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The Enlightenment

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Chronology

page	1686	1687	1688	1689	1690	1691	1693	1694	1695	1697	1702	1704	1707	1709	1713	1715	1716	1717	1718	1719	1721	1722	1723	
	German Pietist August Francke (1663-1727) opens Bible study at Leipzig; Charles Duke of Lorraine, takes Buda from the Turks	Isaac Newton, <i>Philosophiæ Naturalis Principia Mathematica</i>	William of Orange ousts James II as King of England	John Locke, <i>Letters on Toleration</i>	John Locke, <i>An Essay Concerning Human Understanding</i>	New East India Company formed in London	John Locke, <i>Thoughts Concerning Education</i>	Founding of Bank of England. Birth of Voltaire	John Locke, <i>The Reasonableness of Christianity</i>	Peter the Great travels to Prussia, Holland, England and Vienna to study European technology and thought	Asiento Guinea Company founded for slave trade between Africa and America	Isaac Newton, <i>Optics</i>	Political and legal union between England and Scotland. Linnaeus born	First Copyright Act in Britain	Abbé de St Pierre, <i>Projet pour la paix perpétuelle</i>	Peace of Utrecht closes war of Spanish Succession	Louis XIV of France dies; succeeded by his great-grandson Louis XV, under Regency of the Duc d'Orléans	First company of English actors appears in North America at Williamsburg, Virginia	Innoculation against small pox introduced into England from Turkey by Lady Mary Wortley Montagu (1690-1762). First Freemasons' Lodge established in London	Yale University founded at New Haven, Connecticut; New Orleans founded	Daniel Defoe, <i>Robinson Crusoe</i>	Montesquieu, <i>Lettres Persanes</i> ; J.S. Bach, 'Brandenburg Concertos'. Regular postal service between London and New England	Daniel Defoe, <i>Moll Flanders</i>	Ludovico Antonio Muratori publishes <i>Rerum italicarum scrip-</i>

1724	tores, 28 vols. of medieval documents. End of Regency in France. Bach, 'St John Passion'		Hume, <i>Enquiry Concerning the Principles of Morals</i> ; Voltaire, <i>Le Siècle de Louis XIV</i> ; Pope Benedict XIV condemns Freemasonry
1725	Professorships of modern history founded at Oxford and Cambridge. Paris Bourse (Stock Exchange) opens	1752	First condemnation of the <i>Encyclopédie</i>
1726	Foundation of Petersburg Academy of Sciences; of Prague Opera House. Vico, <i>Principles of a New Science</i>	1754	David Hume, <i>History of Great Britain</i> ; Diderot, <i>Pensées sur l'Interprétation de la Nature</i> ; Rousseau, <i>L'inégalité parmi les hommes: discours</i>
1727	Jonathan Swift, <i>Gulliver's Travels</i> . Voltaire arrives in England	1755	Earthquake in Lisbon; Samuel Johnson, <i>Dictionary of the English Language</i>
1728	American Philosophical Society founded in Philadelphia. Isaac Newton died	1756	Beginning of Seven Years' War
1729	Ephraim Chambers (ed.), <i>Cyclopaedia or An Universal Dictionary of Arts and Sciences</i>	1758	Claude Adrien Helvétius, <i>De L'Esprit</i> ; Rousseau, <i>Lettre à d'Alembert sur les spectacles</i> ; Quesnay, <i>Tableau Economique</i>
1730	J.-S. Bach, 'St Matthew Passion', Newton's <i>Principia</i> translated into English	1759	Second condemnation of the <i>Encyclopédie</i> ; Jesuits expelled from Portugal; Voltaire, <i>Candide</i> ; Charles III succeeds as King of Spain; Samuel Johnson, <i>Rasselas</i> ; Adam Smith, <i>Theory of Moral Sentiments</i> ; British Museum open in London, at Montague House; Wolfe takes Quebec from the French
1731	John and Charles Wesley found Methodism at Oxford	1760	George III becomes king in Great Britain.
1732	Abbé Prévost, <i>Manon Lescaut</i> ; Voltaire, <i>History of Charles XII</i> . Franklin founds subscription library at Philadelphia	1761	Rousseau, <i>La Nouvelle Héloïse</i>
1733	Covent Garden Opera House founded in London	1762	Catherine II becomes Empress of Russia; Diderot, <i>Le Neveu de Rameau</i> ; Rousseau, <i>Du Contrat Social, Emile</i> ; Calas trial
1734	War of the Polish Succession opens. Alexander Pope, <i>Essay on Man</i>	1763	Peace of Paris ends Seven Years' War. Voltaire, <i>Treatise on Toleration</i>
1735	University of Göttingen founded; Koran translated into English by George Sale	1764	Jesuits suppressed in France. Salons founded in Paris by Mme. Necker and Julie de Lespinasse. Cesare Beccaria, <i>Dei Delitti e del Pene</i> ; Voltaire, <i>Philosophical Dictionary</i> ; J.J. Wincklemann, <i>History of Ancient Art</i>
1738	Francesco Algorotti, <i>Il newtonismo per le Dame</i> ; Carl Linnaeus, <i>Systema Naturae</i>	1765	Joseph II becomes co-regent with his mother Maria Theresa; Turgot, <i>Réflexions sur la formation et la distribution des richesses</i>
1739	Papal Bull <i>In eminenti</i> condemns Freemasonry. Excavations begin at Herculaneum. Voltaire, <i>Eléments de la philosophie de Newton</i>	1766	Adam Ferguson, <i>Essay on the History of Civil Society</i> ; Bougainville begins voyage to Pacific
1740	David Hume, <i>A Treatise of Human Nature</i>	1767	Rousseau in England. Jesuits expelled from Spain and Naples. Laurence Sterne completes <i>Tristram Shandy</i> . Joseph Priestley, <i>The History and Present State of Electricity</i>
1741	Frederick II becomes King of Prussia and founds Berlin Academy of Sciences. Maria Theresa becomes Empress of Austria. Frederick seizes Silesia, opening war of the Austrian succession. Samuel Richardson, <i>Pamela</i> . George Anson (1697-1762) begins circumnavigation of globe	1768	Purchase of Corsica by France from Genoa; Quesnay, <i>Physiocratie</i> . James Cook's first voyage to the Pacific
1746	Handel composes 'The Messiah'	1769	William Robertson (1721-93), <i>History of Charles V</i> ; Diderot writes <i>Le Rêve d'Alembert</i>
1747	Condillac, <i>Essai sur l'origine des connaissances humaines</i>	1770	Court Doctor von Struensee becomes Chief Minister in Denmark. Cook lands at Botany Bay, Australia. Raynal, <i>Histoire des Deux Indes</i> ; D'Holbach, <i>Système de la Nature</i>
1748	La Mettrie, <i>L'homme machine</i>	1771	French Parlements exiled. Rising tension between them and

- 1772 monarchy. First edition of *Encyclopedia Britannica*. William Robertson, *History of America*: Arkwright produces first spinning mill; Luigi Galvani discovers electrical nature of nervous impulses; Lavoisier establishes composition of air
- 1773 Fall of Danish reformer Struensee; First partition of Poland; James Cook's second circumnavigation begins
- 1774 Boston Tea Party. Pope Clement XIV dissolves Jesuit order Louis XV of France dies, succeeded by Louis XVI. Goethe, *The Sorrows of Werther*. Turgot becomes minister
- 1775 American War of Independence begins. Peasant revolt in Bohemia against serfdom; Beaumarchais, *The Barber of Seville*; 'Guerre des farines' in Paris and Northern France
- 1776 Declaration of Independence by American rebels, mainly drafted by Thomas Jefferson. Turgot forced out of government; Edward Gibbon, *Decline and Fall of the Roman Empire* (-1788); Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*. James Cook begins third voyage into the Pacific
- 1778 James Cook discovers Hawaii. Deaths of Voltaire and Rousseau; Buffon, *Les époques de la Nature*
- 1779 James Cook murdered. Serfdom suppressed in France and its colonies. David Hume, *Dialogues of Natural Religion* (posthumous publication)
- 1780 Empress Maria Theresa dies; Joseph II succeeds as sole ruler. Filangieri, *Science of Legislation*. Abolition of judicial torture in France
- 1781 Kant, *Critique of Pure Reason*; Rousseau, *Confessions*, published; Mendelssohn, *On the Civil Amelioration of the Condition of the Jews*
- 1782 Lacroix, *Les Liaisons dangereuses*
- 1783 American colonies win independence from Britain. Mendelssohn, *Jerusalem*, plea for religious toleration
- 1784 Bengal Asiatic Society founded by William Jones
- 1785 William Paley, *Principles of Moral and Political Philosophy*
- 1786 Death of Frederick II. Mozart, *Marriage of Figaro*
- 1787 Rising political tension in France. Meeting of the first Assembly of Notables. Lavoisier reforms chemical language with *Méthode de nomenclature chimique*. Mozart, *Don Giovanni*
- 1788 Elections for the Estates-General in France. Kant, *Critique of Practical Reason*. Pierre Simon de la Place; *Laws of the Planetary System*
- 1789 Estates General meets (May). Mutiny on the *Bounty*

- 1790 Joseph II dies. Edmund Burke, *Reflections on the Revolution in France*
- 1791 Thomas Paine, *The Rights of Man*
- 1792 Mary Wollstonecraft, *Vindication of the Rights of Women*
- 1793 France at war with Austria and Prussia
Second partition of Poland. Condorcet, *Esquisse d'un tableau historique des progrès de l'esprit humain*

I What is Enlightenment?

The time will come when the sun will shine only on free men who have no master but their reason. (Condorcet)¹

Debate over the meaning of 'Enlightenment' began in the eighteenth century itself and has continued unabated until our own times. Even in the eighteenth century, contemporaries were well aware that the spread of words used in different linguistic areas to refer to 'Enlightenment' – *Aufklärung* in German, *Lumières* in French, *Illuminismo* in Italian – betrayed a fundamental diversity at the heart of 'the Enlightenment'.² It was thus not surprising that in 1783, the influential Berlin newspaper, the *Berlinische Monatsschrift*, asked for responses to the simple yet crucial question of 'What is Enlightenment?'. The essays submitted to the paper in response came from men as diverse as the dramatist Gotthold Lessing (1729–81), the Jewish philosopher Moses Mendelssohn (1729–86) and the Prussian philosopher Immanuel Kant (1724–1804), as well as many others. These essays can be read as a compendium of the diverse meanings that by the end of the century had come to be attached to the term 'Enlightenment'.³ For Mendelssohn, 'Enlightenment' was a difficult term to define, because it referred to a *process*, far from complete in his own day, of education for man, an education in the use of 'reason' – a key word in 'Enlightenment' thinking. At the same time, Mendelssohn was well aware that the unlimited development of 'reason' in individuals might well conflict with their role as subjects and citizens. 'Reason', if carried too far with unlimited questioning and redefinition, could dissolve social, religious and political order into chaos and leave men isolated

¹ Quoted in E. Cassirer, *Rousseau, Kant and Goethe* (New York, 1963)

² H. Stuke, 'Aufklärung', in O. Brunner, W. Conze and R. Koselleck (eds.), *Geschichtliche Grundbegriffe, Historisches Lexikon zur politisch-sozialen Sprache in Deutschland* (Stuttgart, 1972), I, 244; F. Venturi, 'Contributi ad un dizionario storico: "Was ist Aufklärung? Sapere aude"', *Rivista storica italiana*, 71 (1959), 112–43.

³ N. Hinske (ed.), *Was ist Aufklärung? Beiträge aus der Berlinischen Monatsschrift*, 2nd edn (Darmstadt, 1977); E. Behr (ed.), *Was ist Aufklärung? Thesen und Definitionen* (Stuttgart, 1974); Jean Mondot (ed.), *Immanuel Kant, Qu'est-ce que les Lumières? Choix de textes (1780–1790)* (Paris, 1991).

in intellectual egoism. Nor was this a problem merely raised by theoreticians. Only a few years before, in 1780, that eminently practical ruler Frederick the Great of Prussia (1712–86), had directed the Berlin Academy of Sciences to offer a prize for the best essay responding to the question ‘Is it expedient to deceive the people?’ That this became the most popular competition in the Academy’s history and generated great public interest across Europe, reveals a widespread recognition, by the closing years of the eighteenth century, that *Aufklärung* was important – important enough to pose great potential problems for governments searching for a political relationship with the power of organised knowledge in society.⁴ It was also a recognition of the difficulty and complexity of any answer to the issue.

These were themes which were also pursued in Immanuel Kant’s contribution to the *Berlinische Monatsschrift*.⁵ This brief article is probably one of the most quoted and least well-understood attempts to grapple with the meaning of ‘Enlightenment’. Kant calls ‘Enlightenment’, in a much-quoted phrase, ‘man’s release from his self-incurred immaturity’, by the use of his own reason, undistorted by prejudice and without the guidance of others. ‘*Sapere aude*, have the courage to know: this is the motto of Enlightenment’, writes Kant, also near the beginning of the essay. But other, far less quoted, parts of Kant’s essay, present a much more complex picture of Enlightenment, for example, when he remarks: ‘The public-use-of-man’s-reason-must-always-be-free-and-it-alone-can-bring-about Enlightenment among men; the private use of reason may be quite often seriously restricted.’ In the public sphere, subjects of a ruler have an actual duty to restrain the expression of wayward individual judgement in the interests of upholding the ruler’s will and thus lessening the likelihood of the outbreak of chaos and insecurity. Kant poses, in different words, the same problem as Mendelssohn had done: What happens if men think without limits? Does such thought necessarily have a positive outcome? Kant makes clear his impatience with those of his contemporaries who saw their own time as one of unbounded progress towards the fulfilment of human potential, or of the achievement of ‘rational’ social and political arrangements. Like Mendelssohn, Kant was clear that ‘Enlightenment’ was a process, not a completed project; and a process, at that, fraught with dangers and problems. ‘If it is now asked whether we live at present in an Enlightened age, the answer is: No, but we do live in an age of Enlightenment.’

⁴ These essays are reprinted in W. Krauss (ed.), *Est-il utile de tromper le peuple? Ist der Volkbeitrag von Nutzen? Concours de la classe de philosophie speculative de l’Académie des Sciences et de Belles Lettres de Berlin pour l’année 1780* (Berlin, 1966).

⁵ H. Reiss (ed.), *Kant’s Political Writings* (Cambridge, 1977), 54–60.

Even for Mendelssohn and Kant, therefore, Enlightenment was not an easy word to define. And for both men, Enlightenment seemed to present itself more as a series of processes and *problems* than as a list of intellectual projects susceptible to quick and definitive description. These are perceptions which will be incorporated into the framework of discussion in this book. Rather than attempting some neat definition of Enlightenment, which would always be open to challenge or qualification, it is more helpful to think of Enlightenment as a series of problems and debates, of ‘flash-points’, characteristic of the eighteenth century, or of ‘pockets’ where projects of intellectual expansion impacted upon and changed the nature of developments in society and government on a world-wide basis. Some of the most important of these problems have already been touched upon, in particular the contradiction between unrestricted inquiry and the need to assure stability in state and society.⁶

This way of looking at the Enlightenment as a series of debates, which necessarily took different shapes and forms in particular national and cultural contexts, is however, a relatively new one. Generally speaking, up until about twenty years ago, historians of this period usually thought of *the Enlightenment*, as a relatively unitary phenomenon in the history of ideas, ideas generated by an established canon of ‘great thinkers’, such as Charles-Louis Montesquieu (1689–1755), Denis Diderot (1713–84), or Kant. These thinkers shared the obvious characteristics of being white, male and drawn from western Europe. While acknowledging many differences of opinion on individual issues between the great thinkers, historians still tended usually to see their ideas, the ideas of *the Enlightenment* in the last analysis as relatively homogenous. In this interpretation, Enlightenment was a desire for human affairs to be guided by rationality rather than by faith, superstition, or revelation; a belief in the power of human reason to change society and liberate the individual from the restraints of custom or arbitrary authority; all backed up by a world view increasingly validated by science rather than by religion or tradition. A landmark in this approach to the Enlightenment was Ernst Cassirer’s *The Philosophy of the Enlightenment*, which defined the Enlightenment as a period bounded by the lives of two philosophers: Gottfried Wilhelm Leibniz (1646–1716) and Immanuel Kant (1724–1804).⁷ In Cassirer’s words, the Enlightenment was ‘a value-system rooted in rationality’, a definition of the past which must have possessed considerable attraction in the notoriously irrational 1930s in Europe. This line of interpretation of the Enlightenment saw it as an intellectual movement by great thinkers

⁶ This is a problem which will be examined more closely in chapters 7 and 8.

⁷ Ernst Cassirer, *The Philosophy of the Enlightenment* (Boston, 1964; originally published, 1932).

in Western Europe and displayed little interest in its social or political context, or in the impact of these ideas. This was a viewpoint which in many ways was developed and continued by the American historian Peter Gay, in his synthesis of Enlightenment thought which began to appear in 1966.⁸ Individual volume titles (*The Rise of Modern Paganism* and *The Science of Freedom*), clearly indicate Gay's agenda in interpreting the Enlightenment. Like Cassirer, he defines the Enlightenment as a unity,⁹ and defines its chronology in terms of the lives of great thinkers. For Gay, the first period or 'generation' of the Enlightenment was that of Voltaire (1694–1778) and Montesquieu (1689–1755), followed by the second, that of Denis Diderot (1713–84), d'Alembert (1714–80) and Jean-Jacques Rousseau (1712–78); the 'late Enlightenment' is the time span covered by the generation of Lessing and Kant. Gay defines the programme of the Enlightenment as one of hostility to religion and as the search for 'freedom' and 'progress' achieved by a critical use of reason to change man's relations with himself and society. He emphasises a view of the Enlightenment as virtually that of a liberal reform programme and dwells less on writers such as Rousseau whose works refuse to fit easily into this mould. It is this interpretation which enabled Gay to broaden his canon of thinkers to include the Americans Thomas Jefferson (1743–1826) and Benjamin Franklin (1706–90) and to see the American Revolution of the 1770s, with its commitment to 'Life, Liberty and the pursuit of happiness',¹⁰ as the fulfillment of Enlightenment programmes. Gay's account thus does represent a recognition that Enlightenment was not purely a western European phenomenon, in spite of the strong focus in the rest of his account on developments in France in particular. Nonetheless, Gay's interest in the social context of ideas is minimal at best; as well, like all previous historians of the Enlightenment, Gay's canon of thinkers is exclusively male. Issues of gender, of the different reactions of women to Enlightenment ideas, let alone the Enlightenment's debate on gender itself, are absent from his account.¹¹

Gay's synthesis, however, was valuable in encouraging the idea of the Enlightenment as a critical enterprise, committed to engagement with actuality and also as holding diversity within its unity. His synthesis dominated the 1960s. But, by the next decade, lines of analysis which only appear faintly in Gay's account, came increasingly to the fore in the work of other historians. After the publication of H.F. May's *The Enlighten-*

⁸ Peter Gay, *The Rise of Modern Paganism*, vol. I and *The Science of Freedom*, vol. II (New York, 1966–9).

⁹ 'there was only one Enlightenment' (I, 3).

¹⁰ From the preamble to the American Declaration of Independence (4 July 1776).

¹¹ These issues will be discussed in chapter 4.



1 The frontispiece of the *Encyclopédie* portrays reason pulling away the veil from truth, while clouds withdraw to open up the sky to light. This also sees the embodiment of the most common readings of the

ment in America¹² it became increasingly difficult to accept a picture of the Enlightenment as 'homogenised', or as occurring only in Europe. For the rest of the Americas, this insight had been anticipated by the publication of A. Owen Aldridge's work on the Enlightenment in the Spanish colonies of the Americas.¹³ Aldridge pointed out that accounts like Gay's provided no access into the intellectual world of colonial societies affected by European ideas yet simultaneously surrounded by very different indigenous cultures. Other historians, such as Bernard Plongeron, increasingly repudiated the idea that the Enlightenment had been a movement of 'modern paganism', by pointing to the complex and often far from hostile relationship between the churches and the Enlightenment.¹⁴ Increasingly since the 1970s, the geographical area of 'the Enlightenment, has enlarged. In particular, the Italian historian Franco Venturi has established Enlightenment as a force on the so-called 'periphery' of Europe: in Italy, Greece, the Balkans, Poland, Hungary and Russia.¹⁵ Venturi's work paid serious attention to the link between Enlightenment ideas, their transmission through newspapers, pamphlets, letters and books and the events which took place in the political sphere. No longer was the Enlightenment able to be seen as an autonomous intellectual movement or as confined to western Europe. In fact, Venturi argued that it was precisely on the 'fringes' of Europe, that stresses and strains within Enlightenment ideas could best be analysed.¹⁶ Venturi was also one of the first historians to discuss a chronology for the Enlightenment which was not linked to the life-spans of the great thinkers, but to economic and demographic measurements. In spite of local and national variation, Venturi writes:

in spite of everything, one can hardly fail to recognise a common rhythm among all the local differences . . . it is clear that all society, and not just the movement of ideas and politics, is expanding at the beginning of the century, reaches a crisis in the thirties, and reaches its peak in the fifties and sixties, while the last twenty-five years of the century witness a period of profound disturbance. It is the curve of the eighteenth century, and also of the Enlightenment.¹⁷

¹² H. F. May, *The Enlightenment in America* (New York, 1976).

¹³ A. Owen Aldridge (ed.), *The Ibero-American Enlightenment* (Urbana, IL., 1971).

¹⁴ Bernard Plongeron, 'Recherches sur L'Aufklärung catholique en Europe occidentale, 1770-1820', *Revue d'histoire moderne et contemporaine*, 16 (1969), 555-605; *Théologie et politique au siècle des lumières 1770-1820* (Geneva, 1973).

¹⁵ Franco Venturi, *The End of the Old Regime in Europe 1768-1776: The First Crisis* (Princeton, 1989). Translated by R. Burr Litchfield, from *Settecento riformatore. III. La prima crisi dell'Antico Regime* (Turin, 1979).

¹⁶ 'It is tempting to observe that the Enlightenment was born and organized in those places where the contact between a backward world and a modern one, was chronologically more abrupt, and geographically closer' (F. Venturi, *Utopia and Reform* (Cambridge, 1971), 133).

¹⁷ Venturi, *Utopia*, 118.

By the 1970s, it was also clear that historians were becoming far more interested in the social basis of the Enlightenment, in the problem of how ideas were disseminated, used and responded to by society. The agenda was no longer the assessment of the work of a restricted number of great writers, in terms of their sources or internal coherence; but was much more turned to looking at *how* ideas were used socially. Simultaneously, there was a far wider recognition that more knowledge was needed not of the great writers, but of the now forgotten authors whose works had often been far more widely accessible in the eighteenth century. The American historian Robert Darnton for example conducted enquiries into social movements such as mesmerism in the Enlightenment, movements conspicuously lacking in 'rationality', but deeply embedded in the sociability of the age.¹⁸ Darnton went on to point out that the majority of books in the Enlightenment had not been produced by great minds, but by now forgotten professional writers, who wrote for a new commercial market in cultural products and who, far from waiting for inspiration or regarding their role as that of a lofty public educator, wrote simply in order to be able to earn enough to eat.¹⁹ Darnton then proceeded to investigate the commercial and economic conditions that made possible the success of the publishing ventures behind some of the 'great works' of the Enlightenment, such as the *Encyclopédie* of Diderot and d'Alembert.²⁰ It was a natural progression from these new standpoints on the Enlightenment to begin enquiry into the impact of Enlightenment ideas not only in distant geographical areas, but also on social classes far removed from the educated elite. Both Darnton and the French historian Roland Chartier have recently devoted studies to the reception and penetration of the Enlightenment amongst social groups as diverse as peasants and printer's apprentices.²¹ Darnton brought to this work another methodological innovation, which was the explicit use of anthropological models drawn from non-European societies, to assess ideas and value systems in the Enlightenment. Darnton alleges that anthropology provides the historian with 'a coherent conception of culture'.²² Though there has been much debate about the value and appropriateness of such models, their use does

¹⁸ Robert Darnton, *Mesmerism and the End of the Enlightenment in France* (Cambridge, MA, 1968).

¹⁹ Robert Darnton, *The Literary Underground of the Old Regime* (Cambridge, MA, 1982).

²⁰ Robert Darnton, *The Business of Enlightenment. A Publishing History of the Encyclopédie 1775-1800* (Cambridge, MA, 1979).

²¹ Robert Darnton, *The Great Cat Massacre, and Other Episodes in French Cultural History* (New York, 1984); commented upon in Roger Chartier, *Cultural History: Between Practices and Representations* (Ithaca, New York, 1988).

²² Robert Darnton, 'Intellectual and Cultural History', in Michael Kammen (ed.), *The Past Before Us: Contemporary Historical Writing in the United States* (Ithaca, New York, 1980), 347.

testify to a new willingness among historians to ask new questions of the Enlightenment and to place it in new comparative contexts.

All this change since the days of Cassirer has meant that we now face more than ever a multiplicity of pathways into the study of the Enlightenment. There is now little agreement as to either its chronological or its geographical or social confines, let alone any real interest in defining Enlightenment in terms of a coherent intellectual programme. These problems of definition have been increased by historians' new willingness to question the firm dividing line which used to exist between the study of the Enlightenment and that of the French Revolution.²³ It is now increasingly common to see a continuity throughout the whole eighteenth century, instead of sharply opposing 'the Enlightenment', defined as a concern for progress and rationality, and 'the Revolution', characterised by outbursts of conspicuous bouts of irrationality and violence. Increasingly, therefore, it is the Enlightenment, as much as the French Revolution, which is seen as heralding the coming of a recognisably modern world.

Because of this, it is not only historians who have devoted time to the interpretation of the Enlightenment. Philosophers and political commentators have also reinterpreted it, in the hope of defining the meaning and future of the modern world. The Enlightenment is probably unique among historical movements both in its attracting such interest and in the extent to which such philosophical interpretations have influenced the thinking of professional historians. Among the many post-1945 interpretations of Enlightenment at this interface between philosophy, history and political criticism two in particular stand out. In 1947, firstly, Theodor Adorno and Max Horkheimer published their *Dialectic of Enlightenment*.²⁴ Writing in the immediate aftermath of a world war and the Holocaust, the authors were concerned to ask 'why mankind, instead of entering into a truly human condition, is sinking into a new kind of barbarism'.²⁵ This happened, in their view, because of a paradox which lay at the heart of Enlightenment thinking:

the Enlightenment had always aimed at liberating men from fear and establishing their sovereignty. Yet the fully enlightened earth radiates disaster triumphant. The programme of the Enlightenment was the disenchantment of the world: the dissociation of myths and the substitution of knowledge for fancy.²⁶

Man gained sovereignty over nature and then over other human beings, by controlling them 'rationally', technologically, which involved a refusal

²³ E.g., K. M. Baker, *Inventing the French Revolution: Essays on French Political Culture in the Eighteenth Century* (Cambridge, 1990), especially chapters I and VIII.

²⁴ *Dialektik der Aufklärung* (Amsterdam, 1947), translated as *Dialectic of Enlightenment* (New York, 1972); all references are from this edition.

²⁵ *Dialectic*, p. xl. ²⁶ *Ibid.*, p. 3.

to see nature as the location of mysterious powers and forces which men could not explain.

Technology ... does not work by concepts and images, by the fortunate insight, but refers to method, the exploitation of others' work and capital. What men want to learn from nature is how to use it in order wholly to dominate it and other men ... On the road to modern science, men renounce any claim to meaning.²⁷

Enlightenment, in this view, is ultimately totalitarian in the sense that it abandons the quest for meaning and simply attempts to exert *power* over nature and the world.²⁸ These insights link Horkheimer's and Adorno's account of the Enlightenment to ideas which are now commonplace in environmental thinking.

According to them, however, the heart of the problem lay in Enlightenment's reliance on 'rationality': that human beings possess the capacity, once released from superstition, mythology and fear, to see solutions to problems which were objectively correct and acceptable to all other 'rational' minds. The problem in practice, as the *Dialectic* points out is that human beings do not in fact agree on what is 'rational'. Since the Enlightenment denies the validity of other ways of arriving at solutions such as tradition, mythology, or religious revelation, it is difficult to resolve these conflicts without the use of force. In other words, lurking at the heart of Enlightenment, is political terror. It was not difficult for the *Dialectic* to develop this point and allege that Enlightenment seemed to have left no legacy which could be used to resist the use of political terror and the technologically assured man-made mass death of the Holocaust, but might even have been at the very heart and origin of these horrors themselves.

Horkheimer and Adorno made two further important points about Enlightenment. In their view, firstly, the Enlightenment project of the 'disenchantment of the world', made it difficult, even where an outward conformity with religion was reached, to focus aspirations of harmony and fulfillment on 'the regions Beyond' but 'transferred them as criteria to human aspiration'.²⁹ This allowed what the *Dialectic* famously christened 'the administered life', a rational organisation of men, nature and knowledge itself for the achievement of the objectives of this world; the sort of philosophy which makes the idea of 'management' possible. It was this which the *Dialectic* saw as contributing not only to the specific character of everyday life in the twentieth century in the west, but also to the horrors of the concentration camps, where the treatment of human beings as mere objects to be 'administered' and consumed by a 'rational' technological system reached its starkest expression.

The second important idea which the *Dialectic* brought to the study of

²⁷ *Ibid.*, pp. 3-5.

²⁸ *Ibid.*, p. 6.

²⁹ *Ibid.*, p. 87.

the Enlightenment, was that the Enlightenment view of 'rationality' had the effect of turning knowledge into a commodity like any other and thereby of breaking down the area where knowledge and truth, or 'wisdom', were connected. Knowledge and ethics thus also became disconnected. Horkheimer and Adorno argue, that once viewed as a commodity to be bought and sold, knowledge itself became merely a means to an end and 'culture became wholly a commodity disseminated as information without permeating the individuals who acquired it'.³⁰ These comments again anticipate much which has been said about the impact of the 'information revolution' brought about by computerisation, instantaneous transmission of information and new forms of imaging. Horkheimer's and Adorno's argument that knowledge ceased to be internalised by individual people and became divorced from truth values and hence from ethical questions, will be important to this book's discussion of the growing market place for knowledge in the Enlightenment and the impact of that market place on ideas, or the nature and impact of those ideas themselves. The view of the Enlightenment expressed by Horkheimer and Adorno was thus a profoundly negative one and one which has many resonances with contemporary concerns about man's exploitation of the environment, on the effects of the 'information revolution' and on the likely difficulty of eradicating totalitarianism from European political culture.

Another important interpretation of the Enlightenment, however, is far more positive. The German philosopher and political commentator, Jürgen Habermas is a generation younger than the authors of the *Dialectic*, who were among his own mentors. Like them, he developed his views of the Enlightenment against the background of contemporary concerns. In the 1970s and 1980s, German political life manifested an obvious shift to the right. This shift was accompanied by new attitudes to the German past. The events of the 1930s and 1940s, were newly interpreted by historians sympathetic to the right and often holding important positions in state and federal bureaucracies and policy-making bodies.

Habermas tried to oppose these trends by a re-evaluation of the Enlightenment itself. In his *Structural Transformation of the Public Sphere* (1962), he adopted many of Horkheimer's and Adorno's earlier insights about Enlightenment consumption of culture but without drawing from them the negative conclusions of 1947.³¹ For him, other

³⁰ Ibid., p. 197. Alistair MacIntyre, *After Virtue*, 2nd edn (London, 1985), 51-62 argues for similar reasons that the Enlightenment was incapable of providing a secure ground for ethics for future generations.

³¹ J. Habermas, *The Structural Transformation of the Public Sphere: An Enquiry into a Category of Bourgeois Society* (Cambridge, MA, 1989), trans. by T. Burger from

potentials of the Enlightenment still made its ideals worth pursuing, to act as correctives to the right wing. Habermas based his view of the Enlightenment on the famous essay by Kant with which we opened this chapter. Habermas emphasised Kant's own perception, that, far from being an epoch which was closed and over, the Enlightenment had still to be pursued and brought to completion. The Enlightenment, he argued, contained the potential of emancipating individuals from restrictive particularism in order to be able to act, not as 'Germans' embattled against the rest of the world by their past and by their adherence to a particular national and cultural ethos, but, rather, as 'human beings', linked to other humans by a common search for universal values such as freedom, justice and objectivity. He thus took on not only his contemporary critics from the right wing, but also German thinkers such as Johann Herder (1744-1803) who even in the eighteenth century had decried Enlightenment attempts to override feelings of distinctiveness due to national identity based on race, religion, language or attachment to the place of birth.

Habermas also argues that the Enlightenment had seen the creation of a 'public realm' for the discussion and transformation of opinions: what we would now call 'public opinion'. In Habermas' view this was created by the middle classes, who organised and consumed the flow of cultural materials and inhabited social structures which determined the transmission of ideas. Far from seeing this, as Horkheimer and Adorno had, as the beginnings of a 'culture-industry' which would make 'truth' divorced from 'information' and degrade even the nature of knowledge itself into a purely instrumental search for control, Habermas, on the contrary, saw the creation of the 'public realm' as a means of liberation. For him it meant that 'public opinion' could arise and start to exert influence against privileged traditional forces. Habermas' 'public realm' is a space where men could escape from their role as subjects, and gain autonomy in the exercise and exchange of their own opinions and ideas. Habermas in reinterpreting the culture of the Enlightenment was also demonstrating the possibility of historical analysis filled with moral meaning for the present.

In this his work unexpectedly converged with that of the great French philosopher Michel Foucault who engaged with Habermas in debate over the meaning of the Enlightenment. Like Habermas, Foucault also saw Kant's essay as a crucial definition of Enlightenment. Abandoning earlier positions in which he had seen a great gap between Enlightenment and modern thinking, Foucault took up Kant's view that the Enlightenment

Strukturwandel der Öffentlichkeit (Darmstadt, 1962). G. Eley, 'Nazism, Politics and the Image of the Past: Thoughts on the West German *Historikerstreit*', *Past and Present*, 121 (1988), 171-208.

was not complete and used Kant's essay as the starting point for a new understanding of the idea of the critical use of reason as an agent of change. Both thinkers united in agreeing on the importance of the period for a re-evaluation of the present.³²

Enough has now been said to show the great range of variation in ways of interpreting the Enlightenment. The Enlightenment is unusual in being defined as a movement in thought, rather than as the era of a particular dynasty or of a 'great man'. It is also unusual in the extent to which its historical study has been influenced by analyses inspired by philosophical enquiry. Habermas, Horkheimer and Adorno, not to mention Kant and Hegel, have not only shaped ideas about the basic structures of 'Enlightenment thought', they have also written with the conviction that the Enlightenment is not a 'closed' historical period, but one which, whether for good or ill, is still influencing the present; as Kant would have agreed, it is still incomplete. Recent writing on the Enlightenment by professional historians have opened up new areas of enquiry, especially in the social history of ideas, rather than maintaining a concentration on the works of a standard canon of 'great thinkers'. Nor is 'the' Enlightenment any longer seen as a unitary phenomenon. Not only are we now aware of significant national, regional and confessional differences in the Enlightenment experience, but we are also now aware of the different 'Enlightenments' experienced by men and by women, and by white people, and indigenous traditions. All this diversity is hardly surprising, especially when placed against the background of the contemporary inability to define 'the Enlightenment' in any simple way, as the Berlin competition of 1783 made clear.

It might also seem that as our picture of the Enlightenment became more complex, as we have begun to study ideas not as autonomous, discrete objects, but as deeply embedded in society, so the term Enlightenment itself might have become increasingly obscure or even meaningless. It is easy to understand this feeling. A more positive reaction, however, might be to think of the Enlightenment not as an expression which has failed to encompass a complex historical reality, but rather as a *capsule* containing sets of debates, stresses and concerns, which however differently formulated or responded to, do appear to be characteristic of the way in which ideas, opinions and social and political structures interacted and changed in the eighteenth century. This is the

way in which the Enlightenment will be explored in this book. In order to understand how this interaction could affect so many levels of society and politics, and be present not just in Europe, but throughout most other parts of the world touched by European influence, we turn in the next chapter to explore the new social and economic background to the production, spread and marketing of ideas in this period.

³² Michael Foucault, 'What is Enlightenment?' in Paul Rabinow (ed.), *The Foucault Reader* (New York, 1984), 45-56. Habermas' response is 'Mit dem Pfeil ins Herz der Gegenwart: Zu Foucaults Vorlesung über Kants Was ist Aufklärung?', in J. Habermas, *Die neue Unübersichtlichkeit: kleine politische Schriften V* (Frankfurt-am-Main, 1985), 126-31; also in D.C. Hoy (ed.), *Foucault: A Critical Reader* (Oxford, 1986), 103-19 as 'Taking aim at The Heart of the Present'.

4 Science and the Enlightenment: God's order and man's understanding

The Creator doubtless did not bestow so much curiosity and exquisite workmanship and skill upon his creatures, to be looked upon with a careless or incurious eye, especially to have them slighted or condemned; but to be admired by the rational part of the world, to magnify his own power, wisdom and goodness throughout all the world, and the ages thereof . . . my text commends God's works, not only for being great, but also approves of those curious and ingenious enquirers, that seek them out, or pry into them. And the more we pry into and discover of them, the greater and more glorious we find them to be, the more worthy of, and the more expressly to proclaim their great Creator.

The first man I saw was of a meagre aspect, with sooty hands and face, his hair and beard long, ragged and singed in several places. His clothes, shirt, and skin were all of the same colour. He had been eight years upon a project for extracting sunbeams out of cucumbers, which were to be put into vials heremetically sealed, and let out to warm the air in raw inclement summers. He told me, he did not doubt in eight years more, that he should be able to supply the Governor's gardens with sunshine at a reasonable rate; but he complained that his stock was low, and entreated me to give him something as an encouragement to ingenuity, especially since this had been a very dear season for cucumbers. I made him a small present, for my Lord had furnished me with money on purpose, because he knew their practice of begging from all who go to see them.¹

Science is today probably the most powerful force in twentieth-century culture. It determines our potential for technological control of the environment, many of our cultural and intellectual assumptions, and our economic, technological and even agricultural base. In the twentieth century almost all science receives some form of public funding, and scientific practices and assumptions have also heavily influenced much current thinking about the way governments should be run. None of this

¹ William Derham, *Physico-Theology: or, a Demonstration of the Being and Attributes of God, from His Works of Creation* (2 vols., London 1798) II, 394, first published, 1713; Jonathan Swift, *Gulliver's Travels* (1726) London, 1967), 223-4 (A Voyage to Laputa, part III, section 5).

was the case in the eighteenth century. The intellectual status of science was contested, its institutional organisations often weak, and certainly thin on the ground, and the nature of its relations with the economy and with government often tenuous. No institution of science was a major employer of labour, and educational structures in most countries paid little attention to disseminating scientific knowledge. Only a few men could support themselves by full-time work in science.

Nonetheless, science in this period is still an important topic, and not only because of its forerunner status to the expansion of science in subsequent centuries. Precisely because science was an insecure form of knowledge in the eighteenth century, it had to confront many crucial questions in the way that the established science of today, which can concentrate on problem solving *within* a clearly delineated intellectual area, often does not. Eighteenth-century science had to grapple with such larger issues as the relationship of man to nature, the very possibility of knowledge of the external world, and of the best way to organise such knowledge. Science also acted as the link between many apparently diverse areas of Enlightenment thought. As we have seen, it was also deeply implicated in contemporary religious development (chapter 3). 'Nature', the very subject matter of science, has also been described by many as an 'ethical norm' in the Enlightenment. What was 'natural' must be 'good'. Others have argued that science embodied the central Enlightenment value of 'reason' or 'rationality'. By 'rationality' was usually meant objective thinking, without passion, prejudice or superstition, and without reference to non-verifiable statements such as those of religious revelation. More recently, the French philosopher Michel Foucault, put forward the controversial but influential view that the development of Enlightenment science was paradigmatic of deep changes in the structures of *all* knowledge in this period.² Thus, for some historians science is the cultural category of the Enlightenment, rather than that of religion which seems so central to Hegel.

There thus seems to be ample reason to devote attention to science in the Enlightenment. But a word of warning is necessary. In using this word 'science' at all, we are in fact committing the sin of anachronism. The words 'science' and 'scientist' were not invented until the 1830s in England. Before that 'natural philosophy' was probably the term most in use. In French 'science' like the German *Wissenschaft*, meant 'knowledge'

² A.O. Lovejoy, 'Nature as an Aesthetic Norm', in *Essays in the History of Ideas* (New York, 1960), 69-77. Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York, 1973). According to Foucault, taxonomy served during this period not only as the dominant impulse for the pursuit of natural history, but as the organising principle for *all* intellectual activity.

or 'knowing', and was not necessarily connected with knowledge of nature. The term '*scientifique*' to label specifically those involved in such investigation was a coinage of the late nineteenth century.³ Thus, in two major languages there was no word specifically to describe enquiry into nature, or its practitioners. This should alert us to the extent to which 'science' was not yet separated out from other intellectual areas, nor were its practitioners readily distinguished from practitioners of other forms of intellectual enquiry. Enlightenment normality was typified by Voltaire, who worked on a popularisation of Newtonian mathematical physics, while also producing plays, poems, short stories, and political criticism; or by Diderot, whose speculations on the organisation of nature, and the nature of human perception occurred in the midst of other enquiries and discussions, such as those contained in *Rameau's Nephew* or on colonialism in his *Supplément au Voyage de Bougainville*.

The linguistic point also reveals the extent to which 'science' was not yet a defined body of knowledge, not yet a 'discipline', a body of knowledge separate from other bodies of knowledge, with its own subject matter, let alone divided into sub-disciplines such as 'physiology' or 'geology'. The study of what we now call 'science' still took place in the eighteenth century within other disciplines, linked together under the heading of 'natural philosophy'. In turn, as a recent historian has noted 'the whole point of "natural philosophy" was to look at nature and the world as created by God, and thus as capable of being understood as embodying God's powers and purposes'.⁴

This statement is particularly true for the 'natural philosophy' practised in the English-speaking Enlightenment, but it was also a strong factor in much of the natural philosophy undertaken in continental Europe. In an age much concerned with the construction of a 'reasonable Christianity' (chapter 3) which could offer information about God and his purposes independent of 'irrational' sources such as faith and revelation, science with its appeal to the evidence of the senses, was an essential reference in theological debate. For example, the title of John Ray's 1692 *The Wisdom of God Manifested in the Works of The Creation*, could stand for many others of the time. The natural order was also implicated in the arguments of those Deists who thought of God as little more than the original force behind the laws of nature, to the extent that the Deity and the laws of nature often seemed little more than synonyms.

³ Sydney Ross, "'Scientist': The Story of a Word", *Annals of Science*, 18 (1962), 65-86; Raymond Williams, *Keywords: A Vocabulary of Culture and Society* (London, 1976), s.v. 'science'.

⁴ A. Cunningham and P. Williams, 'De-centring the Big Picture', *British Journal for the History of Science*, 26 (1993), 407-32.

'Natural philosophy' thus functioned within this wider framework to a greater or lesser extent, in most European states. This often made it nearly impossible to establish where 'natural philosophy' ended, and where theology, 'the Queen of the sciences' began. It was not easy for the study of nature to become a separate intellectual discipline, with a separate body of practitioners. The link between natural philosophy and theology was tightened by the fact that much natural philosophy and particularly in Protestant states, was done by members of the clergy. Leisure, education and a rural vicarage were the source of much observational science.

The quest for a 'reasonable Christianity' thus did throw natural philosophy into a place of increasing importance in the Enlightenment. But, 'Nature' also started to assume importance in a rather different sense. For 'natural philosophy', 'nature' was seen as an expression of God's ordering hand and was, therefore, largely represented, despite considerable evidence to the contrary, as ordered, as obeying 'laws' and as providing a benevolent habitat for man, who was thus enabled by God to carry out His purposes. ('Nature', however, also had other important meanings in the Enlightenment, many of which were extensions and secularisations of the ideas behind 'natural philosophy'. The 'natural' was seen as the 'good', meaning original, authentic, simple, uncorrupted, and, by extension, in the works of Rousseau and others, as a state opposed to 'civilisation' with all its artificiality and corruption (chapter 6). Thus 'nature' became a description of a moral ideal as well as of a scientifically discernible order, and was thus seen as something which could reside in the hearts of men, as much as being an external order visible and tangible and measurable to natural philosophers. The meaning of 'nature' was thus notoriously imprecise. It, and the search for 'reasonable Christianity' together heightened the importance of enquiry into 'nature' in Enlightenment thinking. They certainly did not provide a secure methodology for the actual conduct of science.

But if 'nature' was to function either as an ethical norm or as a Christian image, natural philosophy had to be underpinned by ideas about how it was possible to know 'nature' at all. Older intellectual traditions which denigrated knowledge of the external world still had considerable force in this period, traditions which greatly pre-dated the popular Enlightenment idea that it was not only possible but proper to deduce the existence and nature of the creator from that of his creation. Among ordinary people, science was also seen as ridiculous or even useless. In 1740, for example, the Swedish naturalist Charles Linnaeus, whose nomenclature systems still survive in botany, felt impelled to answer critics who questioned the very purpose of science. He wrote

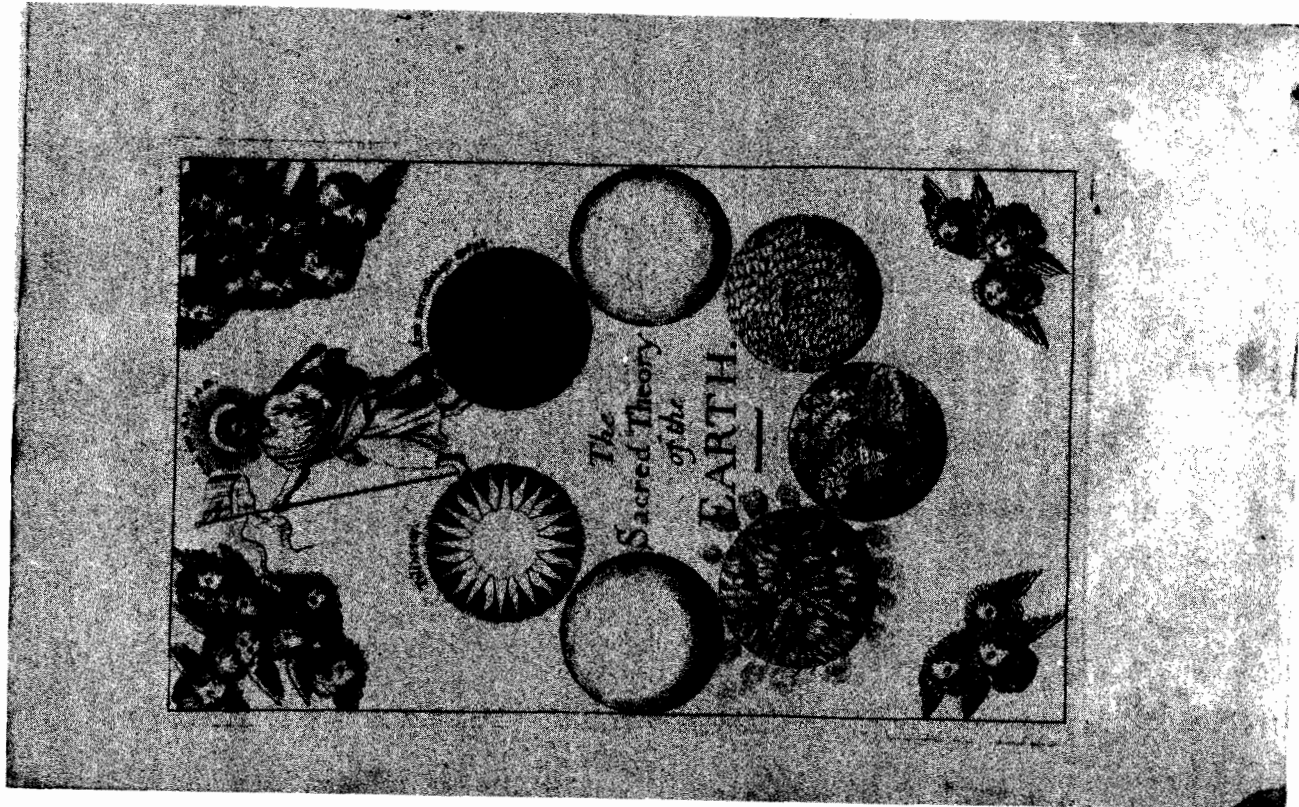
one question is always asked, one objection always made to those who are curious about nature, when ill-educated people (*le vulgaire*) see natural philosophers examining the products of nature. They ask, often with mocking laughter, 'What's the use of it' . . . Such people think that natural philosophy is only about the gratification of curiosity, only an amusement to pass the time for lazy and thoughtless people.⁵

Linnaeus, like Swift's depiction of Laputa, gives a picture of the serious natural philosopher not only as besieged by the ridicule and incomprehension of the uneducated, but also by a strong prejudice *against* the gratification of intellectual curiosity. In the middle ages and the Renaissance, curiosity had a bad name, both as a form of lust and as the impulse which had resulted in the expulsion of Adam and Eve from Paradise. This was a point of view which the continuous publication of earlier theological writings kept firmly alive. Even by 1762, Rousseau was still having to argue in his influential educational text, *Emile*, that curiosity was a virtue which could bring benefits by enhancing knowledge.⁶

(Even sections of society which had jettisoned moral qualms over curiosity about the created world, faced other problems concerning the status of scientific knowledge. How, philosophers asked, could men ever know the external world of nature, or, knowing it, how could they be certain that their knowledge *was* accurate? How was it possible to reduce the dazzling succession of events and entities in nature to general laws which might be predictive? Many argued, as did the Neopolitan historian Giambattista Vico (1688–1744) in his aptly named *Scienza Nuova* (1725), that 'natural philosophy' could never really be a secure form of knowledge. Vico argued that if one is seeking universal and eternal principles in a field of knowledge, principles that make it proper to call it a 'science', one must look to things of *human* creation, such as human history and human institutions. Physical 'science', for example deals with entities, of which we can never have direct experience, and which are thus completely foreign to us. We can only make up theories which are more or less *probable* about physical objects. But we can have an intuitive *certainty* in our understanding of the needs and desires that unite the human race across the ages, and which can be checked against common human experience. Vico's arguments were to be echoed by many others down the century, and it remained a commonplace that historical and literary

⁵ B. Jasmin and Camille Limoges (eds.), C. Linné, 'A Quoi-Sert-il' in *L'Équilibre de la Nature* (Paris, 1972), 145–6.

⁶ J. Céard (ed.), *La curiosité à la Renaissance* (Paris, 1986); [M. Landois], 'Curieux'; [Chevalier de Jaucourt], 'Curiosité', in D'Alembert and Diderot (eds.), *Encyclopédie* (Paris, 1754), 577–8; Jacques-Bénigne Bossuet, *Traité de la concupiscence* (1731) eds. C. Urbain and E. Lenesque (Paris, 1930), esp. chapter 8. J.J. Rousseau, *Emile ou de l'éducation* (1762) ed. F. and P. Richard (Paris, 1964), 185, 271.



3 This is the title page of Thomas Burnet's 1684 *Sacred Theory of the Earth*, one of the most influential early Enlightenment statements of the confluence between the history of Nature and the events of Biblical narrative.

judgements, for Vico's reasons, were far more stable than knowledge of nature, and thus represented a superior kind of intellectual outcome.

Those Enlightenment thinkers who did try to find a basis for knowledge of the external world, such as John Locke or Etienne Condillac (1715–80), broke away from previous thinking and emphasised the role of sense impressions of the external world in the formation of abstract concepts. A consequence of this belief was that man could know only appearances, not the real essences of external things:

Ideas in no way allow us to know beings as they actually are; they merely depict them in terms of their relationship with us, and this alone is enough to prove the vanity of the efforts of those philosophers who pretend to penetrate into the nature of things.⁷

Because of the way in which our ideas of the external world were formed, natural philosophy, in other words, could never explain 'first principles', the causes of causes. And so, while many continued to accept that natural philosophy and theology should operate co-operatively, philosophy in practice laid more emphasis on the constraints on the possibility of human beings gaining any deep knowledge of the natural order. Paradoxically, this was to be a first step along the road to science becoming an entirely distinct form of intellectual endeavour, of its gradual separation from the 'first order' questions dominant in theology, the 'Queen of Sciences'.

(But if science could not peer into the heart of things, could it at least construct a picture of the external world which would be coherent and orderly and law governed – a picture which might not be deeply 'true', but could at least be self-consistent? Here too, however, the philosophers did not make things easy for those interested in the natural world. Statements that one thing causes another are clearly highly important in 'natural philosophy'. Chemists, for example, like to be able to say that the presence of certain chemicals *causes* a certain reaction. But even the validity of such causal statements were challenged. The Scots philosopher David Hume contested the belief held by Descartes – and, for different reasons, by later thinkers such as Locke and Condillac – that there was an easy way of guaranteeing the validity of any transition from the fragmentary and transient world our sense impressions reveal to us to the orderly and 'lawful' world described especially in the physical sciences. Hume explains the fact that human beings do seem routinely able to make this transition, by reference to what he calls 'custom', socially agreed ways which act as facilitators for humans to make the leap from the world of sense impressions to the ordered depiction of the natural world which they portray as the 'natural order'. As Hume wrote:

⁷ Etienne Bonnot de Condillac, *Traité des Sensations* (Paris, 1754).

I may venture to affirm of mankind, that they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, in a perpetual flux and movement.⁸

Because of this the causal claims so central to some branches of natural philosophy, particularly in the cosmological and physical sciences, could not be given absolute legitimation, once science shifted from *describing* a divinely instituted natural order, to enquiring into its causal relations. While scientific accounts of causal relationships could claim to be more or less self-consistent, their truth-value had to remain debatable. Hume argued that the only thing which impels us to connect events in terms of causation is previous experiences of similar sequences. Our *habits* is to reason causally; but nothing guarantees that causal reasoning produces truth, rather than consistency with appearances; and nothing guarantees that these appearances will always appear in the same sequence. That the sun has risen for millions of days before today does not guarantee that the sun will rise tomorrow.

It is difficult to reconcile these ideas, which had a great impact on European philosophers such as Immanuel Kant, with the presupposition central to theology, that nature as God's creation really could be said to be actually existing 'out there', reflecting the order, contrivance and plenitude of the Divine mind itself, and that that natural order would gradually become more and more accessible to human beings. In Hume's account, there was no obstacle to this actually being the case; but it also seemed that a huge number of obstacles inherent in man's own perceptions had been created to men ever being able to perceive the natural order in a way they could guarantee was 'true' rather than 'probable'. Thus, it seemed unlikely that knowledge of God, or 'reasonable Christianity' could be supported by the findings of 'natural philosophy'. Because of this, Hume also argued that it was impossible to reason from the character of the natural order, as constructed by human natural philosophers, to the character of the Deity. The creator could not be presumed from His creation.

Thus, 'natural philosophy' operated in an increasingly strained relationship with philosophical enquiry which undercut its capacity to carry out the objectives of theology. This did not prevent natural philosophy, with all its theological presuppositions, from being enthusiastically endorsed in actual practice, particularly in English-speaking and Prot-

⁸ David Hume, *A Treatise of Human Nature* (1739) Book I, IV, chapter VI. This section also owes much to Ernest Gellner, *Reason and Culture: The Historic Role of Rationality and Rationalism* (Oxford, 1992), esp. 20-3. It should be noted that Kant emphasises that we do need to act as if causality is real, otherwise we have no way of describing location, size, or stability.

estant countries. But it does mean that we cannot say that the Enlightenment unanimously endorsed scientific enquiry as the best or most 'rational' form of knowledge. There were severe and persistent doubts about its standing and 'truth value', as well as its utility and stability in comparison to the historical and literary, let alone theological 'sciences'.

Yet, enquiry into nature did develop in this period, and did end the century with a higher status than at the beginning, though never approaching the dominant place in culture which it has assumed in our own times. Partly, this was because the doubts expressed by even well-known writers like Hume, who was better known in his own day as an historian, seem to have had little impact on the actual practice of science, or on the cultural importance of natural theology in English-speaking countries. The reason for this might be that philosophers almost always began their questioning of science not from the actual *practice* or utility of science, but from the predicament of an individual 'observer' facing 'nature'. Men like Hume and Kant, in spite of the importance of their legacy, did not address the questions of how and why science *can* operate as an activity pursued in common by human beings in a social setting. In this they reflected the comparative social and institutional weaknesses of science in the world around them, as well as reflecting the common emphasis placed by Enlightenment philosophy on an ideal, solitary, representative individual as encapsulating truth.

It is now time to look at what 'science' was actually doing in the Enlightenment.⁹ At many points, we can see that natural philosophy was gradually separating itself from theological ends. This is one interpretation of the work of the century's most famous scientific figure, Isaac Newton (1643-1727). It is certainly possible to argue that the Enlightenment opens not only with John Locke's attempts to understand the human mind and human society, but also with Newton's attempts in his 1687 *Mathematical Principles of Natural Philosophy* (*Philosophiæ Naturalis Principia Mathematica*) to produce mathematical descriptions of the cosmic order, the motions of planets, the famous law of universal gravitation, and the idea of planetary space as infinite. Newton's achieve-

⁹ It is impossible in a single chapter to present the entire range of scientific activity in the Enlightenment and this chapter concentrates on two areas: Newtonian cosmology and natural history. Information on other important fields of science can be found in, e.g., G.S. Rousseau and R.S. Porter (eds.), *The Ferment of Knowledge: Studies in the Eighteenth-Century Science* (Cambridge, 1980); R. Porter, *The Making of Geology: Earth Science in Britain, 1660-1815* (Cambridge, 1979); L.J. Jordanova and R. Porter (eds.), *Images of the Earth: Essays in the History of the Environmental Sciences* (Chalfont St Giles, 1978); J. Roger, *Les sciences de la vie dans la pensée française au dix-huitième siècle* (Paris, 1963); J. Heilbron, *Electricity in the Seventeenth and Eighteenth Centuries: A Study of Early Modern Physics* (Berkeley, 1979); F.L. Holmes, *Lavoisier and the Chemistry of Life: An Exploration of Scientific Creativity* (Madison, WI., 1985).

ments were transmitted down the century by a host of popularisers in most European countries, which, as we have seen, even included Voltaire, and which played into a growing market for popular science. Each populariser introduced his own distortions as they produced verbal equivalents to what were complex and demanding mathematical expressions.¹⁰ Most contrived to produce an idea that Newton had described the whole of the created universe and had described that order as a self-regulating balanced system of lawful movement. In many of these popular accounts, it might appear that whatever the theoretical objections to the possibility of our knowledge of the external world might be, at least physical laws of motion could be completely described by self-consistent mathematical systems.

Newton's views were in fact much more complex. He stated that while it was possible to describe the cosmos mathematically, it was not possible to use mathematics to answer 'first-order' questions as to *how* the cosmos was kept in being and in motion. Newton himself also denied that his laws *did* describe a self-generating, self-regulating universe. As he said, motion 'is much more apt to be lost than got, it is always upon the decay'. Energy, he thought, could only be restored to the cosmic system by the direct, periodic intervention of its creator. Newton's ideas seemed to have shown the necessity of some First Cause to keep the cosmos functioning; but in spite of the statements of some of the popularisers, it provided no guarantee that that First Cause in any way resembled the God of the Old or New Testaments, or that there was any scientific grounding for the tenets of Christianity.¹¹

Newton's impact was mixed. In the 1690s, the theologian, Richard Bently preached sermons which enlisted Newton in defence of religion. By 1734, the divine and philosopher, George Berkeley (1685-1753) saw Newtonianism as conducive to heresy and atheism. There was even disagreement as to how Newton had actually achieved his results. D'Alembert, in his 1751 Introduction to the *Encyclopédie*, invoked Newton to show the supremacy of mathematical analysis in science, while others saw Newton's work as a triumph of pure observation. Others hoped that Newton's prestige could legitimate a 'science of man' that would be as lawful as his natural philosophy. Even as late as 1802, the French Utopian thinker Claude-Henri St-Simon (1760-1825), whom many have seen as one of the grandfathers of Socialism, proposed a social

¹⁰ Popularisations include such European best-sellers as Francesco Algarotti, *Il Newtonismo per le Dame* (1737), and for children, John Newberry, *Tom Telescope's Philosophy of Tops and Balls* (London, 1761).

¹¹ The literature on Newton is vast. I. B. Cohen, *The Newtonian Revolution* (Cambridge, 1980) is probably the most accessible and comprehensive recent account.

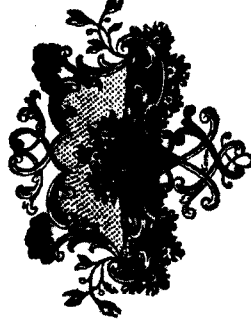
PRINCIPES MATHÉMATIQUES

DE LA

PHILOSOPHIE NATURELLE,

Par feu Madame la Marquise DU CHASTELLET.

TOME PREMIER.



A PARIS,

Chez { DESAINT & SAILLANT, rue S. Jean de Beauvais,
LAMBERT, Imprimeur - Libraire, rue & à côté
de la Comédie Française, au Parnasse.

M. D. C C C L I X.

AVEC APPROBATION ET PRIVILÈGE DU ROI.

⁴ Women in the Enlightenment were not simply creative contributors to literature and art, but also to the exact sciences, most closely identified with 'masculine' rational reasoning. The Marquise's translation of Newton entailed much reworking of the mathematics of

system based on 'Newtonian' principles of reason, order and universal law.

Newton's achievement, great though it was, also had little to say about the nature of living beings on earth itself. This was the second area towards which Enlightenment science directed much effort. How was man to understand the order of nature? Was there such an order? Were there relationships between different living beings, and, if so, of what kind? Could nature simply be understood as a two dimensional 'Great Chain of Being', stretching down from God and his angels, through to man, and in a descending order of complexity, ending in worms and stones?¹² Or were the relationships between living beings more complex?

Enlightenment natural philosophers tended increasingly to ignore those parts of the Great Chain above man, and to visualise nature, rather, as being headed by man usually represented as outside and above the natural order. Enquirers such as the Swede Linnaeus (1709-78) also started to distinguish sharply between living and non-living beings, a distinction which was to make it possible for the 'earth-sciences' such as geology and mineralogy, on the one hand, to distinguish themselves from 'life-sciences' like botany and zoology, on the other. Linnaeus and his pupils produced a new binomial classification for living beings based on their reproductive characteristics. (While extremely successful in the case of plants, Linnaeus' classifications were less so in relation to other living beings. Linnaeus' approach to nature was also very largely a-historical) although by 1744 he was ready to speculate in his *Oratio de telluris habitabilis incremento* (Lecture on the increase of the habitable earth) that new groups of plants and animals might have developed over time by hybridisation. (But Linnaeus in the end still saw nature as a whole, as a harmonious and balanced system created by God, in much the same way that Newton's popularisers represented his view of the cosmos itself.

Linnaeus' views were challenged by the equally well-known and influential naturalist Georges-Louis Leclerc, Comte de Buffon (1708-88). In his *Histoire Naturelle*, which began publication in 1749 and rapidly became a popular publishing success, Buffon challenged the very possibility of classifying living beings in such a way as to reveal thereby the 'real' structure of nature. Whereas Linnaeus believed that species could reveal *truths* about nature, Buffon remained convinced that individuals in nature could not be classified in ways which revealed such 'truths', and that classifications were merely heuristic devices.¹³

Buffon was also much more interested than Linnaeus in the idea that

nature had a history, that its present state was not the state in which God had created it. Buffon used fossil evidence, and physical experimentation, to argue that the world and life itself were far older than was indicated by strict adherence to the chronology indicated by the account of the creation in the Book of Genesis. This importation of historical thinking into natural history has been seen by Michel Foucault as one of the essential ways in which Enlightenment science started to differ in a quite basic way from that of preceding periods, which were much more concerned to place living beings in static taxonomic relationships with each other.¹⁴ Foucault sees this idea that nature too had a history, that species did not emerge perfect and immutable from the Divine hand, but changed in response to other pressures, over far longer periods than were indicated by current understandings of Biblical chronology, as the essential precondition for the emergence of Darwinian theory in the next century and thus for the beginning of scientific modernity. More appositely for our purposes, the question of nature's history also shows divisions emerging between the objectives of theology and scientific enquiry. Buffon's work on the rates of the earth's cooling was condemned by the Paris theology faculty, the Sorbonne, because his results implied that the earth was far older than had previously been realised, but were still reprinted in his best-selling *Epoques de la Nature* (Eras of Nature).

Still other *philosophes*, such as Diderot, applied themselves to the nature of 'life' itself, and produced a picture of 'life' as the constitutive force of nature, an impulsion within living beings themselves to survive, to reproduce, and to obey the laws of their own existence. This picture of life as a dynamic force was emphasised by Diderot, among others, and the idea of living beings as having their own purposes, or teleology, was to be advanced by Kant. Neither did much to prop up an idea of nature as fixed, immutable, perfect, and energised from outside itself, by the will of its creator in the hierarchical order of the Great Chain of Being.

By the end of the century it had become impossible to sustain the calm and stable view of nature left by many theologians. Nature began to be seen as an economy of dynamic processes, changing over time. Far from being described by a 'Great Chain' of Being, it became divided into discrete classification groups. (Even man's own place in nature began to be questioned. Was man, God's highest creation, securely placed above a natural order, created for his exploitation and profit, or was he to be seen as an integral part of that order? In spite of his unique possession of a soul, after all, he also seemed startlingly similar in general conformation to the

¹⁴ Foucault, *The Order of Things*. Werner's *Short Classification and Description of the Rocks* (Freiburg, 1787) suggested that geological strata followed a regular order of deposition which could be used as a guide to the history of different epochs in the history of life.

¹² The 'Great Chain' is described in A.O. Lovejoy, *The Great Chain of Being* (New York, 1936).

¹³ Jacques Roger, *Buffon: un philosophe au Jardin du Roi* (Paris, 1989).

major apes. Was the earth itself still changing? If so, would it do so in a stable way? If God was benevolent and all knowing, why had so many species which he had created become extinct? The questions dragged on, with increasing resonance as the century progressed, and increasingly, especially in continental Europe, gulfs opened up between the objectives and assumptions of theology and those of 'natural philosophy'. In creating this gap, questions about the history of nature played a major role, and meant the mythical 'ordinary person's' view of nature was markedly different from what it would have been at the beginning of the century. Increasingly acceptable was the idea of nature having a history, and a long one at that, which might have seen change occurring as much by violent upheavals as by the slow accretion of the daily operations of nature. While the theological view of nature as reflecting the positive attributes of the Deity still seemed acceptable to many, especially in Great Britain, it seemed increasingly possible for men to hold simultaneously views of nature which were quite divorced from theological objectives; one where nature functioned as a secular sort of emotional therapy, and where knowledge of nature, in spite of the charges of the philosophers, had started to seem more valid and more important.

Social changes in science itself helped this process along. While it remained true well into the next century that few men could hope to make a career in full-time scientific work or even by teaching science, yet science did become much more visible and accessible. The booming publications market began to include many books of popular science, spear-headed by the popularisations of Newton discussed earlier. Popular science lectures became a regular part of urban life in Britain, the Netherlands, France and Italy.¹⁵ In the German states, a wave of new universities founded from the 1740s onwards, like the University of Göttingen, trained future bureaucrats in forestry, agricultural science, engineering and mining, as well as in law and history. This was also the great age of the scientific society. Beginning in the 1660s, which saw the foundation both of the Royal Society of London, and the Paris *Académie des Sciences*, all over Europe, and especially in Germany and Italy, both private and publically chartered learned societies and academies sheltered and encouraged the scientific research of enthusiastic amateurs, or even, in the Paris case, of the few full-time paid workers in science.¹⁶

¹⁵ R. Porter, 'Science, Provincial Culture and Public Opinion in Enlightenment England', *British Journal of Eighteenth-Century Studies*, 3 (1980), 16-25. Best-selling popularisations of science included the Abbé Pluche, *Spectacle de la Nature* (1732-1750).

¹⁶ R. Hahn, *The Anatomy of a Scientific Institution: the Paris Academy of Sciences, 1666-1803* (Berkeley, 1971); R.E. Schofield, *The Lunar Society of Birmingham* (Oxford, 1963); J.E. McClellan, *Science Reorganised: Scientific Societies in the Eighteenth-Century* (New York, 1985).

Zoological gardens, and botanical gardens, such as the Jardin des Plantes in Paris directed by Buffon, allowed public access for the first time. New scientific journals were founded. Certain branches of science, particularly botany, began to be popular amongst women, who were often banned from the education in classical languages and history which was still standard for their brothers. The technological aspects of science such as forestry, mining, veterinary medicine, and agriculture began to appeal more to governments attempting to exert more control than ever over natural environments, and more than ever beset by problems in engineering, in agriculture, and in public health. By the end of the century, science had thus become implicated in the business of government itself, and especially new sciences like that of statistics and probability began to offer the possibility of controlling and predicting the need for social and natural resources on which governments depended (see Chapter 7).¹⁷

Paradoxically, the 'profile' of science was also raised because all this happened at a time when science was still not dominated by experimentalism. There was much rhetoric about the importance of direct observation of nature, and of careful public experimentation; but it was still perfectly possible to engage in speculative writings about Nature, such as those produced by Diderot, which were not based on an experimental approach. This was discursive science, written to be read by lay people, and diffused through the print media. The evidence of library catalogues shows that, at the beginning of the century, the most widely purchased books were theological; by the end of the century, they were fiction or popular science. Science-based crazes such as Mesmerism started to appear.¹⁸ We may dispute Foucault's claim for the dominance of the 'taxonomic impulse' in European thought as a whole, and certainly in terms of the specific concerns of natural history. Where Foucault does appear to be on stronger ground, is with the contention that the Enlightenment earth and life sciences had a new, historical, component which was to drive a wedge between science and its former theological justifications. All this shows the extent to which science was slowly replacing religion as a dominant cultural 'plot', was inculcating as a cultural value the idea that knowledge was secular, concerned with the world as it is, and that it is to this world that men's curiosity might best be turned. Science was becoming acceptable as a form of knowledge worth

¹⁷ L. Daston, *Classical Probability in the Enlightenment* (Princeton, 1988); G. Gigerenzer et al., (eds.), *The Empire of Chance: How Probability Changed Science and Everyday Life* (Cambridge, 1989); H. Mitchell, 'Rationality and Control in French Eighteenth Century Medical Views of the Peasantry', *Comparative Studies in Society and History*, 21 (1979), 81-112.

¹⁸ R. Darnton, *Mesmerism and the End of the Enlightenment in France* (Princeton, 1964).

pursuing in spite of both the jeers of the unlearned, and the *caveats* of the philosophers.

By the end of the century, idealisation of nature, particularly of plants and of wild mountain scenery, had come to provide a new, secular form of therapy, formerly provided by religious means for emotional disturbance. From a different direction, other forms of science – technology and statistics – began to seem increasingly important as means of control and exploitation available to governments. In spite of philosophical objections, and internal conflicts over methodology, such as the struggle between ‘observation’ and ‘experimentation’, science was increasingly successful, if not in putting forward claims to ‘truth’, or even, consistently to objectivity, at least in putting forward claims to both consistency, and practical utility.¹⁹ It had begun to offer claims to control, exploit and predict nature and society, to provide secular knowledge, where man’s knowledge of the universe could become independent from that of its creator. Science had come a long way from Laputa.

¹⁹ L. Daston, ‘Baconian Facts, Academic Civility, and the Pre-history of Objectivity’, *Annals of Scholarship* (Spring, 1992).

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7 Enlightenment and government: new departure or business as usual?

A properly constituted state must be exactly analogous to a machine, in which all the wheels and gears are precisely adjusted to one another, and the ruler must be the foreman, the mainspring, or the soul – if one may use the expression – who sets everything in motion. (Johann von Justi)

Absolute monarchies are but one step away from despotism. Despotism and Enlightenment: let anyone who can try to reconcile these two. I can't. (Franz Kratter (1787))

I go about, I learn, I see, I inform myself, and I make notes. That's more like being a student than a conqueror (Joseph II (1773))¹

A major theme of this enquiry so far has been the relationship between knowledge, critical reflection and power. As we have seen, it was not only philosophers like Immanuel Kant who reflected on the lengths to which unlimited Enlightenment could be taken, before it began to disrupt, rather than illuminate, the structures of society. In this chapter we confront the issue in the most direct way. We examine the extent to which Enlightenment ideas were used by governments in this period, and what impact if any these ideas had not only on government policy, but also on the nature of government itself. We will see if debates on government intervention in the economy, and in church-state relations as well as much wider ranging controversy on what constituted legitimate government, may have prepared the way for the wave of revolutionary movements which accompanied the Enlightenment and which was to culminate in the upheavals in France from 1789 onwards. We will also try to establish how Enlightenment ideas helped or hindered rulers in their search for international success, and internal stability and prosperity.

These are complex questions, not least because the constant flux affecting the exercise of power is not peculiar to the eighteenth century.

Rulers have always striven to make their lands stable, secure, and prosperous. We may find it hard therefore to distinguish how the Enlightenment made a specific contribution. Historians in fact have expended much ink for over a century in trying to come to grips with the problem, although it is difficult to say that this historiographical legacy has in fact been successful in enhancing our understanding.

In the nineteenth century, German historians such as Wilhelm Roscher and Reinhold Koser began to use the label 'Enlightened Absolutism' to refer to a form of monarchy, heavily influenced by Enlightenment ideas, whose emergence they discerned particularly in the German states, and especially in the Prussia of Frederick II. Roscher argued that Enlightenment Absolutism represented the final stage in the evolution of monarchy since the confessional conflicts of the sixteenth century. Efforts by monarchs in that period to anchor their authority in imposing confessional unity on their subjects, had, Roscher argued, been replaced in their turn by monarchs such as Louis XIV who represented themselves as sole and absolute public representatives of their peoples. By the eighteenth century, Enlightenment Absolutism would lead to the emergence of the idea of the ruler being the 'first servant of his people' in the words of Frederick II.²

This conceptualisation of the relationship between Enlightenment and monarchy, however, attracted very little attention in western Europe. After the First World War, new attempts were made to define this relationship. The International Commission on Historical Sciences, searching for a unifying theme for its membership, established an international research project on what it chose to label 'Enlightened Despotism'. Its 1937 report on this theme, and particularly the overview produced by the ICHS Secretary, Michel L'Héritier, produced a concept of the relationship between Enlightenment and government, largely conceived as the impact of French thinkers on monarchies, which was widely influential.³

After 1945, the concept of 'Enlightened Despotism' came increasingly under attack. Anachronism was one charge: no eighteenth-century ruler used the term to describe themselves. Ambiguously formulated by the French writer Mercier de la Rivière in his 1767 *L'ordre naturel et essentiel des sociétés politiques* its use was very uncommon in the eighteenth century.⁴ Whatever their claims to absolute ultimate authority, it was

² R. Koser, 'Die Epochen der Absoluten Monarchie in der Neueren Geschichte', *Historische Zeitschrift*, 61 (1889), 246–87.

³ Michel L'Héritier, 'Le despotisme éclairé, de Frédéric II à la Révolution', *Bulletin of the International Committee of Historical Sciences*, 9 (1937), 181–225.

⁴ B. Behrens, 'Enlightened Despotism', *Historical Journal*, 18 (1975) 401–8; a less hostile view in her *Society, Government and the Enlightenment: The Experiences of Eighteenth-Century France and Prussia* (London, 1985).

¹ Johann von Justi, quoted in G. Parry, 'Enlightened Government and Its Critics in Eighteenth Century Germany', *Historical Journal*, 6 (1963), 182; Franz Kratter, *Philosophische und statistische Beobachtungen vorzüglich die Osterreichischen Staaten betreffend* (Frankfurt and Leipzig, 1787), 23–4; Joseph II quoted in D.E.D. Beales, *Joseph II* (Cambridge, 1987) I, 361.

difficult to point to any eighteenth-century monarch who truly ruled despotically, that is without restraint by laws; let alone without challenge by elite groups and institutions. How, for example, could the history of the British monarchy, hedged around with Parliamentary restrictions as it was, be related to the concept of absolutism? What was the value of any term which could not stretch to the reality of government in what was a major state? There were others who pointed out that the ICHS' definition encapsulated an interpretation of the Enlightenment itself which was fast being discarded. As we saw in chapter 1, by the 1960s, it was increasingly difficult to see the Enlightenment as in any way a unitary phenomenon, dominated by a few, mainly French, 'great thinkers'. 'Enlightenment' was increasingly seen as different from state to state, region to region, and thus it followed that the relationship between government and the crucible of concerns and debates that made up Enlightenment, would also be different.

Another, and even more damaging criticism of the concept of 'Enlightened Despotism' or 'Absolutism' was that it offered no way to separate out what government actions were specifically due to Enlightenment concerns, and those which were rooted in much older ideologies such as neo-stoicism, or were responses dictated by the pure pursuit of advantage.

By the 1970s, scepticism both about the value of the label 'Enlightened Despotism', and about the possibility of adequately investigating the relationship between Enlightenment and government to which it referred, was at an all time high, and seemingly with good reason. But, as usual in historical scholarship, at the very moment of its entrenchment, such scepticism itself came under attack. The sceptics, it was said, had confused an inadequate and misleading label with a more complex and interesting reality. Discarding the labels should not mean however that no further interest be paid to the relationship between government, policies, debates and attitudes in the eighteenth century. Was it not, to say the least, unlikely that monarchs and their ministers could so effectively insulate themselves as to know *nothing* of the often heated debates about government and society raging outside their palaces and offices? If Enlightenment *was* of no concern to monarchs, why did so many, like Catherine of Russia, or Frederick II of Prussia, bother to maintain lengthy correspondences, and long and often troublesome personal and financial relationships with figures such as Diderot and Voltaire?

Many of these perceptions crystallised due to the publication and translation of work by Franco Venturi. His publication of numerous texts by Italian economists, historians and political commentators, many of whom were also governmental advisors, showed beyond a doubt the importance of Enlightenment ideas in the making of governmental

policies and attitudes.⁵ After this, a flurry of reconceptualisations emerged. It was suggested, for example, that Enlightenment could be understood as a facilitator for 'modernisation'; though problems with understanding what was meant by 'modernisation' seemed at once to reflect the current quandaries of development economics, and to take the focus off the problem of understanding Enlightenment in a broader sense.⁶

A second point of view came from Marxism, then at the height of its intellectual and political influence in western Europe. The Marxist approach essentially saw Enlightenment as irrelevant to absolutism, assuming that the former was an ideology of the bourgeoisie, while monarchy existed to bolster the interests of the 'feudal' aristocracy. Thus, in the Marxist view, eighteenth-century monarchies were faced with the impossible task of trying to reconcile irreconcilable interests, feudalism and capitalism, aristocracy and bourgeoisie. Enlightenment acted merely as an 'ideological superstructure' which was used to gloss over the ensuing contradictions of values and interests.⁷ There are, of course, many problems with this approach. It is difficult to apply to the many monarchies whose states, particularly in eastern and central Europe, contained no significant numbers of *bourgeois*; conversely, it is very open to doubt whether the aristocracy of many states, particularly in western Europe, could be helpfully described as 'feudal' by the eighteenth century. Nor is it easy to endorse the Marxist assumption that social groups are only receptive to or influenced by programmes directly related to their objective economic interests. This approach also, by definition, has little to offer the many different republican states. Nor were 'aristocracy' and 'bourgeoisie' monolithic social groups, with completely unified attitudes towards 'Enlightenment'. To treat the Enlightenment as mere 'superstructure' is also to perpetuate (though for very different reasons) the distinction between deeds and thoughts, which was so central, paradoxically, to the older style of historiography of the Enlightenment. Different again was the approach in Reinhard Koselleck's influential

⁵ Franco Venturi, *Settecento riformatore* (Turin 1969-), now in vol. V, part I; and his *Utopia and Reform in the Enlightenment* (Cambridge, 1971).

⁶ E.g., A.M. Wilson, 'The Philosophes in the Light of Present Day Theories of Modernization', *Studies on Voltaire and the Eighteenth-Century*, 48 (1967), 1893-1913; H.B. Applewhite and D.G. Levy, 'The Concept of Modernization and the French Enlightenment', *ibid.*, 74 (1971), 53-96.

⁷ For example, Perry Anderson, *Lineages of the Absolute State* (London, 1974); Albert Soboul, introduction to Philippe Goujard (ed.), *L'Encyclopédie ou Dictionnaire raisonné des Sciences, des Arts et des Métiers: Textes Choisis* (Paris, 1952, 1976, 1984); Horst Möller, 'Die Interpretation der Aufklärung in der Marxistische-Leninistischen Geschichtsschreibung', *Zeitschrift für Historische Forschung*, 14 (1977), 438-72.

1956 *Critique and Crisis*.⁸ This work sees the relationship between Enlightenment and the state as being determined by reaction against the religious conflicts of the sixteenth and seventeenth centuries. Reformation ideology had enabled individuals and groups to legitimate unlimited *critique* of monarchies and rulers of different faiths, thus producing an era of pervasive and long-lasting disorder in Europe. In the eighteenth century, Koselleck argues, ordered government was re-established by the ideals of at least limited religious toleration – which stopped some governments from claiming to operate as ethical agents – and even more by the support given to the idea that ‘critique’, with all its disruptive consequences, should be confined to the private sphere. This is an idea which is still very strong, as we have already seen, in Kant’s essay on Enlightenment.

Koselleck argues, somewhat controversially, that this situation can be traced back to the writings of the English political theorist Thomas Hobbes (1588–1679), who, in the aftermath of England’s own Civil War, had argued for the subordination of the claims of individual morality, or ‘critique’, to the requirements of the necessity for a strong political order. This, however, Koselleck argues, left no clear place for the increasing levels of exchange of ideas and the rise of ‘public opinion’. Public opinion and its informal institutions such as Masonic Lodges, or its conceptualisations such as the ‘Republic of Letters’, became substitutes for real politics, and judged monarchs and the politically active by ‘utopian’ rather than practical standards. Koselleck charges that these utopian judgements were ‘hypocritical’ in that they were taken from a position of irresponsibility and without adequate realisation of the impact of unrestricted ‘critique’ on the crisis of the old order by the end of the century.

Koselleck’s book, even though published as long ago as 1956, has recently enjoyed a revival, manifested in its numerous recent translations. But it has also sustained many damaging cuts from critics, who have pointed out that this view of the relationship between Enlightenment and government is overwhelmingly driven by the author’s wish to account for the Cold War, which had divided his own country. On a less grandiose level of explanation, it has also been questioned whether Hobbes was really representative of the seventeenth-century crisis of ‘critique’; whether Enlightenment rulers really thought of themselves as ruling by *raison d’état* rather than by Christian values; a major ruler like Maria Theresa of Austria, for example, would hardly fit this bill. Was Enlightenment ‘critique’ really always undertaken in conditions of utopian

⁸ Reinhard Koselleck, *Critique and Crisis: Enlightenment and the Pathogenesis of Modern Society* (Oxford, New York and Hamburg, 1988); originally published as *Kritik und Krise. Eine Studie zur Pathogenese der bürgerlichen Welt* (Munich, 1956).

hypocrisy and irresponsibility? This seems to be directly contradicted by the view of the Italian Enlightenment emerging so forcefully from the pen of Franco Venturi.

From this welter of controversy about the nature and meaning of ‘Enlightened Despotism’ or ‘Enlightened Absolutism’, emerges one major question: why have historians experienced, for so long, such a high level of difficulty in discussing this theme? Part of the problem for the eighteenth century undoubtedly arose from the way in which the Enlightenment was itself early characterised as an autonomous body of thought, floating free of situation and circumstance. Formulations of ‘Enlightenment’ as the ancestor of modern liberalism, such as that by Peter Gay, also produced unreal expectations for the actions of eighteenth-century monarchs, who were castigated if they failed to fulfil nineteenth- and twentieth-century ‘liberal’ criteria through refusing to abandon warfare, or refusing to restructure their societies and economies completely by abolishing such key institutions as serfdom. The task today is to find a way of thinking about the relations between Enlightenment and monarchy in a way which is more dynamic, less anachronistic, and more sensitive to the pressure of regional and national patterns and situations.

Previous historiography thus seems to have hindered rather than helped our understanding of the relationship between government and Enlightenment. In any case we would encounter considerable difficulties in trying to approach this theme. Governments come in all shapes and sizes and face very different challenges. Large national states such as France were no less a part of Enlightenment Europe than were the merchant oligarchies of the Venetian and Genoese Republics. Giant multinational monarchies such as Austria and Russia co-existed with more than three hundred small German states. Clearly the challenges faced by large and small states, monarchies and Republics, were very different, as were their previous histories, and the local ideologies of what constituted good government. There is also the problem that all states in this period faced stresses which may have been heightened in the eighteenth century but which were still not different in kind from those faced by previous generations. The pressures of warfare and international competition, the problem of obtaining the cooperation of elites and ordinary people alike, the challenges of rising population and economic expansion, had all faced governments before.

In this sense eighteenth-century government was business as usual. It is also the case that many states particularly in central Europe already possessed a much older body of thinking about the nature, operation and legitimization of government, which remained powerful well into the

Enlightenment. This body of thinking was called Cameralism. Cameralism was particularly powerful in the German-speaking areas of Europe, in the Austrian monarchy and the German states, as well as in areas which often drew their governmental elites from Germany and Austria, areas such as Sweden, Denmark and Russia. So important was this body of thought that it might even be argued that one of the major divisions within Europe was not so much between Catholic and Protestant states, or large and small states but between states which used Cameralist thinking and those which did not.

France, so often seen as the heart of the Enlightenment, saw few of its leading intellectuals in office, or acting as close advisors to government. In spite of the growth of 'public opinion', power remained largely in the hands of the aristocracy, and the struggle to enter its ranks was fierce. Among the ruling class, there was little consensus on future directions for the monarchy, just as there was little consensus among the intellectuals. Few wished to challenge the existing order outright, but opinion was divided on whether the powers of the monarchy should be decreased (to avoid 'despotism'), or increased (to achieve reform, efficiency and greater equity, through restructurings of government, finance, and the army opposed by powerful entrenched interest groups). All this led to a lack of consistency in support for reforming ideas, and also prevented the adoption of efforts to create and teach a technical science of government on the model pursued in the German states. In spite of much support for Enlightenment, improvement and physiocracy among the intendants, the single appointment of a genuine Enlightenment intellectual in high office in central government, the physiocrat Anne-Robert Turgot (1727-81), was a disaster. Weakened from the start by wavering court support, Turgot had to be removed from office when his insistence on establishing a free market in grain led to massive price rises, and the violent resistance by ordinary people, which historians have labelled the 'Guerre des Farines' of 1775. Other reforming ministers have labelled the 'Guerre des Physiocrats', were likewise briefly supported by the monarchy, then abandoned. In France 'Enlightenment', in the political sphere, often seemed to become merely grist to the mill of the competing court factions. It did not act as a unifying factor for the French upper class, even less so as in the 1770s conflict between the efforts of the King and his ministers to achieve reform, and the efforts of bodies like the Parlements to resist them in the name of the nation, became acute, and divided the French governing class.

Very different was the situation in the German states, and in the central government of the Habsburg lands. Here, a highly organised body of thought antedating the Enlightenment, called Cameralism, attempted to

deal with the science of, and justification for, bureaucracy and monarchy. Cameralism emphasised the importance of a state's wealth, and emphasised the virtues of a strong government in obtaining this objective.⁹ Cameralism also argued that rulers should attempt to regulate the lives of their subjects in detail to obtain the vital economic objectives of a strong, healthy, numerous, and loyal population. Cameralism was important, because however much it emphasised the importance of the strong state, it also included social regulation and *social welfare* among the characteristic and legitimate objectives of government, not just the *dynastic* and personal aims with which rulers often approached war and territorial acquisition. It was thus a set of beliefs about government which were well adapted to the German situation where many states were too small to afford their rulers any stage for dynastic posturing; it also worked well in the Habsburg lands, where the challenge of the 1740s - rising aggression between Austria and Prussia, which led to the global war known as the War of the Austrian Succession - made successive rulers well aware of the importance of control and development if they were to muster the necessary resources to compete with predatory rivals such as the Prussia of Frederick II.

The replication of Cameralist thinking was institutionally assured by the foundation of a wave of new universities and training schools in the German states whose *curricula* were primarily geared toward the training of an enlightened, Cameralist bureaucracy often under the close supervision of the monarchs themselves. This meant that, quite differently to the situation in France, university teachers often occupied major government positions, and the converse was also true.¹⁰ All these factors helped to make sure that high-ranking bureaucrats became an international class, often moving from state to state. This itself helped to homogenise thinking about government, about the direction of reform programmes, and about social and economic intervention, across wide geographical areas.¹¹ This is why there was such relative homogeneity in government thinking across the areas affected by Cameralist thinking, which also

⁹ 'A prince, ordered by God to be leader and protector of a people, is justified in doing everything that the welfare of the state entrusted to him demands', Joseph von Sonnenfels, *Politische Abhandlungen* (Vienna, 1777), 254. A.W. Small, *The Cameralists* (Chicago, 1909), is still useful. See also K. Tribe, 'Cameralism and the Science of Government', *Journal of Modern History*, 56 (1984), 263-84.

¹⁰ E.g., Johann von Justi occupied the positions of Professor of Cameralism at Vienna and Göttingen, as well as being Director of Mines for Prussia.

¹¹ The impact of Cameralism on Russia is discussed in the classic study by Marc Raeff, *The Well-Ordered Police-State: Social and Institutional Change through Law in the Germanies and Russia 1600-1800* (New Haven, 1983); 'The well-ordered police state and the development of modernity in seventeenth and eighteenth-century Europe', *American Historical Review*, 80 (1975), 1221-43.

spread into modernising states like Russia. This was not to say that relations between Cameralism and rulers were always smooth: thinkers such as Joseph von Sonnenfels, sometimes produced ideas which were seen as pushing change too far. But it is still generally true that Cameralism acted, far more than did Enlightened attitudes in France, as a unifying factor between monarchs, their servants and their societies, and gave coherence to the governing elite itself.¹² Cameralism also had other impacts. While not anti-religious, it certainly placed great weight on a view of government, and hence monarchy itself, as a machine for producing action and decisions, rather than a location for sacred unifying symbolism. This is the importance of Justi's description, at the head of this chapter, of government as a machine – and machines are devices for turning work into output – and the monarch as only the supreme mechanic. Cameralism also saw the basis for the monarchy's responsibilities to its subjects as lying in natural law as much as in Christian dogma. Nature and economic life were both seen as open to 'management' and exploitation to meet the needs of the state, and justified by rationality. This is an important point, because it showed how in many ways Cameralism was congruent with central Enlightenment concerns such as the importance of 'rationality'. Such concerns also enabled governments to offer legitimisation for intervention in society, a legitimisation particularly important for those rulers whose territories, like those of the Austrian Habsburgs, included a multiplicity of local privileges and jurisdictions, capable of providing obstruction to the ruler.¹³ Cameralism, for example, allowed the construction of a theoretical basis for proceeding with agrarian reform if necessary without the consent of the aristocracy, by reference to man's duty to control nature – thereby exhibiting rationality – and by the search for natural justice through uniform legal structures. The drive towards fuller exploitation of the resources of economy and nature, could often only be achieved by imposing a uniform relationship to the monarchy on regions with very different legal definitions of their obligations to the crown.

It is probably a misconceived enterprise to try to untangle the specifically Enlightenment contribution to Cameralism. It is probably more fruitful to adopt a 'functionalist' approach, and try to establish *how* the holding of such ideas about government helped or hindered rulers in their search for international success and internal stability and prosperity. One

¹² See, for example, the arguments of Rudolf Vierhaus, *Deutschland im 18. Jahrhundert: Politische Verfassung, Soziales Gefüge, Geistige Bewegungen* (Göttingen, 1987).

¹³ For examples of legitimations produced for specific policies of reform in the Habsburg lands, see E. Wangermann, 'The Austrian Enlightenment', in R. Porter and M. Teich (eds.), *The Enlightenment in National Context* (Cambridge, 1981), 127–40, esp. 134.



8 Portrait of Friedrich Anton von Heynitz (1725–1802), director of the *Bergakademie*, or state school of mines at Freiberg in Saxony. Devastated by the Seven Years' War (1756–1763), the Saxon monarchs initiated an ambitious reform programme in 1763. Heynitz was persuaded to leave the services of the Duke of Brunswick, to head state training in mining and metallurgy. The splendour of this portrait, which shows Heynitz carrying the axe of office, and wearing symbols of mining on his uniform, leaves us in no doubt as to the value placed by the Saxon monarchy on technology and the exploitation of nature as an integral part of reform programmes

could argue that legitimisation for measures of social and economic reform, such as the reform of guild organisations to which the Austrian monarchy devoted much effort, gave governments wider choices in policy. Universalistic appeals to Enlightenment values such as humanitarianism, potentially gave princes a legitimate way to disregard particularism and local rights by appealing to the elites' sense of belonging to an enlightened section of society. In other ways, Enlightenment ideas could also actually limit the options open to government particularly in often ruling out the use of greater force against the peasantry in the cause of agricultural reform.¹⁴ If reform continued at a moderate pace, as was the case under Maria Theresa of Austria (1740–80), appeals to Enlightenment values could disguise, or make it more difficult for educated elites to oppose, the increasing efforts by governments to exploit natural and economic resources in their territories in ways which directly competed with the exploitation of those same resources by the aristocracy and church. In some contexts, able to point to a compelling combination of injunctions generated by Enlightenment universalistic ideals, as well as the danger posed by external threats, monarchs were more able to persuade privileged groups in society to accept changes which enhanced the state. Monarchs, such as Frederick the Great were able to persuade their privileged orders to accept changes which enhanced the power of the state, by subsuming their own personal powers in that of the state apparatus. The privileged orders were inclined to accept the situation if they could see that the state was being run in their interests, as Prussia was, and Austria did not appear to be after 1780, and if the monarchy was particularly successful in warfare, as that of Prussia was and that of Austria was not. In doing so, in this particular way, monarchies were also often (though not always) able to decrease the 'transaction costs', or frictions in the machine of government. In this process, Cameralism succeeded in both providing continuity with the pre-Enlightenment period, and with paving the way for Enlightenment objectives.

It is now time to look at the impact of specific bodies of thought on the operation of government. We have already discussed in chapter 3 the importance of religious thinking to rulers. Movements of religious reform such as Pietism allowed rulers such as Frederick William I of Prussia to legitimise programmes of church reform in the monarchy's interest. Even without the appearance of such reform movements within the churches there would still have been very considerable unity within Enlightenment thought about the necessity for church reform. Jansenist concerns about

¹⁴ John Komlos, 'Institutional Change under Pressure: Enlightened Government Policy in the Eighteenth-Century Habsburg Monarchy', *Journal of European Economic History*, 40 (1978), 234–51; Wangermann, 'The Austrian Enlightenment', 135–7.

returning to the simplicities of the early church fitted well with the concerns of governments struggling to diminish the power of the Catholic church within their own dominion, as is shown by the universal attack on the Jesuit order from 1759. Rulers like Joseph II attacked the church's hold over education by attempting to set up a system of secular schools, and by opening the University professoriate to laymen. Joseph like his brother Peter Leopold, legislated against ecclesiastical practices which were seen as a drain on economic productivity: excessive numbers of monks and nuns, of Saints' days holidays, excessive display in church services, interparochial processions that often became the occasion for competitive conspicuous consumption, not to mention scenes of wild disorder. Religious orders which did not perform socially useful functions such as teaching or nursing were forbidden to take in new recruits, and many religious houses were closed. In Tuscany, Peter Leopold used his Jansenist bishops to spearhead reductions in the power of the episcopate and the economic and social functions of the church. At the same time Joseph II began as we have already seen to increase toleration for non-Catholic groups. These religious measures were undertaken for a variety of motives. (Motives ranged from the military (declining religious recruitment would increase the pool of recruits for the army), the economic (releasing church resources into more productive uses), the legal (enhancing the jurisdictional power of the monarchy at the expense of that of the church), the social (hoping to control disorderly behaviour associated with lavish and frequent church ceremonies) and last but not least by gaining control of education, of refocussing loyalty from Pope to monarch.

While Joseph II's methods were the most radical, most Catholic states adopted some version of this programme, showing a commitment to a quite uniform set of policies. At the same time there was also genuine commitment to a new religious value: that of toleration. While Frederick II experienced no serious opposition to his toleration policies, Joseph II had a thankless and politically damaging task in introducing toleration edicts in the Habsburg Monarchy. That Joseph persisted in his efforts to enhance toleration could only have been due to personal commitment. Toleration not only aroused hostility, it also hacked at the roots of the church–state relationship traditional to the Austrian Monarchy, and involved it implicitly in a radical redefinition of its own powers and legitimacy, as we saw in chapter 3. It is first in the campaign for toleration that we see possibly most clearly demonstrated both the commitment of some monarchs to a specifically Enlightenment idea, and the price that they paid for it.

Many attempts to reform the structures of the church had strong

economic motivations. In many Catholic countries the church was a major landowner, if not the largest single landowner. Economists such as Pietro Verri in Milan or Francesco Galiani in Naples pointed out that the church's dominance of the land market retarded agricultural development and prevented the emergence of a dynamic land market which could adjust to the needs of a rapidly rising rural population and generate higher agricultural profits. This attack on the church's economic role was only one aspect of economic debate in the Enlightenment much of which had direct impact on government. For most governments, especially in western Europe the Enlightenment saw the abandonment of previous orthodoxies which have usually been described under the collective heading of Mercantilism, and which, in general, held that real wealth lay in manufactures and in the accumulation of precious metals and restrictions on trade with commercial competitors. In the eighteenth century, as the economy expanded, it became more widely accepted that economic resources also included people, industry and innovation, and that free trade was likely to benefit all by making a generally higher level of economic activity possible. These ideas were developed by a group in France often known as the physiocrats, who saw the true basis of wealth as land and agriculture. They believed that wealth was dependent on free trade in agricultural products. Higher prices would lead to greater profits, profits would raise agricultural productivity, and greater abundance would be produced in the long run. Physiocrats, who included influential publicists such as Mercier de la Rivière, Quesnay, Mirabeau and Dupont de Nemours, advocated the end of government controls on grain, the abolition of internal custom barriers, and the end of monopolies in trade. For a brief period (1774-6) the Physiocrat Anne-Robert Turgot was in control of French government finances, and lifted government controls on grain, as Peter Leopold in Tuscany was also to do in this period. The results were predictable in both cases: a rapid rise in the price of grain, followed by widespread riots by the poor. In Turgot's case, the aptly named *Guerre des Farines* of 1775 produced such disturbances that it was directly responsible for the abandonment of free trade in grain, and the minister's own fall from power.

In the long run, far more influential were the economic theories of Adam Smith, who published his *Inquiry into the Nature and Causes of the Wealth of Nations* in 1776. Smith was convinced, unlike the physiocrats, of the importance of manufacturing industry. Smith emphasised the idea that what increased wealth was not agriculture or industry *per se*, but how labour was applied to human activity. Nature, or, alternatively, the operation of self-interest, would infallibly secure the deployment of labour where it was most productive. Smith's views were highly influen-

tial. But to put them into practice would have required that restrictive labour practices such as guild organisations should be weakened on the Continent to the extent that they already were in Britain. Governments which, like Austria for the 1740s, or France for the 1780s, tried to weaken guild organisation did so under heavy and effective fire from traditionalists. Nor did Smith's study of the division of labour really address the situation in eastern Europe, where industrialisation had barely begun, colonial trade, where it existed, was still carried out under heavy protectionist tariffs, and, above all, the majority of the labour force were unfree serfs. 'Enlightened' rulers such as Frederick II of Prussia, or Catherine of Russia, unlike Joseph II, did not actively seek to destroy serfdom. Joseph paid a very high price in terms of heavy resistance from aristocratic landlords in Hungary and Bohemia; Catherine and Frederick gained a generally harmonious relationship with their aristocratic elite from their abstention from the issue. In this area, as so often, the limits of Enlightenment were set by fear of social and political chaos.

It is thus easy to see that specific debates generated by the Enlightenment did have an effect on actual government policy. On a broader canvass, we can also say that Enlightenment did cause some fundamental questioning of the basis of monarchy, the most common form of government in eighteenth-century Europe. By the end of the century it is certainly possible even to discern a change in how monarchs thought of themselves. This is an important point to make, not simply by virtue of the radical challenge to monarchy in France after 1789, but also because in major and minor states alike, the implementation of Enlightenment policy, for all its rationality and universalism, was almost always still dependent on the physical survival, or the human will of the monarch. At any moment, long-term reform plans could be overturned by death or whim. This was something which happened for example, to Peter Leopold's policies in Tuscany, after his departure for Vienna in 1790. The ruler, his or her powers and his or her way of legitimating authority, was crucial for Enlightenment reforms. We have already seen (chapter 3) for example how Maria Theresa's self-image as a Catholic monarch, deriving legitimation from the church and from her membership of a community of believers, led her to adopt an attitude towards the issue of religious reform which was radically different from that of her son, Joseph II. By the end of the century, the religious legitimations of monarchical rule, the belief that monarchy in general, as well as each individual monarch, were chosen by God to rule as his lieutenants was becoming eroded, as was the elaborate court ceremonials evolved in the seventeenth century to emphasise the distance between monarchs and ordinary mortals. Louis XVI of France, Joseph II of Austria, and Frederick of

Prussia all dispensed with much of this ceremony. As Joseph said, he became more like a student than a conqueror. While Louis XVI certainly retained a vision of monarchy as divinely sanctioned, and legitimated by the Catholic church it was precisely this which was to bring him into the conflict with widespread opinion within the regime which ruled France after 1789.

If kingship itself was becoming secularised, it was also losing its 'proprietary' character. Few believed, as had Louis XIV, that their territories were theirs in the same way that ordinary men possessed personal property. It is difficult to avoid the conclusion that this change was helped by the way in which the Enlightenment had begun to reflect on what legitimate government might be. Often, the answer they arrived at did not look very much like traditional absolutism. Locke, for example, had opened the century with his *Two Treatises on Government*, with an argument that what constituted legitimate government was not divine right, but a contract between government and subjects. As the century progressed, the idea that human beings were innately locations of 'rights' which could not be overridden by governments also started to become more powerful, even though the application of demands for 'rights' beyond the boundaries of race and gender (chapters 5 and 6) were still seen as deeply problematic, and the notion of rights itself was thus not taken to its logical extension. All these tendencies led to monarchy being regarded in quite a different way. Enlightenment and the justification of 'despotism', the rule of one person without the restraint of legality or the subject's welfare, truly were incompatible. It was because of this that some Enlightenment princes, for example, Peter Leopold in Tuscany, and Frederick II in Prussia, began to draft constitutions which would make manifest the nature of the contract between ruler and ruled and stabilise it beyond the lifetime of a particular monarch.

Enlightenment ideas, like all ideas, cannot simply be understood in a functional sense. Their impact cannot be understood if we regard them merely as tools which enabled rulers to do with new and better legitimisation that which external threat and international competition pressed them to do in any case. They were not simply grist to the mills of Justi's machine state. They were not simply means to an end (and means often alter ends). They carried messages of their own. Through these messages, perceptions about the nature of monarchy itself were to change dramatically in some parts of Europe by the end of the century, both for subjects and for the monarchs themselves.

Part of this change came from tensions inherent in the relationship between monarchy itself and programmes of Enlightened reform. Because of the supreme executive power still held by most European

rulers, the fate of programmes of reform was still dependent on the decisions of the ruler, who could withdraw support from policies at a moment's notice. The death of a ruler, or his departure to rule other realms, could throw entire reform programmes into doubt, as occurred for example in Tuscany, when its Grand-Duke Peter Leopold departed to Vienna in 1790 to succeed his brother Joseph II as Emperor of Austria. Monarchal will, and monarchal mortality thus posed deep problems for officials and sections of the elites committed to reform programmes which only had validity as long-term enterprises. At a conceptual level, the premises of rationality and uniformity on which many Enlightenment and Cameralist policies were based, were at odds with the intrinsically personal nature of monarchal involvement.¹⁵ Enlightenment also raised another problem: how far was 'critique', the use of rationality, to be allowed to proceed? Who was to be allowed to exercise this allegedly universal human trait, and to what extent? This is exactly the question raised by Kant's famous essay (chapter 1). Was not the untrammelled exercise of reason sure to perturb that very authority on which the practical implementation of Enlightenment depended?

Was there any way out of these dilemmas, short of the path of the revolution, of the overturning of monarchy and its replacement by the rule of the (allegedly) virtuous and rational elite in the name of the sovereign people, as was to occur in France? By the 1780s, it was officials in the German states who were trying to find a peaceful way out of this dilemma. They were helped in their reformulation of monarchy by the increasing tendencies of monarchs themselves to discard the ceremonial and symbolic aspects of kingship which their ancestors had expended such energy in creating. Louis XVI of France turning to artisan trades in his spare moments (one can hardly imagine Louis XIV patiently constructing watches and turning table legs) was only one among many, in an age which saw the disintegration of elaborate royal ceremonial and symbolism. Joseph II of Austria saw himself at moments as a bureaucrat compiling information, rather than as God's regent, as the opening quotation of this chapter shows. Frederick the Great encapsulated this process by describing himself as the 'First Servant of the State', a description which while in no way diminishing the King's absolute position in the state, did place the focus squarely on the monarch as justifying his position in terms of *deeds*, rather than by providing a sacralised symbolic centre for the realm. Other voices, more radical, called for princes to give written constitutions to their states, which would

¹⁵ J. Mack Walker, 'Rights and Functions: The Social Categories of Eighteenth-Century Jurists and Cameralists', *Journal of Modern History*, 40 (1978), 234-51; Wangermann, 'The Austrian Enlightenment', 135-7.

stabilise the tension between princely will, and long-term reform programmes on universalistic, rational lines. The *Berliner Monatsschrift* asked in 1785, only two years after the Constitution of the new American State was introduced, for example, for a Constitution which would make it impossible 'for his successors arbitrarily to alter the laws he had introduced'.¹⁶ Elements in the Prussian bureaucracy also put forward the idea that in an absolutist state, it was they who stood in the place of a constitution, as it was they who assured the continuity of the state; and that their position should be protected by legal guarantees against arbitrary decrees by the monarchy. Many of these ideas were encapsulated in the *Allgemeines Landrecht*, the first unified law code for Prussia, debated under Frederick II and drawn up in 1794. At many points, the *Landrecht* deliberately sets the state, as a permanent organisation, above the mortal person of the monarch.

In conclusion: By the end of the century, most major states in Europe, as well as many minor ones, were committed to programmes of reform which often involved substantial modifications of interest groups, such as trade guilds, sovereign legal bodies, aristocratic representative institutions and legal jurisdiction over their tenants, and often the economic and jurisdictional interests of the Catholic church. These programmes also involved steadily more intervention by the monarchies in the social life of their subjects, by such means as programmes of public hygiene, setting up of systems of elementary education, and economic regulation. These programmes were designed to produce a healthy educated population, capable of giving rational assent to monarchical measures. Many of these programmes were set in motion by the pressure on all states to reform, which came from the increased pressures of global competition. Many of them represented major change, and were legitimated by Enlightenment ideas such as benevolence, and the duties of states to produce rational assent to policies through education.¹⁷ None were aimed at producing major increases in social mobility, or basic transfers of power in society. These 'limits to reform' have often been discussed: the fact that Enlightenment rulers were reluctant to contemplate major and therefore risky social upheaval, does not lessen their debt to the Enlightenment, few of whose thinkers ever contemplated this either. But, in the end, Enlightenment was able to raise major problems for monarchies, as well as being of major importance in reform. Its reform programmes pointed

logically to a dissociation of the personal ends of the monarchy from the needs of the state, a situation which would have been an anathema to an earlier phase of Absolutism typified by 'L'état c'est moi'. Enlightenment also assisted in the creation of important new factors, such as 'public opinion', which intervened in the process of social and political manipulation by monarchies. Enlightenment gave subjects new aspirations and new expectations from monarchs, expectations for change and reform which were useful if successfully mobilised by monarchs, but were difficult to control in regimes without sufficient institutional representation of the unprivileged. Once 'critique' began, it was difficult to stop. In the end, Enlightenment and 'despotism' or absolute monarchical power, were difficult to reconcile. It is a measure of the success of many monarchs, paradoxically, in using Enlightenment to diminish the frictions of the machine of state that the conflicts between Enlightenment and monarchy started to become intense only late in the century. Whether the resulting *impasse* actually 'caused' the French Revolution and its associated upheavals is discussed in the final chapter of this book.

¹⁶ Quoted in F. Hartung, 'Enlightened Despotism', Historical Association Pamphlet, London, 1957, 29. This article first appeared in *Historische Zeitschrift*, 180 (1955).

¹⁷ James Van Horn Melton, *Absolutism and the Eighteenth-Century Origins of Compulsory Schooling in Prussia and Austria* (Cambridge, 1988); Harvey Chisick, *The Limits of Reform in the Enlightenment* (Princeton, 1981).