

IV The World Shrinks, 1450–1750

prices hit hard at the poor, and many sell their small plots of land. Some poor manufacturing workers, depending on merchant capitalists to keep their cottages. Others became paid agricultural states, where landlords were more manipulable workforce to take business opportunities in the cities. Outside the cities, and a growing problem of wandering poor began to affect Western nations. The poor for moral failings, a new, more toward poverty took shape that has extent to the present day.

Increasingly, the shifts in popular economic conditions provoked important outcries. Waves of popular protest in western Europe at the end of the 16th century and about 1650. Peasants and townspeople sought greater protection from poverty and misery. The uprisings did not deflect the course of change, but they revealed the masses of many workers.

Popular rebellions of the 17th century reflected tension and new ideas of equality. They voiced such sentiments as this: "The monarchy must be overturned, for we peasants are the lords, it is we who will sit in the throne. The uprisings in 1648 produced demands for a popular voice; an English group called the Diggers had 100,000 signatures on a petition for rights. Elsewhere, common people praised the king for attacking their "bad advisors" and the English agitator said that "we should cut the gentlemen's heads... We shall have a new king shortly." In France, Protestant and Catholic peasants rose together against landlords and sought only the ruin of the poor people for their wealth."

A unprecedented outburst against suspected witches in the same decades in various parts of Europe and also in New England. Although witches had developed before, the new period of intense social and cultural upheaval. Between 100,000 and 100,000 suspected witches were killed. The witchcraft persecution reflected resentments against the poor, who were accused of witchcraft by communities unwilling to accept responsibility for their poverty. The hysterical new tensions about family life and

the role of women, who were the most common targets of persecution. A few of the accused witches actually believed they had magical powers, but far more were accused by fearful or self-serving neighbors. The whole witchcraft experience revealed a society faced with forces of unusual complexity.

Science and Politics: The Next Phase of Change

As the impact of the Reformation and commercialization continued, new scientific discoveries and political forms took shape from 1600 onward. These two forces shaped a new round of change that continued into the 18th century.

The revolution in science, culminating in the 17th century, set the seal on the cultural reorientation of the West. Although the Scientific Revolution most obviously affected formal intellectual life, it also promoted changes in popular outlook.

At the same time, after the political upheavals of the Reformation, a more decisive set of new government forms arose in the West, centering on the emergence of the nation-state. The functions of the state expanded. The Western nation-state was not a single form, because key variants such as absolute monarchies and parliamentary regimes emerged, but there were some common patterns beneath the surface.

Did Copernicus Copy?

This is a chapter about big changes in western Europe during the early modern period. Big changes are always complex. One key development was the rise of science in intellectual life. A key first step here was the discovery by the Polish monk Copernicus, in the 16th century, that the planets moved around the sun rather than the earth, as the Greeks had thought. This discovery set other scientific advances in motion, and more generally showed that new thinking could improve on tradition. Copernicus is usually taken as a quiet hero of Western science and rationalism.

Copernicus based his findings on mathematics, understanding that the Greek view of earth as central raised key problems in calculating planetary motion. Historians have recently uncovered similar geometrical findings by two Arabs, al-Urdi and al-Tusi, from

the 13th and 14th centuries. Did Copernicus copy, as Westerners had previously done from the Arabs, while keeping quiet because learning from Muslims was now unpopular? Or did he discover independently? It's also worth noting that scientists in other traditions, such as Chinese, Indian, and Mayan, had already realized the central position of the sun. Change, again, is complicated.

What is certain is that based on discoveries like that of Copernicus, science began to take on more importance in Western intellectual life than had ever been the case in the intellectual history of other societies, including classical Greece. Change may be complicated but it does occur.

Science: The New Authority

During the 16th century, scientific research quietly built on the traditions of the later Middle Ages. After Copernicus, Johannes Kepler (1571–1630; Figure 22.3) was another important early figure in the study of planetary motion. Unusual for a major researcher, Kepler was from a poor family; his father abandoned the family outright, and his mother, once tried for

witchcraft, was unpleasant. But Kepler made his way to university on scholarship, aiming for the Lutheran ministry but drawn to astronomy and mathematics. Using the work of Copernicus and his own observations, he resolved basic issues of planetary motion. He also worked on optics and, with the mixed interests so common in real intellectual life, also practiced astrology, casting horoscopes for wealthy patrons. Also around 1600, anatomical work by the Belgian Vesalius gained greater precision. These key discoveries not only advanced knowledge but also implied a new power for scientific research in its ability to test and often overrule accepted ideas.

A series of empirical advances and wider theoretical generalizations extended the possibilities of science from the 1600s onward. New instruments such as the microscope and improved telescopes allowed gains in biology and astronomy. The Italian Galileo publicized Copernicus' discoveries while adding his own basic findings about the laws of gravity and planetary motion. Condemned by the Catholic church for his innovations, Galileo proved the inadequacy of traditional ideas about the universe. He also showed the new pride in scientific achievement, writing modestly how he, “by marvelous discoveries and clear demonstrations, had enlarged a thousand times” the knowledge produced by “the wise men of bygone ages.” Chemical research advanced understanding of the behavior of gasses. English physician John Harvey demonstrated the circular movement of the blood in animals, with the heart as the “central pumping station.”

These advances in knowledge were accompanied by important statements about science and its impact. Francis Bacon urged the value of careful empirical research and predicted that scientific knowledge could advance steadily, producing improvements in technology as well. René Descartes established the importance of a skeptical review of all received wisdom, arguing that human reason could develop laws that would explain the fundamental workings of nature.

The capstone to the 17th-century scientific revolution came in 1687, when Isaac Newton published his *Principia Mathematica*. This work drew the various astronomical and physical observations and wider theories together in a neat framework of natural laws. Newton set forth the basic principles of all motion (for example, that a body in motion maintains uniform momentum unless affected by outside



Figure 22.3 Johannes Kepler

forces such as friction). Newton defined the forces of gravity in great mathematical detail and showed that the whole universe responded to these forces, which among other things explained the planetary orbits described by Kepler. Finally, Newton stated the basic scientific method in terms of a mixture of rational hypothesis and generalization and careful empirical observation and experiment. Here was a vision of a natural universe that could be captured in simple laws (although increasingly complex mathematics accompanied the findings). Here was a vision of a method of knowing that might do away with blind reliance on tradition or religious faith.

The scientific revolution was quickly popularized among educated Westerners. Here was a key step in the cultural transformation of western Europe in the early modern period. New scientific institutes were set up, often with government aid, to advance research and disseminate the findings. Lectures and easy-to-read manuals publicized the latest advances and communicated the excitement that researchers shared in almost all parts of Europe. Attacks on beliefs in witchcraft became more common, and magistrates grew increasingly reluctant to entertain witchcraft accusations in court. Public hysteria began to die down after about 1670. There were growing signs of a new belief that people could control and calculate their environment. Insurance companies sprang up to help guard against risk. Doctors increased their attacks on popular healers, promoting a more scientific diagnosis of illness. Newsletters, an innovation by the late 17th century, began to advertise “lost and found” items, for there was no point leaving this kind of problem to customary magicians, called cunning men, who had poked around with presumably enchanted sticks.

By the 1680s writers affected by the new science, though not themselves scientists, began to attack traditional religious ideas such as miracles, for in the universe of the Scientific Revolution there was no room for disruption of nature’s laws. Some intellectuals held out a new conception of God, called **Deism**, arguing that although there might be a divinity, its role was simply to set natural laws in motion. In England, **John Locke** argued that people could learn everything they needed to know through their senses and reason; faith was irrelevant. Christian beliefs in human sinfulness crumbled in the view of these intellectuals, for they saw human nature as basically good.

Finally, scientific advances created wider assumptions about the possibility of human progress. If knowledge could advance through concerted human effort, why not progress in other domains? Even literary authorities joined this parade, and the idea that past styles set timeless standards of perfection came under growing criticism.

Science had never before been central to intellectual life. Science had played important roles in other civilizations, as in China, classical Greece, central America, and Islam. Generally, however, wider religious or philosophical interests predominated. In China most notably, despite some real interest in generalizations about the physical universe derived from Daoism, science continued to be construed mainly in terms of practical, empirical advances. The Western passion for combining empiricism with more sweeping rational formulations—the idea of general laws of nature—clearly built on traditions that had come from Greek thought as mediated by Christian theology and Islamic philosophy during the postclassical period. In sum, the West was not alone in developing crucial scientific data, but it now became the leading center for scientific advance, and its key thinkers stood alone for some time in seeing science as the key to gaining and defining knowledge.

Absolute and Parliamentary Monarchies

The feudal monarchy—the balance between king and nobles—that had defined Western politics since the late postclassical period finally came undone in the 17th century. In most countries, after the passions of religious wars finally cooled, monarchs gained new powers, curtailing the tradition of noble pressure or revolt. At the same time, more ambitious military organization, in states that defined war as a central purpose, required more careful administration and improved tax collection.

The model for this new pattern was France, now the West’s most important nation. French kings steadily built up their power in the 17th century. They stopped convening the medieval parliament and passed laws as they saw fit, although some provincial councils remained strong. They blew up the castles of dissident nobles, another sign that gunpowder was undercutting the military basis of feudalism. They appointed a growing bureaucracy drawn from the

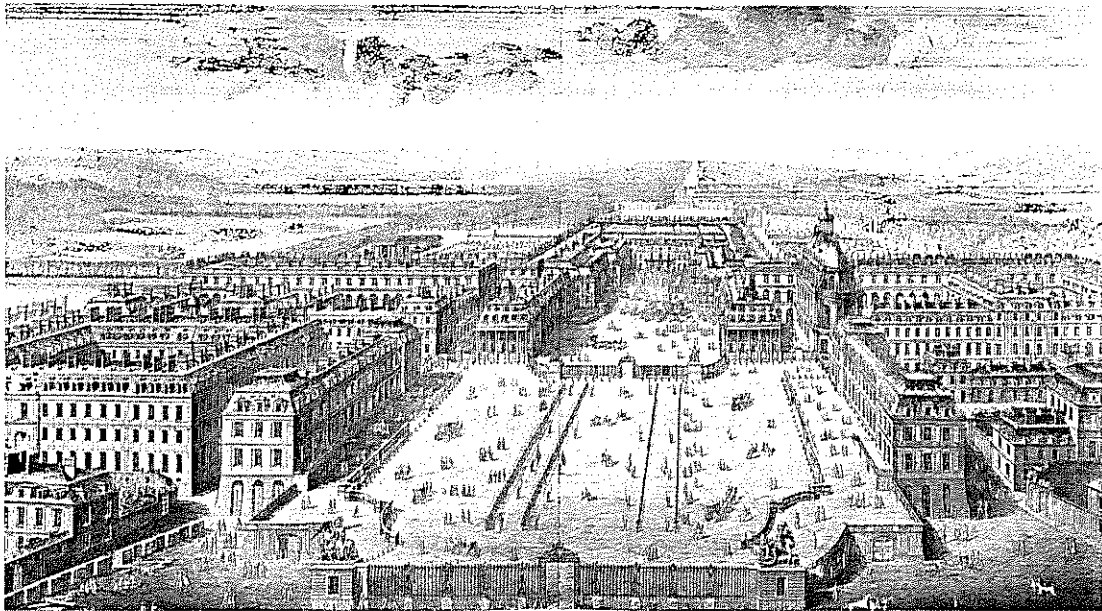
Visualizing the Past

Versailles

This picture shows Louis XIV's grand 17th-century palace at Versailles. It displays the sheer opulence of this absolute monarchy, in what was Europe's richest and most populous and influential nation. It also shows the renewed hold of a classical style, seen to be most prestigious for public buildings. What else does it suggest?

Architecture is sometimes thought to be the most socially and historically revealing of all the arts because it depends most heavily on public support; it is harder for architects, particularly dealing with public buildings, to be as idiosyncratic as painters or poets may be.

Questions: What kinds of intentions on the part of Louis and his advisors does this building represent? How can Versailles be interpreted as a statement of absolute monarchy in addition to its obvious showiness? What are the relationships to nature and to spatial arrangement? What would the palace represent to an ordinary French person? To an aristocrat?



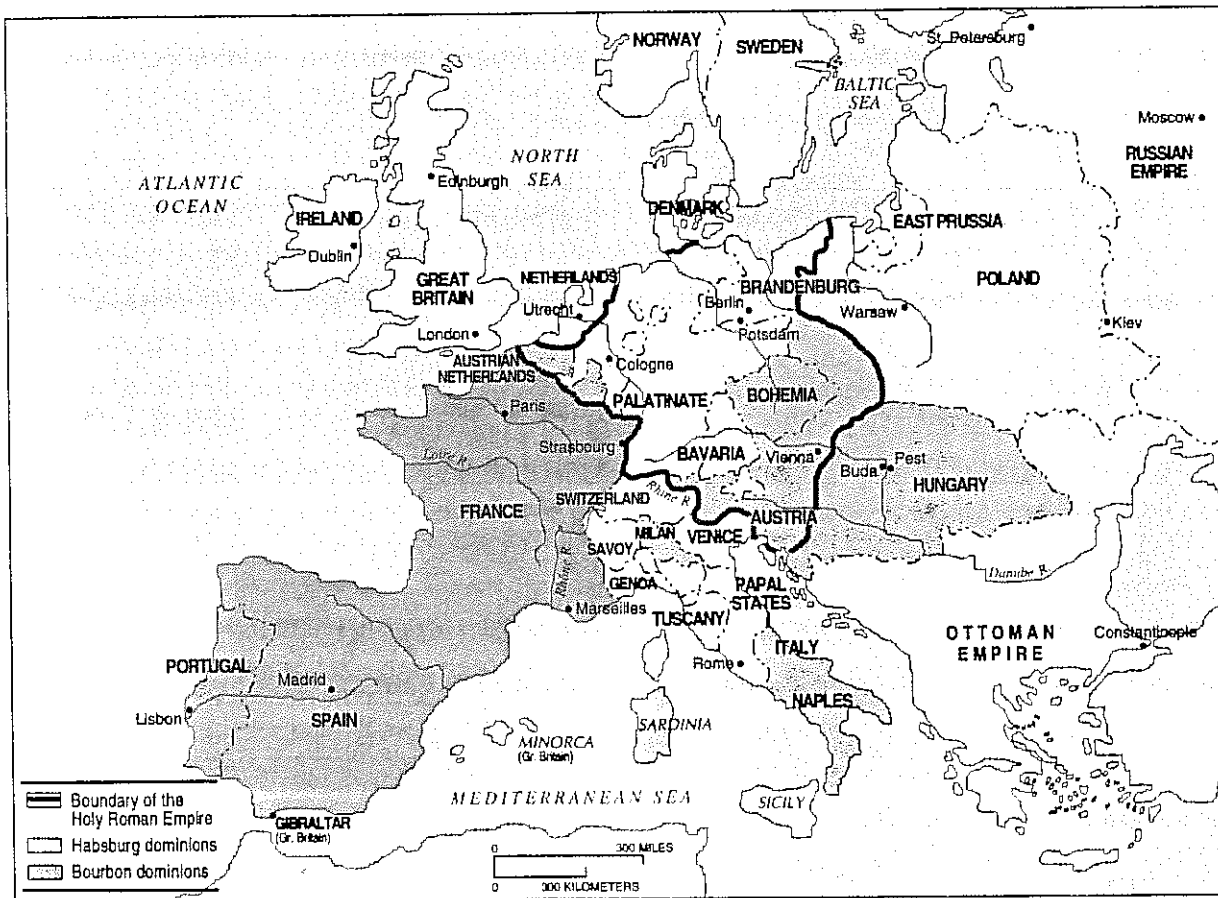
merchants and lawyers. They sent direct representatives to the outlying provinces. They professionalized the army, giving more formal training to officers, providing uniforms and support, and creating military hospitals and pensions.

So great was the power of the monarch, in fact, that the French system became known as **absolute monarchy**. Its most glorious royal proponent, King

Louis XIV, summed up its principles succinctly: “I am the state.” Louis became a major patron of the arts, giving government a cultural role beyond any previous levels in the West. His academies not only encouraged science but also worked to standardize the French language. A sumptuous palace at Versailles was used to keep nobles busy with social functions so that they could not interfere with affairs of state.

Using the new bureaucratic structure, Louis and his ministers developed additional functions for the state. They reduced internal tariffs, which acted as barriers to trade, and created new, state-run manufacturing. The reigning economic theory, mercantilism, held that governments should promote the internal economy to improve tax revenues and to limit imports from other nations, lest money be lost to enemy states. Therefore, absolute monarchs such as Louis XIV set tariffs on imported goods, tried to encourage their merchant fleets, and sought colonies to provide raw materials and a guaranteed market for manufactured goods produced at home.

The basic structure of absolute monarchy developed in other states besides France (see Map 22.2). Spain tried to imitate French principles in the 18th century, which resulted in efforts to tighten control over its Latin American colonies. However, the most important spread of absolute monarchy occurred in the central European states that were gaining in importance. A series of kings in Prussia, in eastern Germany, built a strong army and bureaucracy. They promoted economic activity and began to develop a state-sponsored school system. Habsburg kings in Austria-Hungary, though still officially rulers of the Holy Roman Empire, concentrated increasingly on developing a stronger monarchy in the lands under



Map 22.2 Europe Under Absolute Monarchy, 1715. The rise of absolute monarchies led to consolidation of national borders as states asserted full control of areas within their boundaries. For example, a recent study shows that villages that straddled the French-Spanish border were undifferentiated before 1600, but by 1700 they showed marked national differences because of different state policies and the greater impact of belonging to one state or another.

*In Depth***Elites and Masses**

What caused the end of witchcraft hysteria in the West by the later 17th century? Did wise rulers calm a frenzied populace or did ordinary people themselves change their minds? One explanation focuses on new efforts by elites, such as local magistrates, to discipline mass impulses. Authorities stopped believing in demonic disruptions of natural processes, and so forced an end to persecutions. But many ordinary people were also thinking in new ways. Without converting fully to a scientific outlook, they became open to new ideas about how to handle health problems, reducing their belief in magical remedies; they needed witches less. Potential “witches” may have become more cautious. Older women, threatened by growing community suspicion, learned to maintain a lower profile and to emphasize benign, grandmotherly qualities rather than seeking a more independent role. Without question, there was a decline both in witchcraft beliefs, once a key element in the Western mentality, and in the hysteria specifically characteristic of the 16th and 17th centuries. This decline reflected new ways of thinking about strangeness and disruption. It involved complex interactions between various segments of Western society: magistrates and villagers, scientists and priests, husbands and widows.

The transformation of Western society after 1450 raises fascinating questions about the role of elites—particularly powerful groups and creative individuals—versus the ordinary people in causing change. The growing importance of social history has called attention to ordinary people, as we have seen, but it has not answered all the questions about their actual role. This role varies by place and time, of course. Some social historians tend to see ordinary people as victims of change, pushed around by the power groups. Others tend to stress the positive historical role of ordinary people in partly shaping the context of their own lives and affecting the larger course of history.

It is easy to read the early modern transformation of western Europe as an operation created by elites, with the masses as passively watching or futilely protesting. Not only the Renaissance and Reformation, but also the commercial revolution, required decisive action

by key leadership groups. Leading merchants spurred economic change, and they ultimately began to farm out manufacturing jobs. The resultant rise of dependant wage labor, which tore a growing minority of western Europeans away from property and so from economic control of their lives, illustrates the power disparities in Western society. Ordinary people knuckled under or protested, but they were reacting, not initiating.

The rise of science rivets our attention on the activities of extraordinarily creative individuals, such as Newton, and elite institutions, such as the scientific academies. Some historians have suggested that the rise of science opened a new gap between the ways educated upper classes and masses thought.

Yet the ordinary people of western Europe were not passive, nor did they simply protest change in the name of tradition. Widespread shifts came from repeated decisions by peasants and artisans, not just from those at the top. The steady technological improvements in manufacturing thus flowed upward from practicing artisans, not downward from formal scientists. The European-style family that had taken shape by the 16th century was an innovation by ordinary people long ignored by the elite. It encouraged new parent-child relations and new tensions between young adults and the old that might spur other innovations, including a willingness to settle distant colonies in search of property. The fact that young people often had to wait to marry until their property-owning fathers died could induce many to seek new lands or new economic methods. In other words, ordinary people changed their habits too, and these changes had wide impact.

Questions: Did elites gain new power over the masses in early modern Western society? Are ordinary people more conservative by nature, more suspicious of change, than groups at the top? Can you describe at least two other historical cases in which it is important to determine whether change was imposed on ordinary people from above or whether ordinary people themselves produced important innovations?

their direct control. The power of these Habsburg rulers increased after they pushed back the last Turkish invasion threat late in the 17th century and then added the kingdom of Hungary to their domains.

Most absolute monarchs saw a strong military as a key political goal, and many hoped for territorial expansion. Louis XIV used his strong state as the basis for a series of wars from the 1680s onward. The

wars yielded some new territory for France but finally attracted an opposing alliance system that blocked further advance. Prussian kings, though long cautious in exposing their proud military to the risk of major war, turned in the 18th century to a series of conflicts that won new territory.

Britain and the Netherlands, both growing commercial and colonial powers, stood apart from the trend toward absolute monarchy in the 17th century. They emphasized the role of the central state, but they also built parliamentary regimes in which the kings shared power with representatives selected by the nobility and upper urban classes. The English civil wars produced a final political settlement in 1688 and 1689 (the so-called **Glorious Revolution**) in which parliament won basic sovereignty over the king. The English parliament no longer depended on the king to convene, for regular sessions were scheduled. Its rights to approve taxation allowed it to monitor or initiate most major policies.

Furthermore, a growing body of political theory arose in the 17th century that built on these parliamentary ideas. John Locke and others argued that power came from the people, not from a divine right to royal rule. Kings should therefore be restrained by institutions that protected the public interest, including certain general rights to freedom and property. A right of revolution could legitimately oppose unjust rule.

Overall, western Europe developed important diversity in political forms, between absolute monarchy and a new kind of **parliamentary monarchy**. It maintained a characteristic tension between government growth and the idea that there should be some limits to state authority. This tension was expressed in new forms, but it recalled some principles that had originated in the Middle Ages.


The Nation-State

The absolute monarchies and the parliamentary monarchies shared important characteristics as nation-states. Unlike the great empires of many other civilizations, they ruled peoples who shared a common culture and language, some important minorities apart. They could appeal to a certain loyalty that linked cultural and political bonds. This was as true of England, where the idea of special rights

of Englishmen helped feed the parliamentary movement, as it was of France. Not surprisingly, ordinary people in many nation-states, even though not directly represented in government, increasingly believed that government should act for their interests. Thus, Louis XIV faced recurrent popular riots based on the assumption that when bad harvests drove up food prices, the government was obligated to help people out.

In sum, nation-states developed a growing list of functions, particularly under the banner of mercantilism, whose principles were shared by monarchists and parliamentary leaders alike. They also promoted new political values and loyalties that were very different from the political traditions of other civilizations. They kept the West politically divided and often at war.

The West by 1750

 The three great currents of change—commercialization, cultural reorientation, and the rise of the nation-state—continued to operate in the West after 1700, along with the growing international influence of the West. Each current produced new changes that furthered the overall transformation of the West.

Political Patterns

Many of the key changes in modern Europe drew together by the mid-18th century. Political changes were least significant. During much of the century, English politics settled into a bloated parliamentary routine in which key political groups competed for influence without major policy differences. Absolute monarchy in France changed little institutionally, but it became less effective. It could not force changes in the tax structure that would give it more solid financial footing because aristocrats refused to surrender their traditional exemptions.

Political developments were far livelier in central Europe. In Prussia, **Frederick the Great**, building on the military and bureaucratic organization of his predecessors, introduced greater freedom of religion while expanding the economic functions of the state.

His government actively encouraged better agricultural methods; for example, it promoted use of the American potato as a staple crop. It also enacted laws promoting greater commercial coordination and greater equity; harsh traditional punishments were cut back. Rulers of this sort claimed to be enlightened despots, wielding great authority but for the good of society at large.

Enlightened or not, the policies of the major Western nation-states produced recurrent warfare. France and Britain squared off in the 1740s and again in the Seven Years' War (1756–1763); their conflicts focused on battles for colonial empire. Austria and Prussia also fought, with Prussia gaining new land. Wars in the 18th century were carefully modulated, without devastating effects, but they demonstrated the continued linkage between statecraft and war that was characteristic of the West.

Enlightenment Thought and Popular Culture

In culture, the aftermath of the Scientific Revolution spilled over into a new movement known as the **Enlightenment**, centered particularly in France but with adherents throughout the Western world. Enlightenment thinkers continued to support scientific advance. Although there were no Newton-like breakthroughs, chemists gained new understanding of major elements, and biologists developed a vital new classification system for the natural species.

The Enlightenment also pioneered in applying scientific methods to the study of human society, sketching the modern social sciences. The basic idea was that rational laws could describe social as well as physical behavior and that knowledge could be used to improve policy. Thus, criminologists wrote that brutal punishments failed to deter crime, whereas a decent society would be able to rehabilitate criminals through education. Political theorists wrote about the importance of carefully planned constitutions and controls over privilege, although they disagreed about what political form was best. A new school of economists developed. In his classic book *Wealth of Nations*, Scottish philosopher **Adam Smith** set forth a number of principles of economic behavior. He argued that people act according to their self-interest but, through competition, promote general eco-

nomie advance. Government should avoid regulation in favor of the operation of individual initiative and market forces. This was an important statement of economic policy and an illustration of the growing belief that general models of human behavior could be derived from rational thought.

Single individuals could sum up part of the Enlightenment's impressive range. Denis Diderot (1713–1784; Figure 22.4) was a multifaceted leader of the French Enlightenment, best known for his editorial work on the *Encyclopédie* that compiled scientific and social scientific knowledge. Trained initially by the Jesuits, Diderot also wrote widely on philosophy, mathematics, and the psychology of deaf-mutes and also tried his hand at literature. An active friend



Figure 22.4 Denis Diderot

Document

Controversies About Women

Changes in family structure and some shifts in the economic roles of women, as well as ambivalent Protestant ideas about women that emphasized the family context but urged affection and respect between wives and husbands, touched off new gender tensions in Western society by the 17th century. Some of these tensions showed in witchcraft trials, so disproportionately directed against women. Other tensions showed in open debate about women's relationships to men; women not content with a docile wifeliness vied with new claims of virtue and prowess by some women. Although the debate was centered in the upper class of Protestant nations such as England, it may have had wider ramifications. Some of these ramifications, though quieter during the 18th century, burst forth again in arguments about inequality and family confinement in the 19th century, when a more durable feminist movement took shape in the West. In the selections here, the antiwoman position is set forth in a 1615 pamphlet by Joseph Swetham; the favorable view implicitly urging new rights is in a 1640 pamphlet pseudonymously authored by "Mary Tattle-Well and Ioane Hit-Him-Home, spinsters."

Swetham's "Arraignment of Women"

Men, I say, may live without women, but women cannot live without men: for Venus, whose beauty was excellent fair, yet when she needed man's help, She took Vulcan, a clubfooted Smith....

For women have a thousand ways to entice thee and ten thousand ways to deceive thee and all such fools as are suitors unto them: some they keep in hand with promises, and some they feed with flattery, and some they delay with dalliances, and some they please with kisses. They lay out the folds of their hair to entangle men into their love; betwixt their breasts in the vale of destruction; and in their beds there is hell, sorrow and repentance. Eagles eat not men till they are dead, but women devour them alive....

It is said of men that they have that one fault, but of women it is said that they have two faults: that is to say, they can neither say well nor do well. There is a saying that goeth thus: that things far fetched and dear bought are of us most dearly beloved. The like may be said of women; although many of them are not far fetched, yet they are dear bought, yea and so dear that many a man curseth his hard pennyworths and bans his own heart. For the pleasure of the fairest woman in the world lasteth but

a honeymoon; that is, while a man hath glutted his affections and reaped the first fruit, his pleasure being past, sorrow and repentance remaineth still with him.

Tattle-Well and Hit-Him-Home's "Women's Sharp Revenge"

But it hath been the policy of all parents, even from the beginning, to curb us of that benefit by striving to keep us under and to make us men's mere Vassals even unto all posterity. How else comes it to pass that when a Father hath a numerous issue of Sons and Daughters, the sons forsooth they must be first put to the Grammar school, and after perchance sent to the University, and trained up in the Liberal Arts and Sciences, and there (if they prove not Blockheads) they may in time be book-learned?...

When we, whom they style by the name of weaker Vessels, though of a more delicate, fine, soft, and more pliant flesh therefore of a temper most capable of the best Impression, have not that generous and liberal Education, lest we should be made able to vindicate our own injuries, we are set only to the Needle, to prick our fingers, or else to the Wheel to spin a fair thread for our own undoing, or perchance to some more dirty and debased drudgery. If we be taught to read, they then confine us within the compass of our Mother Tongue, and that limit we are not suffered to pass; or if (which sometimes happeneth) we be brought up to Music, to singing, and to dancing, it is not for any benefit that thereby we can engross unto ourselves, but for their own particular ends, the better to please and content their licentious appetites when we come to our maturity and ripeness. And thus if we be weak by Nature, they strive to make us more weak by our Nurture; and if in degree of place low, they strive by their policy to keep us more under.

Now to show we are no such despised matter as you would seem to make us, come to our first Creation, when man was made of the mere dust of the earth. The woman had her being from the best part of his body, the Rib next to his heart, which difference even in our complexions may be easily decided. Man is of a dull, earthy, and melancholy aspect, having shallows in his face and a very forest upon his Chin, when our soft and smooth Cheeks are a true representation of a delectable garden of intermixed Roses and Lilies.... Man might consider that women were not created to be their slaves or vassals; for as they had not their Original out of his head (thereby to command him), so it was not out of his foot to be trod upon, but in a medium out of his side to be his fellow feeler, his equal, and companion....

Thus have I truly and impartially proved that for Chastity, Charity, Constancy, Magnanimity, Valor, Wisdom, Piety, or any Grace or Virtue whatsoever, women have always been more than equal with men, and that for Luxury, Surquidant obscenity, profanity, Ebriety, Impiety, and all that may be called bad we do come far short of them.

Questions: What are the main disagreements in these 17th-century texts? What kind of approach

was more novel, judging by the Western gender tradition to that point? What conditions prompted a more vigorous public debate about gender in the 17th century? How does it connect to religious, commercial, and political change? How does the favorable argument compare with more modern views about women? What kinds of change does it advocate? Did the new arguments about women's conditions suggest that these conditions were improving?

of other philosophers, Diderot also traveled to foreign courts as advisor and visiting intellectual. A visit to Catherine the Great of Russia in 1773–1774, to thank her for generous patronage, harmed his health, but he maintained his relationship with his mistress, Sophie Volland.

More generally still, the Enlightenment produced a set of basic principles about human affairs: Human beings are good, at least improvable, and they can be educated to be better; reason is the key to truth, and religions that rely on blind faith or refuse to tolerate diversity are wrong. Enlightenment thinkers attacked the Catholic church with particular vigor. Progress was possible, even inevitable, if people could be set free. Society's goals should center on improving material and social life.

Although it was not typical of the Enlightenment's main thrust, a few thinkers applied these general principles to other areas. A handful of socialists argued that economic equality and the abolition of private property must become important goals. A few feminist thinkers, such as Mary Wollstonecraft in England, argued—against the general male-centered views of most Enlightenment thinkers—that new political rights and freedoms should extend to women. Several journals written by women for women made their first appearance during this extraordinary cultural period. Madame de Beaumere took over the direction of the French *Journal des Dames* from a man, and in Germany, Marianne Ehrmann used her journal to suggest that men might be partly to blame for women's lowly position.

The popularization of new ideas encouraged further changes in the habits and beliefs of many ordinary people. Reading clubs and coffeehouses allowed many urban artisans and businessmen to discuss the

latest reform ideas. Leading writers and compilations of scientific and philosophical findings, such as the *Encyclopaedia Britannica*, won a wide audience and, for a few people, a substantial fortune from the sale of books.

Other changes in popular outlook paralleled the new intellectual currents, although they had deeper sources than philosophy alone. Attitudes toward children began to shift in many social groups. Older methods of physical discipline were criticized in favor of more restrained behavior that would respect the goodness and innocence of children. Swaddling—wrapping infants in cloth so they could not move or harm themselves—began to decline as parents became interested in freer movement and greater interaction for young children. Among wealthy families, educational toys and books for children reflected the idea that childhood should be a stage for learning and growth.

Family life generally was changed by a growing sense that old hierarchies should be rethought and revised toward greater equality in the treatment of women and children in the home. Love between family members gained new respect, and an emotional bond in marriage became more widely sought. Parents grew more reluctant to force a match on a son or daughter if the emotional vibrations were not right. Here was a link not only with Enlightenment ideas of proper family relations but with the novels such as Richardson's *Pamela* that poured out a sentimental view of life.

Ongoing Change in Commerce and Manufacturing

Ongoing economic change paralleled changes in popular culture and intellectual life. Commerce

continued to spread. Ordinary Westerners began to buy processed products, such as refined sugar and coffee or tea obtained from Indonesia and the West Indies, for daily use. This was a sign of the growing importance of Europe's new colonies for ordinary life and of the beginnings of mass consumerism in Western society. Another sign of change was the growing use of paid professional entertainment as part of popular leisure, even in rural festivals. Circuses, first introduced in France in the 1670s, began to redefine leisure to include spectatorship and a taste for the bizarre.

Agriculture began to change. Until the late 17th century, western Europe had continued to rely largely on the methods and techniques characteristic of the Middle Ages—a severe economic constraint in an agricultural society. The three-field system still meant that a full third of all farmland was left unplanted each year to restore fertility. First in the Netherlands and then elsewhere, new procedures for draining swamps added available land. Reformers touted nitrogen-fixing crops to reduce the need to leave land idle. Stockbreeding improved, and new techniques such as seed-drills and the use of scythes instead of sickles for harvesting increased productivity. Some changes spread particularly fast on large estates, but other changes affected ordinary peasants as well. Particularly vital in this category was the spread of the potato from the late 17th century onward.

A New World crop, the potato had long been shunned because it was not mentioned in the Bible and was held to be the cause of plagues. Enlightened government leaders, and the peasants' desire to win greater economic security and better nutrition, led to widespread use of this crop. In sum, the West improved its food supply and agricultural efficiency, leaving more labor available for other pursuits.

These changes, along with the steady growth of colonial trade and internal commerce, spurred increased manufacturing. Capitalism—the investment of funds in hopes of larger profits—also spread from big trading ventures to the production of goods. The 18th century witnessed a rapid spread of household production of textiles and metal products, mostly by rural workers who alternated manufacturing with some agriculture. Here was a key use of labor that was no longer needed for food. Hundreds of thousands of people were drawn into this domes-

tic system, in which capitalist merchants distributed supplies and orders and workers ran the production process for pay (Figure 22.5). Although manufacturing tools were still operated by hand, the spread of domestic manufacturing spurred important technological innovations designed to improve efficiency. In 1733, James Kay in England introduced the flying shuttle, which permitted automatic crossing of threads on looms; with this, an individual weaver could do the work of two. Improvements in spinning soon followed as the Western economy began to move toward a full-fledged Industrial Revolution (see Chapter 28).

Human changes accompanied and sometimes preceded technology. Around 1700, most manufacturers who made wool cloth in northern England were artisans, doing part of the work themselves. By 1720, a group of loom owners were becoming outright manufacturers with new ideas and behaviors. How were manufacturers different? They spent their time organizing production and sales rather than doing their own work. They moved work out of their homes. They stopped drinking beer with their workers. And they saw their workers as market commodities, to be treated as the conditions of trade demanded. In 1736, one such manufacturer coolly wrote that because of slumping sales, “I have turned off [dismissed] a great many of my makers, and keep turning more off weekly.”

Finally, agricultural changes, commercialism, and manufacturing combined, particularly after about 1730, to produce a rapidly growing population in the West. With better food supplies, more people survived, particularly with the aid of the potato. Furthermore, new manufacturing jobs helped landless people support themselves, promoting earlier marriage and sexual relationships. Population growth, in turn, promoted further economic change, heightening competition and producing a more manipulable labor force. The West's great population revolution, which continued into the 19th century, both caused and reflected the civilization's dynamism, although it also produced great strain and confusion.

Innovation and Instability

By the 18th century, the various strands of change were increasingly intertwined in Western civiliza-



Figure 22.5 A family of woolmakers at home.

tion. Stronger governments promoted agricultural improvements, which helped prod population growth. Changes in popular beliefs were fed by new economic structures; both encouraged a reevaluation of the family and the roles of children. New beliefs also raised new political challenges. Enlightenment ideas about liberty and fundamental human equality could be directed against existing regimes. New family practices might have political implications as well. Children, raised with less adult restraint and encouraged to value their individual worth through parental love and careful education, might see traditional political limitations in new ways.

There was no perfect fit, no inevitable match, in the three strands of change that had been transforming the West for two centuries or more: the commercial, the cultural, and the political. However, by 1750 all were in place. The combination had

already produced an unusual version of an agricultural civilization, and it promised more upheaval in the future.



GLOBAL CONNECTIONS: Europe and the World

In 1450, Europeans were convinced that their Christianity made them superior to other people. But they also understood that many societies were impressive in terms of cities and wealth and the strength of their governments.

As Europe changed and prospered, its outlook toward the world changed as well. We saw in the previous chapter how Europeans began to use technology as a measure of society, arguing that other

societies that were less interested in technological change were inferior. By the 18th century, criticisms of the superstitions of other people began to surface among Europeans proud of their science and rationalism.

The wider world could still provide a sense of wonder, but increasingly this was focused on natural phenomena and the strange animals being imported to European zoos. The Enlightenment generated the idea of a “noble savage”—a person uncorrupted by advanced civilization and urban ways. But this was largely a fiction designed to comment on Europe itself, not a source of real admiration for other peoples. Increasingly, European power and the rapid changes within Western civilization led to a sense that most other societies were backward, perhaps not even civilized. The idea had powerful impact, not only on European attitudes but also on the ways other societies perceived themselves and reacted.

Further Readings

For an overview of developments in Western society during this period, with extensive bibliographies, see Sheldon Watts' *A Social History of Western Europe, 1450–1720* (1984); Michael Anderson's *Approaches to the West European Family* (1980); and Peter N. Stearns' *Life and Society in the West: The Modern Centuries* (1988). Charles Tilly's *Big Structures, Large Processes, Huge Comparisons* (1985) offers an analytical framework based on major change; see also Tilly's edited volume, *The Formation of National States in Western Europe* (1975).

On more specific developments and periods, J. R. Hale's *The Civilization of Europe in the Renaissance* (1994); J. H. Plumb's *The Italian Renaissance* (1986); F. H. New's *The Renaissance and Reformation: A Short History* (1977); O. Chadwick's *The Reformation* (1983); and Steven Ozment's *The Age of Reform, 1520–1550* (1980) and his *Protestants: The Birth of a Revolution* (1992) are fine introductions to early changes. See also Hubert Jedin and John Dolan, eds., *Reformation and Counter Reformation* (1980). H. Baron, *The Crisis of the Early Italian Renaissance* (1996), examines the place of civic life in Italian humanism. E. Amt, ed., *Women's Lives in the Medieval Europe: A Source-Book* (1992), and A. Vickery, *The Gentleman's Daughter: Women's Lives in Georgian England* (1998), survey the growth or retreat of opportunities for women over time.

Later changes are sketched in Thomas Munck's *Seventeenth Century Europe: 1598–1700* (1990) and Jeremy Black's *Eighteenth Century Europe: 1700–1789* (1990). On England in the civil war period, see Christopher Hill, *A Nation of Change and Novelty* (1990).

Key aspects of social change in this period can be approached through Peter Burke's *Popular Culture in Early Modern Europe* (1978); Robin Biggs' *Communities of Belief: Cultural and Social Tensions in Early Modern France* (1989); Keith Thomas' *Religion and the Decline of Magic* (1971); Lawrence Stone's *The Family, Sex and Marriage in England 1500–1800* (1977); and James Sharpe's *Instruments of Darkness: Witchcraft in Early Modern England* (1997). On popular protest, see Charles Tilly's *The Contentious French* (1986) and H. A. F. Kamen's *The Iron Century: Social Change in Europe 1550–1660* (1971).

On science, A. R. Hall's *From Galileo to Newton, 1630–1720* (1982) is a fine introduction. Relations between science and technology are covered in C. Cipolla's *Before the Industrial Revolution* (1976).

On the Web

Daily life in Renaissance Italy is examined at <http://history.evansville.net/renaissa.html>. The lives and art of Leonardo da Vinci (<http://www.mos.org/leonardo/>), Michelangelo (<http://www.michelangelo.com/buonarroti.html>), and Raphael (<http://www.theartgallery.com.au/ArtEducation/greatartists/Raphael/about/>) were closely intertwined with the city of Florence, whose history is addressed at <http://www.mega.it/eng/cgui/epo/secrepu.htm>.

Martin Luther's life (<http://www.iclnet.org/pub/resources/text/wittenberg/wittenberg-luther.html> and <http://www.wittenberg.de/e/seiten/personen/luther.html>) and the course of the Protestant Reformation/Catholic Reformation are discussed at <http://mars.acnet.wncc.edu/~grempe/courses/wc2/lectures/catholicreform.html>, <http://old.jccc.net/~jjackson/refo.html>, and <http://www.fordham.edu/halsall/sbook1y.html>. The art and literature of the Northern Renaissance is examined at <http://www.urtonart.com/history/Renaissance/northrenaiss.htm>, <http://www.msu.edu/~cloudsar/nrweb.htm>, while <http://communication.ucsd.edu/bjones/Books/luther.html> illustrates the role of the printing press in the Reformation.

The Web provides insight into the role of two of the leading absolute monarchs of Europe, Frederick the Great (<http://members.tripod.com/~Nevermore/king7.html>) and Louis XIV (<http://www.louis-xiv.de/>, <http://history.hanover.edu/texts/louisxiv.htm>, and <http://www.chateauversailles.fr/>).