own profit). Even in comparatively progressive Hanover, as late as 1820 landlords used forced labour from *Leibeigenen* (serfs) because it was

costless, although, as the English traveller Hodgskin remarked, 'If the landlord had to hire labourers, he might have his work tolerably well performed, but it is now shamefully performed, because the people who have it to do have no interest whatever in doing it well and no other wish but to perform as little as possible within the prescribed time.'

Even though the new husbandry did not involve machines, it did require some capital. Enclosure of pastures and open fields required fences, hedges, and ditches. New crops required seed purchases. Soil improvement required extra fertilizer, sand, lime, and marl. Heavier harvests required more draught animals. Workers had to be supported during the transition to new techniques. Changing farming practice always requires at least small investments, as shown by the current focus on agricultural 'micro-credit' in modern developing economies. Dutch and English agriculture efficiently tapped the few sources of capital in eighteenth-century Europe. In the Netherlands, capital-rich townsmen invested directly in land and lent funds to farmers through the country's advanced credit markets, in which interest rates stood at 3 per cent in 1750, the lowest in Europe. In England, landlords had to make their estates pay, since they enjoyed few of the seigneurial privileges of their French or east European counterparts. This gave them strong incentives to lend their tenants capital for farm improvements, or even borrow themselves for this purpose in England's developing financial markets, where in 1715 interest rates stood at 5 per cent. Grain merchants extended credit to farmers, and incidentally smoothed price fluctuations, by speculating on the outcome of the harvest, as Daniel Defoe described in 1727: 'Corn-Factors in the Country ride about among the Farmers, and buy the Corn, even in the Barn before it is thresh'd, nay, sometimes they buy it in the Field standing, not only before it is reap'd but before it is ripe.'

Elsewhere in Europe, these credit conduits to agriculture developed more slowly. Much of the available capital in the economy was accumulated by rulers through taxes, state loans, and sales of monopolies and offices, then squandered on war or court display. Another substantial portion was levied as rents (or arbitrary confiscations) by noble landlords, and then spent on royal offices, monopolies, or conspicuous consumption. As late as 1781, the German traveller Freiherr von Stein voiced deep pessimism about economic growth in Poland

because 'the wealth of the nation is in the hands of the aristocracy, which wastes it in an unreasonable manner, and uses it for frivolities'; a 10 per cent interest rate had to be paid on capital. As the travel writer William Coxe remarked in 1792 of Russian peasants, 'with regard to any capital which they may have acquired by their industry, it may be seized, and there can be no redress'. In many economies—France, Spain, Italy, and many German territories—even commercial and industrial profits tended to flow into landed estates, noble status (confering tax freedom), bureaucratic office, or legal monopolies over certain lines of business. In societies where the greatest returns and least risk lay in purchasing land or royal favour, it is not surprising that risky economic projects such as *improvement* of the land or (as we shall see shortly) industrial and commercial ventures were starved of capital. Part of the delay in introducing the new agricultural techniques outside the Netherlands and England before 1750 resulted from the difficulty of saving or borrowing the requisite capital.

Farmers not only needed markets where they could get the inputs of land, labour, and capital required by the new agricultural techniques. They also needed markets where they could sell their output profitably, and buy goods they no longer produced themselves. But many of the same institutions that blocked efficient use of land, labour, and capital also blocked exchanges of food, raw materials, and industrial goods. Rulers and town governments in Spain, France, and the Italian and German city states often enforced so-called staples, legal rights of prior purchase that they used to force farmers in the surrounding countryside to sell their output in towns at lower-than-market prices. As in twentieth-century Africa and China, where similar price ceilings have been widespread, the aim was to prevent urban food riots, but the result was to discourage peasants from producing surpluses or investing in new techniques. This was one of the reasons the highly urbanized regions of northern Italy and southern Germany failed to stimulate an agricultural revolution around 1600, in contrast to the Dutch and Flemish cities, which had to pay farmers market prices. In Spain, price ceilings (and other institutional disadvantages) drove peasants off the land, and by 1797 there were almost 1,000 deserted villages in rural Castile; grain had to be imported to alleviate famine.

Towns were not the only barrier to farmers' profiting from investing in the new husbandry. Seigneurial tolls (internal customs

barriers) blocked the development of a national grain market in France until 1789, discouraging farmers and worsening famines. In Bohemia, Poland, and many east German territories, the great landlords forced peasants to sell them grain at fixed (low) prices. The landlords exported the grain to western Europe or used it to brew their own beer on the demesne farm, which they then forced the peasants to buy back from them at fixed (high) prices. In such conditions, peasants could not gain enough profit from grain surpluses for it to be worthwhile investing in new techniques—even if other institutional obstacles had permitted.

Circumvention of urban and seigneurial privileges in markets for foodstuffs had wiped out famine in the Low Countries and England by the early eighteenth century. In France, Germany, and eastern Europe, by contrast, it recurred long past 1800. Partly this was because market prices motivated farmers to invest in increasing output, and to sell their surpluses rather than consuming extra food themselves. But it was also because, as modern development economists have shown, famine is seldom caused by sheer lack of food. In the eighteenth century, as in the twentieth, it was caused by a failure of 'entitlements', economists' jargon for people's ability to buy cheap non-local food when local harvests fail. In eighteenth-century Europe, even when the harvest failed in one region, food was usually available somewhere. Integrated grain markets, free of urban or seigneurial privileges, could move food swiftly from regions of plenty to those of scarcity. Prices might be high, but at least the grain got there, the emerging welfare system could supplement the incomes of the local poor, and fewer people starved.

The eighteenth century, therefore, saw a breakthrough that had never been made before. Not just in a few favoured regions such as the Low Countries (where only 3 per cent of Europeans were lucky enough to live), but throughout western and central Europe, people broke out of the productivity trap that had stifled economic growth for millennia. At last, farmers escaped from the vicious trade-off between soil exhaustion and leaving land idle. At last, ordinary people could buy off nobles, priests, and princes and still have something left over to buy non-necessities: extra clothing, better tools, comfortable furnishings, clocks, toys, books. This in turn gave work to craftsmen, shopkeepers, peddlers, and merchants. Between 1700 and 1800, the farming revolution freed people and resources from the

brutal struggle against starvation, and they moved into industry and trade.

This did not happen everywhere. Escaping the agricultural productivity trap did not need just technical know-how or consumer demand. Land, labour, and capital had to be used differently, and farmers had to be able to sell profitably to customers and find cheap supplies of goods they no longer made at home. In the twentieth century, we take this for granted, but getting there was not easy. Age-old social arrangements had to be got round or broken down, and often they were staunchly defended by privileged groups. The Low Countries and England were lucky: they emerged from the medieval period with landlords that had economic weight but few legal powers, village communities that were only loosely organized, and town privileges that were poorly enforced. In the chinks of Dutch, Flemish, and English society, new ways of farming and selling food sprang up and grew vigorously in the sixteenth and seventeenth centuries, before any institution or interest group could organize stopping them. But in most other parts of Europe, landlords, towns and communities were still very strong in 1700. It took almost the whole eighteenth century to break down the social obstacles to releasing even a share of the immense productive forces locked up in the rural economy. Even the vaunted abolition of seigneurial privileges in France during the Revolution, and in Prussia and many other German territories after their defeat by Napoleon in 1807, left many restrictive practices intact. Not until traditional institutional privileges were fully broken down—by popular revolution, military defeat, or long and grinding social conflict—could farmers break out of the old productivity trap that had blocked the growth of the whole economy for thousands of years. The process had begun in the Netherlands in the sixteenth century, and lasted into the nineteenth century in the far east and south of the continent. But in most of Europe the decisive steps were taken in the eighteenth century.

Industry

In industry, unlike agriculture, there was no known body of techniques that could galvanize productivity once the obstacles had been swept away. The industrial equivalent of the new husbandry did not appear until the 1760s and 1770s, when British entrepreneurs began to combine new mechanical devices with new ways of harnessing energy, opening up a Pandora's box of threatening alternatives to every existing industrial practice. But before these inventions could be widely implemented, people had to experiment with them in a business setting, and that did not happen until the 1780s or 1790s. For most of the eighteenth century, there was no single path to industrial success. Even the most efficient industries had only small cost advantages over less efficient competitors, and such advantages were quickly pared away by the high cost of trading goods over any distance. Industry, even more than agriculture, varied enormously from one European region to the next, and many quite inefficient industries survived because they faced no effective competition.

With agriculture still employing an estimated 80 per cent of the labour force, the European economy in 1700 was still overwhelmingly agricultural. But even the most purely agricultural economy needed some industry: food had to be processed, clothing manufactured, tools made, shelter built. In eighteenth-century Europe, these needs were satisfied in three ways. First, households manufactured things for their own use, in between farming and other tasks. Women in particular were expected to make a wide range of products that families now buy from specialized industries. Women habitually baked bread, churned butter, brewed beer, sewed clothes, knitted stockings, spun yarn, and even sometimes milled flour and wove cloth. Families built and repaired their own houses and barns, mended their own tools and harness, sometimes smithed iron and tanned leather. Without the training or tools of the specialist, households did these things slowly and poorly, but where people could not use their time to earn more income, this was the cheapest option.

The second way industrial needs were satisfied was through the work of craftsman, who specialized in making specific products and sold them to local customers. In most European societies craftsmen

were still in principle supposed to be restricted to the towns, which claimed a monopoly over all industrial work. But the eighteenth century has been described as an age of 'ruralization' or 'territorialization' of crafts. In some societies, this process had begun much earlier, with a trickle of craftsmen already moving into the countrysides of the Netherlands, England, and southern Germany before 1500. But in the eighteenth century, despite loud protests from the privileged urban guilds, the trickle became a flood. In Brandenburg-Prussia, even in the later eighteenth century, the Hohenzollern rulers were still trying to ban craftsmen from practising outside the towns for fear they would evade the excise tax. But this was an exception, and, although it kept rural crafts in check, it did not stamp them out wholly.

The third source of industrial goods was what have been called 'proto-industries'. Historians distinguish these from traditional crafts mainly on the grounds that they exported to distant markets instead of (or as well as) selling to local customers. Their broader customer base enabled them to cluster densely, creating distinctive *Gewerbelandschaften* (industrial landscapes) where a large share of the labour force participated in a single industry: usually weaving or spinning, but sometimes metalworking, glass-making, or, as in the Erzgebirge of Saxony, carving wooden toys. Often, these export-oriented proto-industries were located in the countryside, where farming families did industrial work during the less busy seasons of the agricultural year, or where women and children spun and wove while men did the farm work. In parts of the Low Countries, southern Germany, and southern England, proto-industries had already begun to emerge in the late Middle Ages. But the eighteenth century was their heyday, with export-oriented industrial landscapes emerging from Russia to Ireland and from Scandinavia to Ottoman Bulgaria.

The boundaries between these three forms of industry—household manufacturing, local crafts, and proto-industries—were very fluid. Consumers shifted back and forth, depending on which offered the cheapest and best access to manufactured goods. This has prompted some historians to speculate that the growth of one of the three, at the expense of the others, was what caused the Industrial Revolution. In 1972, for instance, a historian of Flanders, Franklin Mendels, advanced a 'theory of proto-industrialization', in which he argued that the eighteenth century saw the export-oriented

proto-industries taking over from the local-oriented crafts. From his study of linen production in eighteenth-century Flanders, Mendels argued that the growth of proto-industries created the population growth, the pool of industrial labour, the accumulation of capital and entrepreneurship, the foreign markets, and the institutional changes necessary for factory industrialization.

The theory of proto-industrialization has, since it was first proposed, generated volumes of excellent research on pre-factory industries. The upshot, however, has been to dismiss the original hypotheses almost completely. Historians have cast doubt on the idea that fast population growth was actually favourable for industrialization. Even if it was favourable, population grew fast during the eighteenth century in some agricultural regions as well, and it grew slowly in some proto-industrial ones. The early factories after 1760 seldom employed former proto-industrial producers, who often demonstratively refused to work in them, and even smashed the machines. The first factory workers were usually recruited from more easily disciplined groups such as paupers, labourers, women, and children. Finance and entrepreneurship for the early factories came from a wide range of sources; some were proto-industrial, but many more were agricultural, commercial, and even political. Foreign markets were easily won and lost: the markets captured in the earlier eighteenth century by Silesian and Westphalian linen proto-industries were as easily recaptured after 1770 by English cotton factories. Finally, proto-industries did not break down traditional institutions. We now know that the unregulated market transactions Mendels observed in Flanders were an extraordinary exception, paralleled only in England and a few other unusual institutional enclaves. In the rest of eighteenth-century Europe, proto-industry (like agriculture) was regulated by traditional institutions: guilds, merchant organizations, privileged towns, village communities, feudal landlords. The spate of research on proto-industrialization has shown that industrial development was affected much more strongly by institutional variations than by the presence (or absence) of proto-industry.

There is better evidence to support a second theory of how changes in pre-factory industry may have prepared the way for the factory. This is the idea of the 'industrious revolution', proposed in the late 1980s by a historian of the Netherlands, Jan de Vries. De Vries stressed a different set of changes in eighteenth-century industry: not the

move from crafts to proto-industries, but the move from household manufacturing to market-oriented crafts and proto-industries. During the eighteenth century, de Vries argues, Europeans began to use their time differently—in a sense, more ‘industriously’. They began to allocate less time to leisure and ‘household production’ (producing things for their own use within the family), and more to ‘market production’ (producing things to sell on the market to get income, which they then used to buy the things they no longer produced themselves). They did this not just in industry, but in agriculture as well, and de Vries argues that this big change in behaviour had far-reaching implications. It brought more human time into productive use, and it created more consumer demand, both of them essential for factory industrialization.

The jury is still out on the ‘industrious revolution’, but studies of consumption patterns using probate inventories and commercial records bear out at least part of this story. During the eighteenth century, people in some parts of Europe did indeed begin to buy more industrial goods from specialists and make fewer themselves. Studies of time allocation are more difficult, but the few that exist suggest that people were working longer hours, taking fewer holidays, and working more for wages and less for subsistence. The shift from household-oriented to market-oriented industrial work, however, did not happen to the same extent everywhere. The strongest evidence we have comes from Britain and the Low Countries. By contrast, the new consumption patterns arrived in central Europe later, and to a lesser extent. To many poor regions in the east and south of the continent, they did not come at all until the nineteenth or even the twentieth century. We cannot speak of an ‘industrious revolution’ that affected all areas of eighteenth-century Europe equally.

The ‘industrious revolution’ relied on changes in the relative price of making something yourself compared to buying it. Partly, this depended on the value you placed on various uses for your own time: leisure, household production, and income-earning work. But it also depended on the prices you had to pay if you purchased goods. Prices were partly determined by the efficiency of merchants, traders, and peddlers, as we will see in the next section. But prices were also determined by the extent to which craftsmen and proto-industrial producers minimized production costs, introduced better techniques, and responded to consumer demand for quality and fashion. The

efficiency and adaptability of industrial producers varied from one European region to the next, and were influenced by many of the same socio-political and institutional factors whose effects on agriculture we have already seen. All over eighteenth-century Europe, the costs of manufactures were often needlessly high, and the quality and selection needlessly uninviting, because of social and political rules directed at redistributing resources to powerful minorities rather than allocating them in ways that would benefit the economy at large.

One powerful minority was the privileged craftsmen based in the towns and organized into guilds. As the French economist Robert Turgot wrote in 1776, ‘In nearly all the towns of our Kingdom, the practice of different arts and crafts is concentrated in the hands of a small number of masters, united in a corporation, who alone have the exclusive right to manufacture and sell particular articles.’ France was no exception. In most European societies, towns claimed a legal monopoly over industry. Within towns, each branch of industry was the monopoly of a group of adult males, the masters of a particular guild or ‘corporation’. Guilds almost always excluded women, bastards, foreigners, Catholics in Protestant territories, Protestants in Catholic ones, and Jews anywhere. Most of them discriminated against everyone except male relatives of their own male members. They tried to make monopoly profits by limiting the number of masters, punishing outside encroachment, preventing internal competition by prohibiting new tools and new products, imposing output quotas, fixing minimum prices to customers, and setting maximum rates to suppliers and employees. Guild masters justified all this by claiming they protected consumers from low-quality goods. But often they merely exploited their workers, overcharged their customers, and, as Turgot put it, ‘retarded the progress of these crafts, through the innumerable difficulties encountered by inventors with whom different corporations dispute the right to exploit their discoveries’.

Urban guild monopolies had already largely broken down in the Low Countries and England before 1700. Competition among the numerous great Dutch and Flemish cities created unregulated interstices in the countryside, where rural craftsmen could play off one urban government against another and produce freely and cheaply in the resulting confusion. The English crown was unwilling to enforce the privileges of towns and guilds after the political crisis over ‘monopolies’ that peaked under the Stuarts. In any case, it was largely

unable to enforce any domestic economic privilege, because, unlike most other eighteenth-century European states, it failed to establish a local-level bureaucracy on the absolutist pattern. Lacking the captive markets of the guild monopolist, eighteenth-century Flemish and British industrial producers could stay afloat only by minimizing costs, devising attractive products, pleasing customers, and responding fast to economic changes. Rural competition in turn energized urban guildsmen to change their ways, or go under. In eastern Europe, too, as 'refeudalization' reached its apogee in the eighteenth century, guilds were weakened by the great landlords, intolerant of any economic privileges save their own. A few strong princes also began to grant guild-free 'immunities and privileges' to favoured enterprises, such as the Saxon Elector issued to the Royal Meissen Porcelain Factory in 1710, 'to the end that the artists and artisans shall not be frightened off by the guilds or the jurisdiction of our local councils'.

But in most of central and southern Europe, guilds remained very strong. In some proto-industries, particularly in France, Switzerland, Saxony, and the Rhineland, guilds gradually lost their monopoly over rural stages of production after the early eighteenth century. But guilds continued to control urban stages of production, including the important finishing and marketing processes. The monopolistic practices of the urban guildsmen often cost their rural suppliers dear, and inevitably reduced competitiveness throughout the whole industry. Guilds remained even more powerful in southern and central Germany, Austria, Switzerland, Italy, Spain, Greece, and Bulgaria. Here, both crafts and proto-industries remained guilded until the very end of the eighteenth century, or even beyond. Rural industries simply formed new rural or 'regional' (rural-urban) guilds, with the explicit encouragement and enforcement of the state.

Even when guilds broke down, rulers often simply replaced the old monopolies of the guild masters with new monopolies for favoured groups of industrialists: the *Fabrik* (manufactory) privileges granted by German and Austrian princes, the *franquicias* of Spain. Industrialists sheltered behind their *Fabrik* monopolies, producing at high cost and making sales only because their royal patron kept out the competition and forced his subjects to buy their output. The Austrian Habsburgs granted *Fabrik* privileges to a worsted manufactory at Linz and a hosiery manufactory at Poneggen, which, despite their

legal powers over thousands of rural outworkers and their protected domestic markets, failed ever to reduce costs to a profitable level, swallowed up huge state subsidies, and ultimately went bankrupt. The Prussian kings granted a long series of expensive monopolies, subsidies, and exclusive market rights to a silk *Fabrik* in Berlin, but it never flourished. By the 1790s, so notorious had its failure become that the Comte de Mirabeau wrote of the successful Krefeld silk manufactures that, although Prussian-ruled, had never been granted *Fabrik* privileges, 'Unhappy those manufactures, if ever a Prussian king should love them.' Although moving to the countryside could weaken guild and *Fabrik* privileges, they still kept costs higher than necessary in many industries.

Even when industry moved to the countryside and was not followed by the privileges of a guild or a *Fabrik*, it did not encounter the untrammelled market society Mendels described for Flanders. As we saw with agriculture, the rural economy was criss-crossed with institutional rules regulating the use of labour, land, and capital, and the exchange of food and other products. Inevitably, these affected how well industries could work. In societies where seigneurial and communal powers varied across short distances, such as Switzerland, England, Flanders, the Rhineland, and Saxony, proto-industrial workers settled where landlords and communities were weak. Above all, they clustered wherever seigneurial and communal rules failed to control migration, settlement, and occupational choice, since labour was by far the most important input into industry before the advent of the factory. In the Zürich highlands, for instance, weavers were excluded by villages with strong corporate rules, so they congregated in those whose regulations were weaker. In Leicestershire, framework-knitters proliferated in 'open' villages such as Shepshed, shunning 'closed' communities such as Bottesford where a single great landlord controlled settlement.

But in many parts of Europe, strong landlords and strong communities could not be avoided. Their rules might inflate costs, but industries could still arise and survive on the basis of proximity to lucrative markets or natural resource endowments (such as good sheep pasture for wool supplies, good water for linen-bleaching, or rich ore deposits). The Württemberg Black Forest, for instance, had very strong community institutions, which helped make its worsted proto-industry high cost, low quality, and technically backward. It

nevertheless survived into the late 1790s because geography, trade barriers, and warfare protected its access to south German and Italian markets from more efficient competitors. Sometimes, strong communal institutions actually created an artificially cheap industrial labour supply, as in the Netherlands region of Twente, where village regulations excluded inhabitants who were not legally 'full peasants' from access to land, leaving linen production as their only option.

Strong landlords also affected the costs of industry. Sometimes, as in Mecklenburg, Prussia, or Sweden, they prevented their serfs from weaving or smelting iron, in order to protect their sources of agricultural *corvée* labour. But landlords sometimes encouraged industry where they saw profit for themselves. In Russia, as the German observer von Storch reported in 1797, 'Foreign capitalists establishing factories, manufactories or workshops may buy as many peasants or serfs as they require for their enterprises . . . it has become virtually impossible for anyone who does not possess his own serfs to enter the mining industry to advantage.' In Bohemia and Silesia, landlords sold monopolies over their serfs' yarn and cloth output to Nuremberg merchant houses, levied loom fees on serf weavers, and forced serfs to cart wood and ore for mines, ironworks, and glassworks. The 'Linen Triangle' of Silesia, Bohemia, and Lusatia became one of the largest linen proto-industries in Europe, despite primitive technology, because serf labour enabled it to undercut the free wage weavers of Westphalia, Flanders, England, and Ireland. But one must question whether the coerced serf weavers and serf miners of central and eastern Europe developed the new habits of diligent time allocation and market-oriented consumption that de Vries has termed the 'industrious revolution'.

Some systematic changes can be described in European industry before the factory. Overall, between 1700 and 1800, proto-industries expanded while crafts stagnated or declined. Overall, household manufacturing gave way to both. Whether these changes presaged the rise of the factory is still an open question. It seems more likely that they, like the factories, were merely symptoms of deeper changes in the social framework surrounding all economic activity, whether industrial or agricultural. This is borne out by the fact that these changes occurred to widely varying extents, and with widely various consequences, in different parts of Europe. In many areas of the

continent, as late as 1770 the industrial scene still looked very much as it had in 1670 or even 1570. Guilds and privileged towns were still powerful, except in the richest economies (England and the Low Countries) and the poorest ones (east of the River Elbe). Powerful landlords were successful either in forbidding rural industry where it would interfere with their agricultural interests (as in Leicestershire, Sweden, or Prussia), or in co-opting it as another source of seigneurial revenues (as in Languedoc, Silesia, or Russia). Corporate villages excluded proto-industry where it threatened communal resources (as in the Zürich uplands) or subordinated it successfully to their corporate rules (as in Twente or Württemberg). The privileged groups that had long regulated industry in the towns continued to do so. Those that had for centuries regulated the agrarian economy in their own interests extended control to the new rural crafts and proto-industries. High-cost industries were protected from competition by institutional privileges and geographical barriers to trade. Why should anything change?

Industrial change required two things to coincide: governments that were strong and stable enough to stop enforcing (or even to abolish) traditional institutional privileges; and markets that made it possible to use inputs in new ways, and sell output at a profit sufficient to make the risk of innovation worthwhile. Such a coincidence occurred in more and more regions of Europe during the eighteenth century. Slowly, some princes developed standing armies, tax systems, professional bureaucracies, and public finances that enabled them gradually to dispense with that old mainstay of early modern princes, granting economic privileges to favoured groups and institutions in return for military, fiscal, and regulatory cooperation. Gradually, in the interstices of poorly enforced institutional privileges, markets developed that allocated land, labour, and capital more efficiently, and let producers trade with consumers, without having to buy off innumerable corporate and feudal parasites along the way. The combination of strong governments with strong markets created an environment in which economic experimentation was both possible and profitable.

This did not make an industrial revolution inevitable, but it made it possible. By 1750 the combination of strong government and strong markets had been emerging slowly in a number of European societies for some time. With the spread of Newtonian science, new scientific

ideas with potential industrial applications—what historians of technology have called ‘macro-innovations’—had been proliferating in many parts of western Europe. But in the words of one of the great engineers of the Industrial Revolution, John Farey, ‘The inventions which ultimately come to be of great public value were scarcely worth anything in the crude state, but by the subsequent application of skill, capital and the well-directed exertions of the labour of a number of inferior artizans . . . brought to bear to the benefit of the community.’ Such fine-tuning proved to be easier in certain European countries. As one Swiss calico-printer remarked in 1766, for a new technique to be perfect it had to be invented in France and worked out in England.

Lively debate still rages about why this should have been the case. All the thousands of pages of controversy about the causes of the Industrial Revolution have still not come up with one clear, identifiable factor that Britain had and every other European (or Asian, or African) economy lacked. True, the agricultural revolution and an advanced financial system provided cheap sources of capital—but the Netherlands had these as well. True, agricultural productivity growth released labour, and guilds did not prevent it from taking work in industry—but by 1760 this was the case in parts of Flanders, Switzerland, and France. True, well-off farmers profiting from the agricultural revolution provided ready consumer markets for industry—but there were plenty of these throughout the Low Countries and other rich farming regions. True, a ‘commercial revolution’ (discussed in the next section) created an integrated grain market and lowered the costs for producers to reach consumers, without opposition from institutional privileges—but, again, England was not the only European economy whose trade, both domestic and foreign, was thriving.

Perhaps the best speculation, in the current state of our knowledge, is that, although each of these features could be found to some extent in other parts of Europe, England brought them all together. People who thought up better ways of producing things could obtain the necessary inputs in the required quantities at the lowest possible cost, without opposition from entrenched interest groups. And they could rely on being able to sell the output at a price and in a quantity that would gain them enough for it to be worth their while incurring the costs and risks of experimenting.

And experiment they did. The number of industrial patents in England expanded every decade after 1700, and a surprisingly large number were put into practice: Darby’s coke iron furnace after 1710, Kay’s flying shuttle after 1733, Paul’s carding machine after 1748. As early as 1745, the French commentator Abbé Le Blanc remarked that ‘England is the country where one finds the largest number of these machines . . . which truly multiply men by saving their labour.’ Then, in the 1760s, the average number of patents issued in a single decade surpassed 200 for the first time. In an astonishing thirty-year period between 1760 and 1790, more than 1,000 inventions were patented in England, among them half a dozen that, along with the requisite ‘micro-innovations’, were to transform industry irreversibly: Arkwright’s water frame, Hargreaves’s spinning jenny, Crompton’s mule, Watt’s steam engine, Cartwright’s power loom, Cort’s iron puddling process. From 1770 on, English cotton production took off, and after 1780 iron followed suit. Productivity increased enormously, costs and prices plummeted, sales and output expanded fast. By 1784 the Marquis de Biencourt was describing in plaintive terms how the English were constantly making new discoveries: ‘The whole of nature is unceasingly studied, requested, worked upon, fecundated, husbanded.’

This threw a spanner into the delicate equilibrium of eighteenth-century European industry. Hitherto, a slightly better technology in Flemish linen-making was counterbalanced by a slightly cheaper source of flax in Westphalia, slightly lower wage costs among Silesian serf weavers, or slightly greater proximity to key markets on the Swabian Jura. But, suddenly, competition among industries was no longer merely a matter of tiny cost differences, easily compensated for by local resource endowments, an artificially cheap labour force, high transportation costs, or protective legislation. The new machines and factories produced cotton textiles, small iron wares, and soon other manufactures, which could be profitably sold at prices a quantum leap below those of most existing proto-industries, whether in England or elsewhere in Europe. Machines often hugely improved quality as well. At a blow, machines and factories wiped out the tiny cost advantages on which so many eighteenth-century industrial regions had survived. Proto-industries throughout Europe began to feel the chill winds of competition. The stable and privileged industrial regime of eighteenth-century Europe began to break down.

The obvious move was for existing industries to introduce machines and factories. But for this the privileged groups already monopolizing industry had to recognize necessity, and bend to it. By the early 1780s, entrepreneurs in Belgium, northern France, Switzerland, and the German Rhineland were trying to set up factories and install the new 'English machines'. Quite apart from the technical challenges, the social barriers could prove insuperable, as was discovered by Brügelmann, a proto-industrial linen merchant in the Wupper valley, when he tried to set up the first English-style spinning mill in Germany in 1782. The state corporatism typical of eighteenth-century German industry meant that he could not just set up his factory, as in England: he had to get a *Konzession* (permit) from the state. But the Wuppertaler Garnnahrung, a privileged proto-industrial linen-trading corporation of which Brügelmann himself was a member, allied with the rural weavers' guilds to lobby against him. His application was turned down. Years later, Brügelmann got a permit, but from the ruler of a neighbouring territory with no existing industrial interest groups. In Silesia, the response of the institutionalized proto-industrial interests was even more fatal. The great feudal lords got the Hohenzollern rulers to prohibit machines and factories altogether, in order to protect their profits from their serf weavers. The result was a foregone conclusion: in 1820, the English traveller Russell was told how 'Thirty years ago, when the decay of the Silesian manufactures was only in its commencement, you might see weavers returning from the town to their distant villages, with tears in their eyes, and not a sixpence for the expectant family at home. The evil is now much more general.'

Institutional obstacles made it hard for many European industries to react to the coming of factories and machines with any flexibility. Some survived for a generation or two longer by devising other ways to lower their costs, mainly (as in Silesia) by lowering workers' pay. But undercutting the new machines was already difficult and became more so as factories spread outside England, and people learned to run them more efficiently. Other industries moved out of the direct line of fire: by 1850 many German and French industries had carved out modest niches in high-quality goods or raw materials that were difficult to mechanize, while their British, Belgian, and Swiss counterparts addressed the mass market with factory production. But technology did not stop moving into new sectors, and this was only

staving off the evil day. Other industries tried to survive by persuading their governments to introduce protectionist barriers or new institutional privileges. Some Saxon cities even created new guilds of cotton-manufacturers, who tried to perpetuate old corporate monopolies into the factory era. These, combined with Napoleon's Continental System, protected some European proto-industries from English factory competition for another generation. But, after peace broke out in 1815, time ran out quickly for the old eighteenth-century industrial regime.

Responses to factory competition after 1770 thus varied widely across Europe. Many did not involve radical institutional reform, and thus it is not surprising that so many European economies did not even begin industrializing until well into the nineteenth century. A wide array of responses had to be tried, and fail, before privileged industrial interests could grit their teeth on change. Protectionism and deindustrialization could sustain existing institutional privileges, and these were chosen by some European proto-industries, or forced upon them, from the 1790s on. Devising new ways to reduce costs in order to compete with factories, or moving into as yet unmechanized lines of business, by contrast, required a degree of flexibility that put further pressure on rigid industrial institutions. Mechanization itself, which was the only long-term solution, required even more adaptation. Under intolerable pressure from rulers increasingly unsympathetic to old interest groups, and from markets that were more and more competitive, the industries that survived in Europe after 1800 were those that managed to free themselves from traditional institutional privileges. The eighteenth century itself saw only the beginning of these changes, and in many European countries they required the entire nineteenth century to diffuse or even get properly started. Moreover, in some European economies, new industrial and commercial interest groups soon obtained new legal privileges over the factory industries. But factories, even inefficient ones, required a new institutional framework. The stable industrial regime of the eighteenth century had contained the seeds of its own destruction. The destruction itself was often painfully delayed long into the nineteenth century.

Trade

'Trade makes the wealth of England,' wrote one French Foreign Office bureaucrat in 1736. The view that trade was the engine of economic growth was a central tenet of mercantilism, the European economic orthodoxy in the first half of the eighteenth century. After 1750 it was challenged by the physiocrats' insistence on the primacy of agriculture, but most French government officials still believed, as the French consul in London wrote in June 1789, that 'The wealth of England is nothing but the fruit of her large trade.'

This idea attracted later historians. Foreign trade did grow in many parts of Europe before the Industrial Revolution, and it grew earlier and faster in certain economies, such as England and the Low Countries, in which agricultural and industrial development was also advanced. Moreover, the eighteenth century also saw the growth of the British seaborne empire from its modest seventeenth-century beginnings into a fully-fledged colonial and imperial system. By the mid-eighteenth century, Europe, Africa, and the New World had been knitted together by the 'triangular trade', whereby European merchants exchanged manufactures (especially textiles and arms) for African slaves, which they shipped across to the West Indies and America to grow cotton, sugar, and other raw materials, which were then traded back to Europe to be incorporated into the manufactures that were exported to Africa (for slaves) and America (for slave-grown raw materials). A multitude of bilateral and multilateral trading links brought exotic goods into European households, spread European manufactures throughout the world, and made some handsome merchant fortunes. This trade was highly visible, it left very good records, and it seemed a new departure compared to the way the European economy had ever worked before. Surely this combination of long-distance commerce, imperialism, and slave-trading was what accumulated the capital, created the export markets, and captured the raw materials subsequently used in the Industrial Revolution?

This view is appealing, but the evidence is mixed at best. In Britain, long-distance trade and industry both grew remarkably during the eighteenth century, but which caused which? Did long-distance

commerce promise such huge profits—through exports of manufactures and imports of raw materials—that it stimulated British industries to invent, invest, and expand? Or did the efficient and flexible British industries produce goods that competed well on foreign markets, expanding sales there, and creating demand for colonial imports? The role of foreign trade in economic growth is a fundamental question that economists have yet to settle even for the modern developing world, let alone for eighteenth-century Europe. It seems likely, however, that the long-distance trade was at best a 'handmaiden' rather than an 'engine' of growth. All the figures suggest that British domestic supplies grew faster than foreign demand. That is, it was the success of British industries that caused exports to grow, not the success of British overseas trade that made industries grow. Even for cotton textiles at the end of the century, the domestic market could (and did) take up the slack when foreign markets failed. The only argument that remains partly persuasive is that, without cheap raw cotton from the American slave plantations, the Industrial Revolution might have been delayed until linen or wool could be mechanized. Those countries whose domestic economies were flexible and efficient, such as Britain, probably benefited from long-distance commerce, but would have industrialized anyway.

Nor is it clear whether the possession of colonies always brought net economic benefits. True, most European imperial powers tried to limit access to their colonies, subsidizing their own manufacturers' exports to them, prohibiting colonies from buying foreign manufactures, preventing foreign ships from sailing there, and cornering the best colonial exports for the mother country. Surely such legal discrimination must have given those European economies that had colonies a head start over others? Not necessarily. Even for Britain, economists have calculated that the costs of defending and administering the colonies, enforcing the trade regulations, and giving preference to colonial goods, outweighed the benefits. Colonialism, they conclude, benefited naval interests, owners of plantations, and a few subsidized manufacturers, at the expense of the economy at large; it was essentially a device for redistributing resources from taxpayers to special interest groups. Of course, if the resources extracted from taxpayers to fund colonial defence and administration would otherwise have been lying idle, in a rigid and underemployed economy, then it might be argued that there was no net cost to the economy.

But this assumption is implausible: certainly in eighteenth-century Britain, people had productive projects to which to allocate resources. Hence, it seems more likely that colonialism benefited certain social groups, but not the economy as a whole—not to mention the harm done to indigenous populations overseas. European comparisons cast even more doubt on the industrial benefits of colonialism: of the early industrializers, only Britain was an imperial power; Belgium and Switzerland industrialized next, without colonies; Holland, Portugal, and Spain, with rich colonial empires, are counted among the late industrializers of western Europe. The colonial trade generated prosperity for some individuals and regions, in a few economies in the west of the continent, but not on a scale fundamentally to alter patterns of growth in eighteenth-century Europe.

Yet a commercial revolution did take place in eighteenth-century Europe: not in the glamorous long-distance expeditions to exotic lands, but in the seemingly mundane business of regional exchange and local shopkeeping. For farmers to find the risks of agricultural innovation worthwhile, they needed to know they could sell their surplus at a profit, and that meant being able to reach consumers efficiently. For craftsmen or proto-industrial workers to risk specializing in goods they could not eat, they needed to know they could sell them and be sure of buying food. Trade made it possible for individuals and regions to begin specializing in the crops and goods their natural and social endowments made them best at producing. Trade also brought competitive pressures to bear on monopolists, forcing them to lower their prices and control their costs. But trade was costly, and where it was too costly it did not take place. The essence of the eighteenth-century commercial revolution was that it reduced the costs of trade so much that many exchanges began to occur that had never been possible before.

The most obvious costs of trade are the costs of transport. In 1700 both land and water transport were still extremely expensive in most parts of Europe. Water transport was much cheaper than land, with less draught power needed to move a given weight of goods. English coal, for example, doubled in price after 5 miles by road, but after 20–30 miles by water. Eighteenth-century roads were narrow, they were winding because they followed the contours of the landscape, and their surfaces were very poor. The best roads in central Europe at the end of the eighteenth century have been likened to present-day forest

tracks. Water routes were not much better: many rivers were not navigable, building canals was costly and was as yet widespread only in the Netherlands, and only countries with long coastlines (such as Britain and the Low Countries, but also Denmark, Italy, Portugal, Dalmatia, and Greece) had access to almost all their regions by coastal shipping.

Road improvements that reduced transport times and breakages were a major component of the commercial revolution. The biggest problem was that no one owned roads, it was hard to charge for using them, so no one had an incentive to maintain them. During the eighteenth century, this problem was solved in France by the state, in England by the market, and in much of southern, central and eastern Europe not at all. The French Royal Road Administration expanded its budget from 870,000 livres annually in 1700 to 4 million livres by 1770, building a planned network of 40,000 kilometres of royal roads, and reducing the journey time between Paris and Lyons from ten days to five. England, by contrast, solved the problem through the 1662 Turnpike Act, which permitted the formation of tiny 'turnpike trusts', groups that invested in improving roads in return for the right to charge users a toll. By 1750, a network of turnpikes radiating out from London linked centres of population and economic activity across England, and between the 1740s and the 1780s the journey time from London to Birmingham fell from 2 days to 9 hours. By 1781, the French bureaucrat d'Aubarède was writing, in connection with plans for invading England, that 'the roads are superb'. Elsewhere on the continent, neither markets nor states made much of a start on improving land transport until the late eighteenth century. The Spanish crown did not begin a road-building programme until 1767, and even then the new royal roads addressed strategic rather than economic needs. Frederick II of Prussia regarded trade as politically destabilizing, so half of central Europe lacked proper highways till after 1780. As late as 1820, the English traveller Hodgskin described how in northern Germany the revenue from road tolls 'goes into the pocket of the sovereign, and he repairs the road or not as he pleases'.

River improvements and canals followed a similar pattern: they were carried out by private individuals in England, the state in France, and in many other European regions not at all. Canal improvements started in the Low Countries in the seventeenth century, where by the 1660s the canals were already carrying 38 million

passenger-kilometres of transportation each year, and transport costs were so low that people sent their laundry from Amsterdam to be washed in the cleaner waters of Harlem and Gouda. England possessed only one river that was fully navigable, the Severn, but by 1760 river improvements (many inspired by Dutch engineers) had doubled England's endowment of navigable water to 1,400 miles. The real 'canal mania' started in 1760, with limited liability companies being set up by local landowners wanting to transport coal to salt-fields, ironworks, or big industrial cities such as Manchester, or by industrialists such as Josiah Wedgwood who needed a cheaper (and lower-breakage) method for transporting his heavy china. In France, by contrast, the canal network that grew up between the early seventeenth century and the 1730s was mainly inspired and financed by the crown, concerned to divert trade from the Habsburg possessions and incidentally help bring food into Paris. German princes' emulation of the French Bourbons was not limited to building mini-Versailles, but extended to the somewhat more useful activity of canal-building. But motives of princely display often, in both France and Germany, led to massive misinvestments. The Canal des Deux Mers, Colbert's pet project for connecting the Mediterranean with the Atlantic, was completed in 1691 but never used for any but local traffic; much of its length was out of use throughout the eighteenth century for lack of maintenance. In precisely the same way, the Dukes of Braunschweig-Wolfenbüttel spent huge sums making the Oker river navigable in 1741, but there was not enough ship traffic to justify the project and it was abandoned again by 1775.

But transport costs were not the only costs of trade. Even where roads, navigable rivers, or canals existed, the same privileged groups we have already seen at work in agriculture and industry also often secured institutional rights over them. At the same time as the French absolutist government was building roads and canals, it was also carving up the largest economy in Europe into a multitude of separate economies, by a complex system of internal tariffs. It then sold off the right to collect these tariffs to a set of officials (the 'Farmers of the Royal Customs'), creating an effective lobbying group for maintaining the internal trade barriers. During the eighteenth century, the great French seigneurs also revived their ancient feudal rights to levy tolls on trade passing through their domains. In German-speaking central Europe, territorial fragmentation made the problem worse: not only

princes and feudal landlords, but also privileged cities, charged innumerable tolls on road and river traffic. As late as 1820, an English traveller described in astonishment how 'There are no less than 22 tolls on the Weser betwixt Münden and Bremen . . . At every toll every vessel is stopped and her whole cargo examined . . . It is said the expence of collecting the tolls equals the receipts . . . Similar tolls and impediments are known to exist on every river of Germany.' The great German cities also possessed staple rights, entitling them to force farmers and industrial producers in the surrounding countryside to sell all their goods to town merchants, and to compel all goods passing through the city to be unloaded and sold to local merchants who had a monopoly over re-exporting them. In the Low Countries and England, the institutional weakness of cities and towns, which had lost their staple rights in the sixteenth or seventeenth centuries, was an important factor in their commercial strength.

A final component of the eighteenth-century commercial revolution was a transformation in the activities of merchants and traders. Since medieval times, the merchants in most towns in Europe had organized themselves into guilds, just like craftsmen. During the sixteenth and seventeenth centuries, the rise of new forms of commerce, such as the handling of proto-industrial products and the long-distance colonial trade, had seen the creation of new organizations called 'merchant companies'. A few of these presaged modern joint-stock companies, but most were simply guilds in a new guise. The merchants in a particular city, proto-industrial region, or overseas trade route would form a lobbying group, secure a state monopoly, and then act much like any other guild, excluding outside competitors, stifling internal competition, opposing new practices, and charging monopoly prices to customers. Some of the most important long-distance trading routes were dominated by such companies: the Merchant Adventurers, the Levant Company, the Dutch East India Company, the French East India Company, the Dutch West India Company, the English East India Company. Yet many of these companies failed financially in the short or long term, and those routes flourished most that were open not only to the monopolistic operations of the great companies but to small-scale trading by individual merchants.

The major contrast between the most advanced and the more backward trading economies in eighteenth-century Europe resided in

whether privileged merchant companies also monopolized the proto-industrial trade, the inter-regional grain trade, and local retailing. In England and the Low Countries, urban merchant guilds had already lost control over these sectors before 1600. Throughout the rest of Europe, by contrast, there was hardly a proto-industrial region which was not the monopoly of a privileged trading company, which had the right to force local weavers, metalworkers or glass-makers to sell everything they produced to members of the company, often at disadvantageous prices. Sheltered behind their monopoly privileges, these companies failed to introduce commercial innovations that would have reduced trading costs. Whenever they could, they exploited their monopoly powers on regional markets to charge higher than competitive prices to customers. Guilded urban merchants also sought to keep the trade in grain, wine, industrial raw materials, indeed all 'merchant wares' in their own hands, using their lobbying power with rulers to limit the intrusions of unlicensed hawkers, peddlers, and informal shopkeepers, whose ability to lower the costs of trade benefited customers but threatened to eat into the monopoly profits of the established merchants. So ubiquitous were such merchant privileges as late as 1793 that, on a journey to Württemberg, the Göttingen professor Christoph Meiners described how commerce 'is constantly made more difficult by the form which it has taken for a long time. The greatest share of trade and manufactures are in the hands of close and for the most part privileged companies.' It was not until eighteenth-century rulers ceased to enforce these merchant monopolies that the costs of trade really began to fall outside the north-west corner of Europe.

The final element of the eighteenth-century commercial revolution is one we have already encountered: de Vries's concept of the 'industrious revolution'. De Vries argues that productivity growth in agriculture and industry, combined with the falling costs of trade, brought a richer array of cheap and attractive consumer goods within the budgets of poorer people. This meant that a much larger share of the population could now think of buying consumer items. This, he speculates, motivated people to change how they allocated their time. Traditionally, people had put a lot of time into leisure and 'household production' (producing things for their own use within the family), and relatively little into working for income in the market. In the eighteenth century, de Vries argues, they shifted time out of leisure

and household production and allocated it to income-earning activities, so they could afford to buy the new consumer goods. This growth of consumption then became self-sustaining: increasingly, people began to define social esteem and class affiliation in terms of patterns of consumption and industrious behaviour, rather than in the traditional terms of birth, honour, corporate affiliation, legal status, or participation in sociability and leisure activities. This new interest in consumption and income-earning, de Vries argues, was itself responsible for drawing hitherto unused supplies of human time and ingenuity into productive activities, contributing to economic growth.

Empirical evidence that such an 'industrious revolution' actually occurred in eighteenth-century Europe is still not fully established, as we saw in the section on industry, and in some parts of the continent it probably did not take place in this period. However, for some regions of western Europe, there is evidence that during the eighteenth century people from ever wider social groups were consuming more traded goods. Even in Germany, as the political thinker Justus Möser demanded plaintively at the end of the eighteenth century, 'Can one conceive of anything which the shopkeeper does not now trade in, either secretly or publicly? Does he not watch out for all opportunities and crazes, in order to introduce something new, wonderful and foreign?' In societies where shopkeepers acted like this, there is even some indication that people were beginning to work more intensively. Partly, this was simply because, as discussed throughout this chapter, the institutional obstacles to productive work and low-cost exchange were being broken down. But it may also have been, as de Vries argues, because of social and cultural changes that oriented people more towards consumption and work, and less towards leisure and other ways of obtaining social esteem and political influence. As the Englishman John Bright wrote in 1756, 'See, as the Owners of old Family Estates in Our Neighbourhood are selling off their Patrimonies, how your Townsmen are constantly purchasing; and thereby laying the Foundation of a new Roll of Gentry! Not adorned, it's true, with Coats of Arms and a long Parchment Pedigree of useless Members of Society, but decked with Virtue and Frugality.'

The 'industrious revolution', no less than other aspects of eighteenth-century economic change, was evolutionary rather than

revolutionary, and far from universal throughout Europe. The extent to which it could take hold in any society was profoundly influenced by socio-political and institutional factors. 'Sumptuary legislation' was issued by many European princes in the eighteenth century, precisely in order to stop the industrious revolution in its tracks. Rulers tried to prevent their subjects from spending money on 'needless luxuries' so they would be able to pay the taxes needed to finance the swelling tide of European warfare. The nobility and urban patriciate tried to stop their social inferiors from encroaching on traditional symbols of social demarcation. In many European societies, the nobility sought to defend its privileged status against incomers by genealogical codification, strict endogamy, or legal barriers. Where these attempts were successful, they hindered the emergence of a definition of social esteem and social status in terms of consumption or income, and blocked one of the main conduits of the 'industrious revolution'.

Nor must it be forgotten that there were many European societies, even at the end of the eighteenth century, in which privileged groups thoroughly cornered all consumption above the subsistence minimum. Contemporaries recognized that in such societies there could be no industrious revolution. As one western visitor to Poland observed in 1781, for 'the largest part of the nation . . . the drive to activity which is a consequence of the desire to happiness is lacking'. In this respect, as in so many others, the economic 'revolutions' so often associated with the eighteenth century in Europe were neither inevitable nor universal. Society and politics stifled economic revolution more often than economies revolutionized society.

Religion and culture

Derek Beales

Individual historians have saddled eighteenth-century Europe with a rich variety of contradictory titles: for example, in intellectual history 'the Age of Reason' and 'the Age of Enlightenment'; in political history 'the Age of Absolutism', 'the *Ancien Régime*', 'the Old European Order', 'the Reforming Century', 'the Age of Revolution', even 'the Age of the Democratic Revolution'; in social history 'the Aristocratic Century' and 'the Age of Politeness'; in economic history 'the Age of Commercialization' and 'the Age of Industrialization'; in religious history 'the Age of Scepticism' and 'the Age of Secularization'; and in the history of the arts 'the Age of the Baroque', 'the Classical Age', 'the Age of Sentimentalism', and even 'the Age of Romanticism'. Most of these titles are plausible for some parts of Europe in some parts of the period. A great deal depends on whether one is thinking of 'the short eighteenth century', 1715–89, the strict hundred years 1700–1800, or 'the long eighteenth century', 1688–1815. Once 1789 is passed, the French Revolution, its impact, and the reaction against it must dominate the story, at least in politics and related spheres, such as religion. Indeed, the French Revolution was such a colossal event that many historians have allowed the search for its origins and causes to constrain their view of the whole century: they see revolution as immanent in the France of Louis XIV and espy similar tensions in every other country. But in fact the beginning of historical wisdom about the eighteenth century before 1789, even with regard to France, is to forget the French Revolution. Many recent historians deny that a political, social, and religious upheaval such as actually occurred was inherent in the situation of France before 1789, and none of the other so-called revolutions that punctuated the 1780s elsewhere in Europe, in Geneva, Holland, and Belgium, much

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OXFORD
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Great Clarendon Street, Oxford OX2 6DP

Oxford University Press is a department of the University of Oxford.
It furthers the University's objective of excellence in research, scholarship,
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Published in the United States
by Oxford University Press Inc., New York

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British Library Cataloging in Publication Data
Data available

Library of Congress Cataloging in Publication Data
Data available

ISBN 0-19-873181-7 (Hbk)
ISBN 0-19-873120-5 (Pbk)

1 3 5 7 9 10 8 6 4 2

Typeset in Minion
by RefineCatch Limited, Bungay, Suffolk
Printed in Great Britain by
T. J. International Ltd., Padstow, Cornwall

General Editor's Preface

The problems of writing a satisfactory general history of Europe are many, but the most intractable is clearly the reconciliation of depth with breadth. The historian who can write with equal authority about every part of the continent in all its various aspects has not yet been born. Two main solutions have been tried in the past: either a single scholar has attempted to go it alone, presenting an unashamedly personal view of a period, or teams of specialists have been enlisted to write what are in effect anthologies. The first offers a coherent perspective but unequal coverage, the second sacrifices unity for the sake of expertise. This new series is underpinned by the belief that it is this second way that has the fewest disadvantages and that even those can be diminished if not neutralized by close cooperation between the individual contributors under the directing supervision of the volume editor. All the contributors to every volume in this series have read each other's chapters, have met to discuss problems of overlap and omission, and have then redrafted as part of a truly collective exercise. To strengthen coherence further, the editor has written an introduction and conclusion, weaving the separate strands together to form a single cord. In this exercise, the brevity promised by the adjective 'short' in the series' title has been an asset. The need to be concise has concentrated everyone's minds on what really mattered in the period. No attempt has been made to cover every angle of every topic in every country. What this volume does provide is a short but sharp and deep entry into the history of Europe in the period in all its most important aspects.

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