1 Introduction: aspects of Enlightenment

For a definition of Enlightenment, we do have a handy starting point. At the pinnacle of the age, 1784, one of the leading philosophers of the Enlightenment, Immanuel Kant, wrote a short piece entitled 'What is Enlightenment?' That piece is a splendidly concise summary of much of the preceding epoch, but nevertheless hints at some of the difficulties of definition.

Kant is commendably direct: his first sentence defines Enlightenment as 'man's release from his self-incurred tutelage'. The goal is intellectual freedom; people need to be liberated from authority. Kant's motto for the age is 'sapere aude', often translated as 'dare to know!' So the search for intellectual freedom is a moral one, and failure to embark on it is owing to 'laziness and cowardice'. One should argue with authority, because one should claim 'the freedom to make public use of one's reason at every point'. That is not to say that we should be wrangling perpetually. We play various roles in life which quite properly restrict our freedom, but we have an individual core at the centre of our being which should dare to know, argue and find out. Kant gives the example of a clergyman who is obligated to the church to give orthodox sermons to his flock, but as a scholar, it is his duty to test such orthodoxy against his reason, to question and argue.

The Enlightened man challenges orthodoxy, argues against authority when his reason is compromised, and understands the limits to his reason dictated by the roles he plays in society. That is an important goal, but picking it apart exposes many of the

tensions of the Enlightenment. For instance, the reader will no doubt have noticed its gendered language. Enlightened thinkers (of both sexes - even the important feminist thinker Mary Wollstonecraft) usually referred to man or mankind meaning all people, men and women, and it is certainly futile and anachronistic to condemn writers of a quarter of a millennium ago for lacking sensitivities we now possess. But their assumptions were indeed often sexist, and so the gendered language can also betrav an unmotivated privileging of men's experience over women's. Kant, for example, asserts that the attempt to use one's own reason 'is held to be very dangerous by the far greater portion of mankind (and by the entire fair sex).' In this book, I shall generally use the gendered language used by the people on whom I am commentating, because to do otherwise would risk misstating key positions, and will leave the very difficult question of evaluating sexism to the reader, together with the additional question, if sexism be shown, of identifying whether it crucially undermines the arguments of the texts it appears in.

Kant is also unashamedly elitist. 'New prejudices will serve as well as old ones to harness the great unthinking masses.' He is very nervous of the idea that letting *all* individuals think for themselves is the best way to promote Enlightened values; he much prefers the idea that a radical prince (he is thinking of Frederick the Great of Prussia) should shepherd his people 'out of barbarity'. Only an Enlightened despot with a numerous and well-disciplined army, he thinks, can let his people argue. 'A republic could not dare say such a thing. ... A greater degree of civil freedom appears advantageous to the freedom of mind of the people, and yet it places inescapable limitations upon it; a lower degree of civil freedom, on the contrary, provides the mind with room for each man to extend himself to his full capacity.'

Indeed, Kant denied that he lived in an 'enlightened age' at all (though 'we do live in an "age of enlightenment"'). The

Enlightenment, even for the foremost philosopher of the age, had not produced Enlightenment for the mass of people even by 1784. How, then, should a beginner's guide proceed?

The Enlightenment has very blurry borders, and no-one quite agrees on the fine detail, but there is a core that can be described. My hope in this book will be to guide the beginner around that core, so that she – or he! – can get to know the rough territory, and start to make her own judgements about the age.

In the following sections I will sketch out some representative Enlightenment positions, with the firm caveats that thinkers of other eras have had similar ideas, and that Enlightened thinkers could sometimes hold very uncharacteristic opinions. But, if one does not mind generalising enormously, one can provide a not inaccurate view of the key aspects of the processes and products of Enlightened thought.

Aspect 1: new sources of authority, particularly grounded in human capacities

Any kind of belief, be it scientific, religious, philosophical, political or common sense, has a justification, a *reason* why it is believed. In the Enlightenment, there was a broad and general shift in the accepted justifications of belief away from *authorities* and toward the *individual*, who was expected to take more responsibility for the beliefs he held. This attitude was at least partly due to the social changes brought about by increased literacy, and was not unnaturally concentrated in the towns – the social mix allowed more people access to a larger number of opinions jostling to be heard.

Older sources of authority such as the king, God, the Bible, or tradition lost their hold, and newer ones, such as experimental

observation, reason and logic became more respectable. The past has no claim on the future. As Kant put it, 'An age cannot bind itself and ordain to put the succeeding one into such a condition that it cannot extend its (at best very occasional) knowledge, purify itself of errors, and progress its general enlightenment'¹ (seemingly neutral between a moral and a practical claim). Jean le Rond d'Alembert's take was that genuine *philosophes* 'respect that which they ought to, and prize that which they can. This is their real crime' – i.e. the real reason for their notoriety. The opinion of 'the people' also became important, as Jean-Jacques Rousseau's theories about 'the general will' were adapted by Robespierre and the French Revolutionaries.

To make all that clearer, let's take three examples. Many used to believe that the legitimacy of a ruler that made it obligatory for his subjects to obey him derived directly from God (the divine right of kings). In the Enlightenment the idea of a social *contract* emerged whereby subjects obeyed the king only in return for various services that the king was contractually obliged to perform, such as providing law and order, protection from want or outside invasion (see chapter six for more on this). So although royalism declined during the Enlightenment, it didn't disappear, while a royalist like Voltaire would rest his arguments on a strongly-argued rational case, not on the realities of tradition or power.

A second example is religious belief. Whereas in the seventeenth century one was expected to conform to the religion of one's country, and one could easily find oneself executed for holding the wrong beliefs, there was much argument in the eighteenth century that toleration of all religions was important, because God was less appreciative of someone getting it right, than of them making a genuine attempt to understand religious truth, even if they got it wrong.

Thirdly, science arose as authority, particularly religious authority or the authority of the great classical thinkers such as Aristotle or Galen, declined (see chapter seven). Truth about the world was found not in the library or the Bible, but via investigation of the phenomena in the world, with experiment and observation. If observations went against authority, so much the worse for authority.

There were three important corollaries of this new attitude. First, the power of tradition was markedly reduced, and old habits and attitudes were almost automatically questioned. The eighteenth century was a period of self-conscious modernisation. Secondly, there was a general increase in toleration; people with opposing views should be able, it was felt, to live peacefully alongside each other, as long as those views did not affect other people materially. Pierre Bayle argued that people cannot be forced to believe, pointing out that each of us generally strives to obey God as best we can in good faith even though we diverge, and this is generally unproblematic. On the other hand, we can recognise when people are doing evil, and can deal with them accordingly.² A stronger argument, honed by John Locke in his 'Letter concerning toleration', was that the religious and secular spheres are and should be kept separate; the policing of conscience is simply beyond the competence and authority of the magistrate.

The third corollary of the new attitude was that the **individ-ual** became more important as a political entity, correspondingly more time was devoted to studying and theorising the psychology of the individual, and individual **liberty** was increasingly seen as an important political goal. The work of Isaiah Berlin and others³ reminds us that 'liberty' can be interpreted in many different ways, in the Enlightenment as much as in any era, but, however broadly construed, it was the watchword for many an Enlightenment thinker.

Mystery, in particular the mysteries of religion and folkmagic, became unfashionable. Alchemy and magic declined, and in the arts clarity began to reign. The dense, metaphorical poetry

of the seventeenth century, represented in England by Donne and Vaughan, was replaced by the civilised, straight-speaking work of John Dryden (1631–1700) and Alexander Pope, and the acme of poetical achievement was when one's lines were 'what oft was thought but ne'er so well expressed'. The complex polyphonic music of Byrd or Palestrina from the sixteenth century was followed by the beautiful, joyous works of Bach and Händel.

The mysteries of religion were replaced by the assumption that God was basically rational and reasonable. The mysteries were really a way for the church to prevent ordinary people discovering inconvenient facts, and to obscure sensible ways of governing lives and nations. In Voltaire's short novel, *The Ingenu*, a noble and naïve Huron Indian transported to eighteenth century Paris notes that where matters are clear, there is no conflict – there are no sects in geometry. But then why would God make the truths of geometry clear and the truths of morality obscure? 'It is an absurdity, an outrage against the human race, an attack on the Infinite and Supreme Being, to say: "There is one truth essential to man, and God has hidden it." '

Aspect 2: confidence and optimism

This change in attitude towards authority coincided, not unnaturally, with another shift towards greater **confidence** about human powers of control. The example in particular of Newton's mechanics showed that exact theories of even very complex phenomena could be developed that not only explained but allowed one to intervene and alter the environment. Newton's advances were echoed in the world of politics by Locke, whose theories showed how a government could be tolerant while retaining power and legitimacy, and the example of the English government after 1688 proved it was possible.

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The constraints of nature could be tamed by commerce, new transport and communications systems, agriculture, gardening and so on. The vast wilderness of America presented a big, but not insuperable challenge. This confidence often displayed itself as **optimism** about the future of mankind, in marked contrast to previous generations who tended to look back nostalgically to the glories of Greece and Rome whose remains were so visible, or to the Biblical world where man was closer to God.

Optimism developed into the idea of **providence**, that the world couldn't be any better than it was because God would surely not make an imperfect world. This view is generally associated with the German philosopher Gottfried Leibniz, but was certainly not unique to him. Pope's *Essay on Man* gave the philosophy its most concise formulation.

All nature is but art, unknown to thee; All chance, direction, which thou canst not see; All discord, harmony not understood; All partial evil, universal good: And, spite of pride in erring reason's spite, One truth is clear, whatever is, is right.

Confidence about progress became optimism about ability. One could have total knowledge of a state of affairs so that all variables were explained. Precision became important, and tools, instruments and measurements became increasingly accurate. The irreducibility of complexity was not seen as an issue. **Abstraction** and, thanks largely to Newton, mathematics were important tools. **Expertise** and expert opinion were admired. Scientist Joseph Priestley made the connection between totalising and optimism explicit:

[A]ll knowledge will be subdivided and extended; and *knowl-edge*, as Lord Bacon observes, being *power*, the human powers will, in fact, be increased; nature, including both its materials,

and its laws, will be more at our command; men will make their situation in this world abundantly more easy and comfortable; they will probably prolong their existence in it, and will grow daily more happy, each in himself, and more able (and, I believe, more disposed) to communicate happiness to others. Thus, whatever was the beginning of this world, the end will be glorious and paradisiacal, beyond what our imaginations can now conceive.⁴

Aspect 3: scepticism

The **balance** of **scepticism** and **confidence** could never reach equilibrium. Scepticism about the old authorities very quickly turned on newer ones; Bayle was unimpressed even with Newton, while Voltaire's *Candide*, *Or Optimism* (1759) parodied the optimism of the age as the philosophy of Dr Pangloss, the metaphysico-theologico-cosmologist (spoofing Leibniz) who suffers terrible depredations (he catches syphilis that makes his nose drop off, is hanged, dissected, enslaved and whipped, in that order) while constantly intoning his view that 'all is for the best in the best of all possible worlds'.

One could be as sceptical of the fashionable nostrums of the Enlightenment as of the unfashionable mysteries and rituals of the Church – and many thinkers of the period were, but it did not have to lead to crippling inaction: James Boswell reports Dr Johnson arguing 'take the case of a man who is ill. I call two physicians: they differ in opinion. I am not to lie down, and die between them: I must do something.'⁵

One effect of the clash between scepticism and confidence was a split between, broadly, Anglophone thinking and Continental thinking that persists to the present. The American revolutionaries veered toward the sceptical and conservative in politics, while the French revolutionaries were characterised by confidence. As a direct result of their respective political histories, Americans even now instinctively want government kept out of affairs, while the French expect top-down solutions to social problems. Scions of the two political cultures have tended to detest each other, and still do to the present day.⁶ Thomas Jefferson's *Notes on the State of Virginia*, which appears to be a factual description of the state in which he lived, was in part a riposte to the celebrated French naturalist Buffon, who had argued (not on the basis of first hand experience) that nature in the New World was inferior to that in the Old World, and that Americans were less virile than Europeans because of the dense forests and marshes in which they lived.

There was a warm but impermanent *rapprochement* after French support had helped America defeat Britain in the Revolutionary War. Jefferson was strongly committed to the ideals of the French Revolution, and is an important figure for those who stress the continuity of the American and French Revolutions. Nevertheless, the radicalism and single-minded confidence of the French Revolutionaries worried many Anglophone thinkers; even initially sympathetic figures like Wollstonecraft and Thomas Paine ultimately became troubled. In each case, their confidence in political and historical theory was shaken by real events. Historian Jonathan Israel argues that while scepticism and moderation towards theory may have been appropriate in the short term, it was the highly theoretical, confident radical theorists, not the sceptics, who furnished us with the treasured liberties of the modern age.⁷

Aspect 4: universal reason

The move away from authority meant that the individual needed the ability to find things out, and come to the right conclusions about the world. Scepticism about authority was fine, but it had no point unless something better could be found.

The 'something better' was reason, the ability to discover implicit truths from explicit evidence. A wealth of psychological theorising took place in the Enlightenment to show how people were able to deploy reason, and that in turn was an important factor in the confidence that was also characteristic of the era. Some argued that reason was a type of perception, analogous to eyesight.

Because reason was the driver, **truth** was a central value, and regarded as sovereign. One should not defer to authority until one had established to one's own satisfaction that the authority was indeed speaking truth. One should not avoid uttering or publicising truths even if they were inconvenient or dangerous. As d'Alembert put it, 'truth can hardly be too modest' and he went on to argue that the community of radical French philosophers and writers which grew up during the Enlightenment, *les philosophes*, formed a newly rational literary community.

It was also argued that reason was the same faculty in each person, which meant that the Enlightenment must be **universal** and global in scope. Indeed, for many thinkers, God, the Supreme Being, must be the ultimate deployer of reason precisely because reason was the supreme mode of thought. God's behaviour could therefore be at least partially understood even by an imperfect human, because the human could follow at least some of His reasoning. The cult of reason, both human and divine, contributed to Enlightenment optimism; many questioned or rejected the Christian doctrine of original sin, arguing that mankind was indefinitely improvable, or even perfectible, by deploying its reason effectively.

Admiration of reason was a threat to religion, especially Catholicism. The Protestant emphasis on the individual conscience could be squared with much of the more moderate Enlightenment thought, but traditional Catholic societies found their most treasured nostrums under attack. Gibbon is a good representative of the new advanced thinking, identifying the Romans' Christianity as a major factor in *The Decline and Fall* of the Roman Empire.

Aspect 5: self-interest, happiness and human nature

The rise of individualism led to a new favourable attitude towards purely personal good. The American Declaration of Independence, passed by Congress on 4 July 1776 and based heavily on the philosophy of Locke, enshrined in its second paragraph the 'self-evident' truth that individuals had inalienable rights to life, liberty and the pursuit of happiness. The philosophy of utilitarianism, whose major theorist was Jeremy Bentham, featured the promotion of happiness. Pleasure was no longer a vulgar pursuit, a rather lowly sort of good. It became something that people were expected to wish for, and which it was no-one's business to impede. Cultural differences still manifested themselves; a number of American thinkers visiting Paris found themselves appalled at the loose morals of the French philosophes.8 Self-interest, as long as it was Enlightened, was not seen as necessarily destructive of social harmony; rather, it balanced the restraint of reason. As Pope argued,

Two principles in human nature reign: Self-love, to urge, and reason, to restrain.

Philosopher David Hume went further, claiming that 'reason is, and ought only to be, the slave of the passions and can never pretend to any other office than to serve and obey them', while Rousseau painted a nuanced picture of a deeply interconnected mind:

Whatever moralists may hold, the human understanding is greatly indebted to the passions which, it is universally allowed,

are also much indebted to the understanding. It is by the activity of the passions that our reason is improved, for we desire knowledge only because we wish to enjoy; and it is impossible to conceive any reason why a person who has neither fears nor desires should give himself the trouble of reasoning.⁹

Hume's fellow Scot Adam Smith expanded these ideas to the social and economic world, postulating that an 'invisible hand' helped a free market determine the 'correct' distribution of consumption of resources in production even while individual decisions were made on the basis of self-interest. Nevertheless, many thinkers believed that social virtues such as **benevolence** did contribute to the happiness of individuals, which helped them square the circle between individual wants and social needs.

A related idea was the importance of **nature**, particularly human nature taken as the common, universal part of human psychology, which was elevated above local idiosyncrasies of culture. The aim of many Enlightenment thinkers was to develop political institutions to bring out natural ways of living and thinking. Smith's markets removed obstacles to our 'natural' inclinations to trade and exchange; Rousseau was deeply opposed to most civilised societies precisely because they made us 'unnatural'. The cult of the 'noble savage' arose on the theory that 'uncivilised' men were closer to their genuine natures (any unfortunate warlike behaviour on their part was often put down paradoxically to the 'natural' inferiority of dark-skinned peoples¹⁰). Reason and experiment would help us discover the truths about both physical and human nature and their mutual influences: thinkers such as Montesquieu and artists such as the French novelist Crèvecoeur believed that human nature and consequently society were shaped by physical and social surroundings.

Aspect 6: attitudes of an educated minority

The noble savage, however, did not get it all his own way. For instance, although the philosopher and mathematician Condorcet pointed out that 'our trade monopolies, our treachery, our murderous contempt for men of another colour or creed, the insolence of our usurpations, the intrigues ... of our priests, have destroyed the respect and goodwill that the superiority of our knowledge and the benefits of our commerce at first won for us in the eyes of the inhabitants,' he still hoped that 'the European population in [New World] colonies [will] either civilise or peacefully remove the savage nations who still inhabit ... its land.'

Gibbon, like many Enlightened thinkers, disapproved and despaired of unorganised, charismatic religion, opining that 'the monastic saints, who excite only the contempt and pity of a philosopher, were respected and almost adored by the prince and people'. The 'extravagant' tales of miracles displayed 'the fiction, without the genius of poetry [and] seriously affected the reason, the faith and the morals of the Christians'.¹¹ These views of Condorcet and Gibbon are symptomatic; the Enlightenment was a very top down movement. It was an attitude, by and large, of a highly educated minority, often wealthy and with position in society, who felt the liberating force of Enlightenment, but were also conscious (and sometimes nervous) of the 'great unthinking masses' kept in darkness, through lack of education, money or manners, or perhaps merely through not being exposed to Enlightened views. It may be, as has been argued in the case of America, that Enlightenment ideas were simply too remote from the concerns of the agrarian majority - 'on the whole, various forms of Protestant Christianity served the emotional needs of most Americans better'¹² – and the same may be true in Europe.

Enlightened thinkers did not expect their own views to triumph without a struggle, and were keen to provide the conditions where they could flourish. Hence many thinkers developed theories of education.

Sometimes, paradoxically, tolerant elitism became a *lack* of toleration of the unenlightened. The great thinkers of the time were noticeably impatient of those who failed to 'get it', and often remarked on the inferiority (remediable or otherwise) of the working poor, or women, or non-white colonised peoples. As Leonard Krieger put it, they 'were in the anomalous position of writing on behalf of the whole society and at the same time castigating large sections of it for chronic abuses – governments for their inequities, aristocracies for their gratuitous privileges, and the masses for their servility.'¹³

Having said that, the Enlightenment was a very social movement, premised on more or less good-natured conversation, argument, discussion and the voicing of opinions. In England, the disputants tended to be the bourgeois and merchant classes discussing public affairs in the coffee houses of London (one of which, famously, evolved into the insurer Lloyd's of London), or in clubs which included the Lunar Society, a dining club of industrialists and intellectuals that met in Birmingham between 1765 and 1813, including Matthew Boulton (1728-1809), Erasmus Darwin (1731-1802), Joseph Priestley, James Watt (1736-1819), Josiah Wedgwood (1730-95) and William Withering (1741-99),¹⁴ and which was visited by Richard Arkwright and Benjamin Franklin no less. In Edinburgh, intellectuals would often get together in clubs such as the Select Society, which included Adam Smith and David Hume, or the Poker Club. In France, however, the philosophes congregated in the houses, or salons, of wellconnected Parisian ladies such as Madame d'Épinav (1726-83), Sophie de Condorcet (1764-1822, wife of Condorcet), Julie de Lespinasse (1732-76) or Madame Roland (1754-93).

As a result, they were drawn from a somewhat smaller social stock.

The different social *milieux* may be connected with the fact that the revolutionary or radical aspects of the British Enlightenment were muted (though not absent), while the French were much more inclined to 'think the unthinkable.' Gertrude Himmelfarb, for example, has argued that the British Enlightenment promoted the social aspects of virtue, while the French were much more interested in what she calls 'the ideology of reason.'¹⁵ Certainly the more top down Enlightenment societies tended to produce more radical thinking.

Nevertheless, all across the Enlightened world people with no official status came together to talk of public affairs, to create what we now call the sphere of public opinion. This is central to our lives nowadays, but it was an innovation of the time, and helped revolutionise politics. It was this space that the philosophes filled - in England the coffee houses, in France the salons, in Scotland the societies of learned men. Journals developed to carry the debates, and branched out into periodicals such as The Spectator or The Rambler, or early versions of newspapers. Commerce, justice, philosophy, science were all discussed, as well as the high politics and diplomacy of the day. This arena was public, in so far as one was not concealed from one's fellows, yet private in so far as one could not be held to account for what one said. The importance of public opinion both for democracy and for fostering the revolutionary forces of the age cannot be overstated.¹⁶

The public arena changed politics in a number of ways. Public opinion acted as a counterweight to decisions or debates at court, and implicitly addressed the interests of a wider class of people. Rent-seeking by ruling classes, widespread in the seventeenth century, came under attack from the public who felt they would benefit from, for instance, fewer wars, or lower tariffs. By giving voice to the bourgeois classes, it automatically put them

on the political radar even though they were often nominally powerless, and this gave immediacy to the debates on government legitimacy which carried on throughout the Enlightenment (see chapter six). Furthermore, since the public in this sense was relatively wealthy and educated, there could be no objection that 'the mob' was being brought into politics. It took many decades before the majority of people could take their place as part of public opinion – the development of the public sphere was an important step towards democracy, but it was only one step, and the direction of influence was still mainly top down.

This top down aspect also meant that Enlightened thinkers were often self-consciously one or two steps ahead of reactionary governments and princes, and consequently were rarely secure, especially in dictatorships. They developed circumlocutions for their more radical thoughts, and relied heavily on **irony**, often saying the precise opposite of what they really intended to say. Voltaire was the master of this, but see also Gibbon's apparent criticism of the heretical Bishop Demophilus (Damophilus) of Constantinople, which conveys only admiration.¹⁷

The social context

One final point to be made particularly with respect to the sixth aspect of the Enlightenment (though it is relevant to any discussion of the Enlightenment couched as the process of transmission of a set of ideas) is that ideas have contexts which are often more explanatory of their spread or otherwise than their intellectual force. The history of ideas can look like a list of great men, women and books, and indeed in this Beginner's Guide it is appropriate to focus on the names, ideas and works with which the reader will hope to become familiar. However, it does not follow from this that the great do their work in a vacuum, that ideas are transmitted by sheer intellectual force alone, or that other more humble processes do not have a part to play.

American historian Robert Darnton has been at the forefront of the movement to uncover the unconventional and irredeemably social aspects of intellectual history, aiming to incorporate the spread of not only books but 'unofficial' communications ranging from rumours and jokes to pamphlets and wills, as well as the actual working practices of contemporary publishers. The result is an understanding of the wider culture of communication within which the intellectual debates discussed in introductory books like this one take place.

This work has been extremely important and influential, and is one reason why the aspects of Enlightenment discussed above are not entirely philosophical, but also incorporate more generally diffused attitudes (e.g. scepticism) or social structures (e.g. the Enlightenment as a 'top down' phenomenon). Nevertheless, when we are looking at ideas, it is important to focus on their content as much as their context, and also to remember that context includes the disputes and controversies that help define and refine ideas. These are what the *philosophes* actually believed were important, of course. Furthermore, whereas the clash of ideas in open debate is at least visible and traceable, the undercurrents of the wider communication culture – though clearly relevant – are dogged with uncertainty and even invisibility.

Hence in this book, there will be a concentration on ideas and intellectual debate, but it should not be forgotten that there are powerful, if not fully understood, social undercurrents. Accordingly, I will end this chapter with a brief discussion of one publishing project as much social as intellectual, whose influence was as much to do with the philosophy *behind* it as the philosophy and ideas contained *within* it.

The quintessence of Enlightenment: *L'Encyclopédie*

How did the Enlightenment work? The 'Enlightenment' metaphor (in French, *Siècle des lumières*, in German, *Aufklärung*) was meant to be taken seriously. The thinkers of the Enlightenment did claim to have brought light where previously there was darkness and replaced mystery with clarity. Knowledge should not be hoarded, but rather shared. It was a public good, not a private possession. This was perhaps the most revolutionary idea that issued from the Enlightenment – one fundamental to the organisation of Western democracies today.

With that thought in mind, a notable development was the encyclopaedia, the history of which shows an amalgam of subversive intention, commercial possibility, respect for the individual reader and faith in the progress of science and knowledge, which between them cover the breadth of Enlightenment myth and reality. An encyclopaedia brings together information from a number of sources, and presents it in a clear way; it also aims for universality, in that, though one is not expected to read it cover to cover, all that one needs to know is contained therein. Encyclopaedias had existed for a long time, but those of the Enlightenment altered the model to increase accessibility. The languages they were written in changed from Latin to the vernaculars used by the increasingly prosperous and influential middle classes. Publication was often via several volumes, on the subscription model, so that the outlay would be spread over a manageable period of time. And the trend was for short articles organised alphabetically, rather than longer articles organised thematically (which made individual pieces of information harder to find, demanded greater commitment from the reader, and negated the modern ideal of the encyclopaedia as 'ready reference'). The alphabetical arrangement of short articles also made updating possible - supplemental volumes often followed

completion of eighteenth century encyclopaedias – which implicitly supported Francis Bacon's view of science as an openended activity, rejecting the idea of the mere preservation and curation of a pre-existing 'complete' body of knowledge.

There were many great examples of Encyclopaedic writing, by individuals and by collaborating groups. Ephraim Chambers (c1680-1740) created his 'universal dictionary' or Cyclopaedia in 1728 (two volumes), which wrestled with hypertextual problems by ordering the articles alphabetically while pioneering the use of cross-reference and showing how all knowledge could be classified into a hierarchy of forty-seven disciplines. The oldest English-language encyclopaedia currently in print, the Encyclopædia Britannica (1768-71, three volumes) appeared at this time, edited in Edinburgh by William Smellie (1740-95). More specialised publications followed. Buffon became a revered celebrity with his Natural History of Animals, Vegetables and Minerals (1749-78, thirty-six volumes), which classified the biological world minutely, with an eye to geographical influences, while Johnson's Dictionary (1755) was not superseded until the publication of the Oxford English Dictionary over a century later.

For some encyclopaedists, ideology counted for more than the spread of knowledge, and the movement was used as a kind of Trojan horse to smuggle in articles with more political spice. Bayle's *Historical and Critical Dictionary* (1697) looked at ideas and their originators, and deliberately cultivated a measured evaluation to show the value of tolerance. Almost the whole work was sceptical of its subject matter, but Bayle was able to use the encyclopaedia format to hide subversive thoughts away in footnotes. Meanwhile, Voltaire's *Philosophical Dictionary* (1764) remains an essential and entertaining read. Organised largely around religious and philosophical concepts, it is basically a series of short discursions on toleration and justice. Its title should certainly not be taken literally – for instance, the section

on 'Chinese catechism' is an essay in dialogue form about the relationship between ethics and religion, and mentions Chinese catechism precisely zero times. For Voltaire, the encyclopaedic form was heaven-sent - he was able to publish a number of his shorter pieces (the various editions of his Dictionary differ substantially in content) without having to relate them to any kind of central narrative, anonymously and safely. He also used the survey form as a vehicle for his brilliant irony; for instance, the article on 'Abraham' begins by enumerating a number of mythical Asian and Arabian figures, including Abraham himself, before disingenuously reporting that fortunately, the Bible 'having manifestly been written by the holy ghost himself', we need not doubt Abraham's existence (which would have been an extremely shocking thing to do). Voltaire, without expressly stating that Abraham was a mythical character, was able to hint not so subtly that 'if we followed the methods of our modern history books it would be quite hard to believe' in the Biblical Abraham.

Of all the encyclopaedic works of the period, the most celebrated was *L'Encyclopédie*. This appeared in Paris between 1751 and 1772, and originally had the modest intention of being a translation of Chambers' *Cyclopaedia*. But under the editorship of prominent *philosophes* Denis Diderot and d'Alembert, its scope widened. With Diderot taking the lead, twenty-eight volumes (eleven consisting entirely of illustrations) were published, followed by five supplementary volumes edited by other hands, and a two-volume index. In all over 70,000 articles were included, many by Diderot and other Enlightenment luminaries, including Voltaire, Montesquieu and Rousseau.

It fell to Diderot himself to summarise the project in the *Encyclopédie* article on 'Encyclopédie'. Such an undertaking, he claimed, could only take place in a philosophical age 'because [it] constantly demands more intellectual daring than is commonly found'. The aim of setting out the total state of

current knowledge is revolutionary, for two reasons. First, everything has to be debated and examined, and vested interests have to be challenged; the duty of an encyclopaedia editor is to leave nothing unexamined. And secondly, an encyclopaedia puts everything on show. Those who benefit from the scarcity of knowledge would prefer an encyclopaedia to be 'an enormous manuscript ... carefully locked up in the king's library, inaccessible to all other eyes but his'. Surely, they would say, France's superiority over other nations depends on its monopoly of knowledge about industry and the arts. Surely, rather than enlightening foreigners, it would be better to keep them in darkness, or even to reduce other nations to barbarity. To this rhetorical question, Diderot replies that it is one's duty as a member of the human race to spread Enlightenment everywhere, if the word 'humanity' is to have meaning. He believed, but did not feel bold enough to add, that the spread of knowledge would help drive out superstition and prejudice. For instance, in L'Encyclopédie's 'figurative system of human knowledge' (a hierarchical scheme analogous to that of Chambers), religion appeared as a mere branch of philosophy (and therefore subject to reason) on the same level as black magic and divination.

L'Encyclopédie was banned by the authorities after the first seven volumes. But we have already remarked on the strange, hypocritical world of 'keeping up appearances' in monarchical France. Thus, the government of the ineffectual Louis XV banned L'Encyclopédie in order to please the church, but did not enforce the ban in order to please his mistress Madame de Pompadour. This may also have pleased Diderot, but he was not so pleased by his publisher, who, feeling threatened, cut a number of the more radical passages.

It is a matter of controversy as to how revolutionary the encyclopaedists believed themselves to be, but a matter of record that *L'Encyclopédie* contributed substantially to the revolutionary

dynamic in eighteenth century France (Robespierre called it 'the introductory chapter of the revolution'). The writers were a diverse group of experts and polymaths, but the existence of *L'Encyclopédie* immediately set up an alternative moment of authority against the government and the Catholic Church.¹⁸

The whole point of the Enlightenment was that spreading knowledge would shake the foundations of what became disparagingly known as the *Ancien Régime* – and *L'Encyclopédie* shows that to be absolutely and definitively true. But the foundations shook at different rates, and in different places; in the next two chapters, we will look at the Enlightenment's development through time and space.