



THE ENLIGHTENMENT

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1 What Was the Enlightenment?

Just over two hundred years ago, the German philosopher, Immanuel Kant, wrote an essay entitled 'Was ist Aufklärung?' ('What is Enlightenment?'). For Kant, enlightenment was man's final coming of age, the emancipation of the human consciousness from an immature state of ignorance and error. He believed this process of mental liberation was actively at work in his own lifetime. The advancement of knowledge – understanding of nature, but human self-knowledge no less – would propel this great leap forward. 'Sapere aude' ('dare to know') was Kant's watchword, taken from the Latin poet, Horace.

But only the most unquestioning historian today would pronounce, as confidently as Kant, that what we now know as the Enlightenment of the eighteenth century, that body of 'progressive' and 'liberal' ideas and options advanced by the leading intellectuals and propagandists of the day, unambiguously amounted to a decisive stage in human improvement. Historians are rightly sceptical about accepting the spokesmen of the past upon their own terms. In any case, 'saints and sinners' histories, which paint pictures of forward-looking 'heroes' conquering reactionary tyrants and bigots to create a better future, nowadays themselves appear partisan and prejudiced. It would be wrong to hope to find in the Enlightenment a perfect programme for human progress. It should rather be seen as posing a series of problems for historians to explore.

For long, the movement suffered a bad press. The 'Age of Reason' – the portmanteau term traditionally given to eighteenth-century views – was dismissed by the Roman-

tics and Victorians as a time of shallow and mechanical thinkers, overweeningly confident in abstract reason. Reason alone would afford them a total knowledge of man, society, nature and the cosmos; would enable them to mount a critique of the political and religious status quo; and, above all, would provide the foundations for building a utopian future. Far more, however, existed in the world (so the Romantics argued) than was day-dreamt about in the armchair philosophies of the Enlightenment: not least, the imagination, feeling, the organic power of tradition and history, and the mysteries of the soul. Sometimes silly, often seductive, but always shallow, Enlightenment teachings had proved appallingly dangerous. Its muchvaunted humanitarianism had led (so many nineteenthcentury critics accused) to the crimes against humanity committed in the French Revolution and thereafter. Unsympathetic critics still make similar insinuations [93; 1041.

The 'Age of Reason' thus found few friends in the nineteenth century. Romantics judged it soulless, Conservatives thought it too radical, while Radicals in turn were distressed to find its leaders, such as Voltaire, were at bottom worldly elitists, salon talkers rather than revolutionary activists. Only in the present century, when the true complexities of the relations between ideology and action have forced themselves upon us, have the subtle ironies of the Enlightenment come to be appreciated.

For one thing, all historians now agree that the very labelling of the eighteenth century as an 'age of reason' is deeply misleading [42]. Many of the century's leading intellectuals themselves dismissed the rationalist, systembuilding philosophers of the seventeenth century, notably Descartes (with his notion of 'clear and distinct ideas' self-evident to reason) and Leibniz. They repudiated them as fiercely as they rejected what they considered the verbal sophistries of rationalist, scholastic theology, developed first by St Thomas Aquinas in the Middle Ages (Thomism), and further elaborated in the Counter-Reformation. In the light of the triumph of Newtonian

science, the men* of the Enlightenment argued that experience and experiment, not a priori reason, were the keys to true knowledge [84]. Man himself was no less a feeling animal than a thinking one. No doubt, as Goya observed, the 'sleep of reason produces monsters'. But, divorced from experience and sensitivity, reason equally led to error and absurdity, as Voltaire delightfully demonstrated in his philosophical novel, Candide, in which the anti-hero, Dr Pangloss, is so blinded by his Leibnizian metaphysical conviction that 'all is for the best in the best of all possible worlds', as to become utterly indifferent to the cruelty and suffering going on under his best of all possible noses [42: vol. 1, 197; 98].

As Gay has emphasised, the exponents of Enlightenment were neither rationalists, believing that reason was all, nor irrationalists, surrendering their judgement before feeling, faith intuition and authority [42: vol. 1, 127f.]. They criticised all such simple-minded extremes, because they were above all *critics*, aiming to put human intelligence to use as an engine for understanding human nature, for analysing man as a sociable being, and the natural environment in which he lived. Upon such understanding the foundations for a better world would be laid.

They called themselves 'philosophers', and this term (in the French form, philosophes) will serve – for there is no exact English equivalent – as a convenient group name for them below. (Occasionally the German form, Aufklärer (= Enlighteners) will be used.) But we must not think of them as akin to the stereotypical modern philosophy professor, agonising over the nuances of words in his academic ivory-tower. Rather they were men of the world: journalists, propagandists, activists, seeking not just to understand the world but to change it. Diderot and d'Alembert's Encyclopédie thus defined the philosophe as one who 'trampling on prejudice, tradition, universal consent, authority, in a word, all that enslaves most minds,

^{*} Almost all the key Enlightenment thinkers were, indeed, male. For the role of women in the Enlightenment see below, Chapter 5.

dares to think for himself'. Voltaire was to the fore in campaigning against legal injustice in a succession of causes célèbres in the 1760s; for a brief spell, it fell to the philosophe-economist, Turgot, to take charge of the French finances; the leading American intellectual, Ben Franklin of Philadelphia, put the science of electricity on the map, invented bifocal spectacles as well as lightning conductors, and also played a crucial part in setting up the new American republic [68].

A more rounded knowledge of intellectuals such as Diderot and Condorcet has dispelled the old caricature of the philosophes as dogmatic system-builders, infatuated with pet economic nostrums and 'vain utopias seated in the brain' [12; 78; 107]. Above all, we should be careful not to give oversimplified accounts of their ideas. They often popularised (to get through to the people). They often sloganised (they needed to, in order to be heard). But there was much subtlety behind the slogans. From around 1760, Voltaire went onto the offensive against the evils of religion with what became a notorious catchphrase, Écrasez l'infâme (destroy the infamous one). Yet it would be simplistic to jump to the conclusion that he had declared total war on all religion whatsoever (see below, Chapter 4). Experience of twentieth-century police states should have taught us why the philosophes had to speak in different voices under different circumstances: now they had to be blunt, now they had to talk in riddles or fables, in order to circumvent the all-present censor. Straighttalking was not always possible or effective.

Once ingrained myths and prejudices are thus cleared away, we can begin to reassess the nature and significance of the Enlightenment. Yet that is still not easy. In his dazzling and sympathetic account written in the optimistic climate of the 1960s, Gay depicted the Enlightenment as a unity ('there was only one Enlightenment' [42: vol. 1, 3]), the work of a group of people who largely knew and admired each other, or at least were familiar with each others' works. They hailed from the major nations of Europe and from British North America. There were the Frenchmen, Montesquieu, Voltaire, Diderot, d'Alembert,

Turgot, Condorcet; the Britons, Hume and Gibbon; the Genevan, Rousseau; the German-born d'Holbach, Kant and Herder; the American, Benjamin Franklin. These constituted the hard core of what Gay called a 'family' or a 'little flock' of *philosophes*, flourishing from around the 1720s to the dawn of the new American Republic in the 1780s, when the French Revolution was on the horizon. And there were many others whose contributions were only slightly more peripheral or less influential: the pioneer psychologists, La Mettrie, Condillac and Helvétius; the codifier of utilitarianism, Jeremy Bentham; the Italian penologist and enemy of capital punishment, Beccaria; the systematiser of political economy, Adam Smith; those draftsmen of American constitutional liberties, Jefferson, Adams and Hamilton – and others besides.

Like the members of every close family, Gay cheerfully conceded, they had their disagreements. Yet emphasised the cardinal points upon which they were essentially at one. They shared a general commitment to criticising the injustices and exposing the inefficiencies of the ancien régime; to emancipating man, through knowledge, education and science, from the chains of ignorance and error, superstition, theological dogma, and the dead hand of the clergy; to instilling a new mood of hope for a better future ('a recovery of nerve', Gay felicitously called it [42: vol. 2, Ch. 1); and to practical action for creating greater prosperity, fairer laws, milder government, religious tolerance, intellectual freedom, expert administration, and not least, heightened individual self-awareness. Thanks to Gay's generous collective portrait of this 'party of humanity', the philosophes can no longer be dismissed as a bunch of intellectual poseurs [40].

Yet Gay's survey must be our point of departure in illuminating the Enlightenment, not the last word upon it. Many problems of interpretation remain outstanding, exposed by further digging in the archives or produced by new angles of vision. For one thing, there is the question of the relations between generals and rank-and-file. Gay's decision to devote the bulk of his pages to the 'great men' of the Enlightenment certainly honoured the

towering reputation – 'notoriety' many would say – of the likes of Voltaire and Rousseau (men often condemned by reactionaries, as if they had almost single-handedly engineered the French Revolution). Gay's strategy enabled him to get under their skin, and to show they were complex human beings, whose ideas changed over time in response to experience – rather than just being names on the spines of books.

But more recent scholarship has looked away from these 'prize blooms' and paid more attention to the 'seedbed' of the Enlightenment. What sort of intellectual life, what groupings of writers and readers, made it possible for such giants to flourish? What conditions helped disseminate their teachings to wider audiences? Who continued their mission after their deaths? As well as a 'High Enlightenment', wasn't there also a 'Low Enlightenment'? Complementing the elite version, wasn't there also a 'popular' Enlightenment [33; 55]? These issues are taken up in Chapter 5.

The choice as to whether we see the Enlightenment principally as an elite movement, spearheaded by a small, illustrious band, or view it instead as a tide of opinion advancing upon a broad front, obviously colours our judgement of its impact. The smaller the leadership, the more readily the Enlightenment can be pictured primarily as a radical revolution of the mind, combating the entrenched orthodoxies of the centuries with the new weapons of pantheism, deism, atheism, republicanism, democracy, materialism, and so forth. We hear Voltaire thunder his magnificent cries of écrasez l'infâme and épater les bourgeois (outrage the bourgeoisie), and church and state tremble.

But another interpretation is possible; one in which the spotlight should fall less upon the embattled few than upon the swelling ranks of articulate and cultured men and women throughout Europe, those whom Daniel Roche has dubbed *gens de culture* (cultured people: [81]); educated people at large who preened themselves upon their own progressive opinions and 'polite' life-styles, picking up a smattering or more of Voltaire and Co. —

maybe just as a smart veneer, but sometimes as part of a genuinely new way of living.

Such a view would thus mean regarding 'Enlightenment' as a sea-change occurring within the ancien régime, rather than as the activities of a terrorist brigade bent on destroying it. So was the Enlightenment an intellectual vanguard movement? Or should it be seen as the common coinage of eighteenth-century polite society? And in either case, did the Enlightenment actually transform the society it criticised? Or did it rather become transformed by it, and absorbed into it? These issues will be examined below, in Chapters 6 and 7, and in the Conclusion.

Many other matters of interpretation hinge upon whether we see the Enlightenment as a 'Militant Tendency' operating against a hostile environment (ironically, rather as Gibbon portrayed the activities of the early Christians), or as a much wider ideology or mentalité. For one thing, we must broach the question of the practical impact of the Enlightenment in effecting change. As Gay has rightly emphasised, the philosophes were contemptuous of dreamers with their heads in the clouds; they championed what Marxists were later to call 'praxis' (theoretically informed practical activity). When Diderot visited Russia at the request of Catherine the Great, he explained to her at length that what her country needed above all were artisans and craftsmen [28: Ch. 4; 36]. Voltaire concluded his moral fable, Candide (1759), by having the hero assert, 'il faut cultiver notre jardin' (we must cultivate our garden - in other words, get on with things).*

But if (as Gay has argued) the flock of *philosophes* was 'small', and if most of them earned their living or won their fame as men of letters rather than as statesmen and politicians, can we realistically expect to find that they were Napoleons on the historical stage, possessing the power to change the very course of human affairs?

^{*} Though it is only the final ambiguity of a deeply ambiguous book that Voltaire's phrase may also have a largely private meaning: we must mind our own business.

Edward Gibbon, it is true, spent numerous years in the House of Commons as an MP, but, notoriously, he never made a single speech [75].

Of course, the chains of influence leading from attitudes to action are inevitably complex. Hence it might not matter that Voltaire never held office, because (we might point out) for many years he was in communication with the 'enlightened absolutist', Frederick II (the Great) of Prussia. Yet it seems that Frederick, far from listening to Voltaire, expected the *philosophe* to listen to him. Certainly, Frederick held advanced views (he was flagrantly irreligious), and he modernised the administration of his kingdom. Yet, despite his veneer of sophisticated humanity, Frederick's Prussia – a militarised, war-hungry state indifferent to individual civil and political liberties – resembles a perversion of the true goals of the 'party of humanity' rather than their fulfilment [40; 41; 15].

What is at stake here amounts to more than a matter of the influence of personalities, or questions of good or bad faith (did cynical enlightened absolutist rulers abuse naïve philosophes?). Rather, it is a question of the function, no less than the aims, of Enlightenment ideals. The philosophes claimed that critical reason would prove emancipatory. Reason and science, they proclaimed, would make people more humane and happy. But certain scholars have recently been arguing that just the opposite occurred. When rulers and administrators heeded the promptings of 'reason', it was to increase their power and enhance their authority, in ways which often penalised the poor, weak and inarticulate [38; 39]. Certain philosophes, such as the Quesnay and Mirabeau (known economists 'physiocrats'), claimed that free trade would increase prosperity. But when the French grain trade was finally deregulated, merchants profited and the poor suffered [69]. In a similar fashion, the undermining of religion which philosophes encouraged led, some scholars claim, to the moral nihilism of the French Revolutionary Terror [31; 93].

In their *Dialectics of Enlightenment*, the modern philosophers, Adorno and Horkheimer, have argued that it was

thus no accident that 'reason' so often went hand-inglove with 'absolutism' [9]. For reason and science, far from promoting liberty, encouraged an absolutist cast of mind, by assuming an 'absolute' distinction between true and false, right and wrong, rather than a pluralist diversity of values. Along similar lines, the French thinker, Michel Foucault, has contended that Enlightenment principles and absolutist policy focused, in the name of rational administration, to promote cruel social policies. For instance, various kinds of social misfits - the old, the sick, beggars, petty criminals and the mad – were taken off the streets, lumped together as an 'unreasonable' social residue, and locked up in institutions. Here what purported to be 'enlightened' action was in reality repressive [38]. Thus it is not good enough simply to applaud enlightened intellectuals for attempting to tackle social problems; we must also assess the practical implications of their policies. It was one thing to deplore begging and the humiliating effects of dependence upon charity; it was another, however, to find effective solutions to the problems of which poverty was the product. Chapters 3 and 4 will attempt to evaluate the political and religious manifestoes of the Enlightenment.

As is well known, Jean-Jacques Rousseau long ago contended that much which other *philosophes* were commending in the name of reason, civilisation and progress, would, in reality, render mankind only less free, less virtuous, and less happy [45]. Rousseau battled against Voltaire's unbelief and d'Holbach's materialism, both of which he saw as degrading. Yet Rousseau is always considered a leading light of the Enlightenment; and rightly so, for he was second to none in his hatred of the abominations of the *ancien régime*. Does not this suggest that the very label, 'Enlightenment', may be more confusing than clarifying, if such a motley army of reformers could march under its banner?

The problem is real, but it is not unique to the Enlightenment. Without such labels, all generalisation would be impossible. Sometimes we cannot in practice do without anachronistic labels – ones contemporaries did not pin

upon themselves: terms such as reformers, radicals, reactionaries, and so forth. And the leading figures of what we call the 'Enlightenment' did, after all, see themselves as the bringers of light to the benighted.

There is, however, a particular problem with the movement we call the Enlightenment. That stems from the fact that, unlike certain agents in history, such as political parties or religious sects, it did not have a formal constitution, creed, programme, or party organisation, nor was it committed to some explicit '-ology' or '-ism'. 'Dissenters' dissented from the Church of England, 'Chartists' endorsed the People's Charter. But there was no public charter of the Enlightenment, no party manifesto for the 'party of humanity'. Hence the Enlightenment is necessarily rather amorphous and diverse.

Yet, to admit this, does not mean to say that we would be better off abandoning talk of the Enlightenment altogether. Rather we should face up to this diversity. Thus, whereas, as quoted earlier, Peter Gay argued there was 'only one Enlightenment', Henry May has plausibly found four rather distinct types of Enlightenment in North America [68]. Taking May's hint, we might make a virtue of necessity and argue that such plurality, such lack of a sworn creed, may be amongst the unique and valuable features of eighteenth-century intellectual radicalism: perhaps its special strength – or maybe its fatal weakness, when contrasted to such a well-drilled body as the Jesuits.

What must not be masked is the fact that, for all its celebration of 'cosmopolitanism', the tone, priorities and orientation of the Enlightenment differed from region to region and from kingdom to kingdom: a point which will be explored in Chapter 6 [88]. And this highly variegated quality of the Enlightenment must be borne in mind when we come, in the final chapter, to assess the true impact and significance of the siècle des lumières. If we conclude that, despite the contentions of both its friends and its enemies, the Enlightenment was not responsible for bringing about the French Revolution, would this be so decisive a verdict as if we concluded that the Communist Party failed, in some country, to spark a communist

revolution? The Enlightenment perhaps never had such fixed targets in its sights.

In finally trying to assess the achievement of the Enlightenment, therefore, we would be mistaken to expect to find that a particular group of men effected a set of measures which amounted to 'progress'. Rather we should be judging whether habits of thinking, patterns of feeling, and styles of behaviour were modified, if not amongst the masses, at least among the many. Given that it was a movement aiming to open people's eyes, change their minds, and encourage them to think, we should expect the outcome to be diverse.

Indeed, it may be helpful to see the Enlightenment as precisely that point in European history when, benefiting from the rise of literacy, growing affluence, and the spread of publishing, the secular intelligentsia emerged as a relatively independent social force. Educated people were no longer standardly primarily the servants of the crown or the mouthpieces of the churches. For all the assurances of a distinguished eighteenth-century writer, Jonathan Swift, the pen may not have been mightier than the sword. Yet Enlightenment words did prove dangerous weapons. Those making quills their weapons were not the servile mouthpieces of absolutist rulers, but freebooters. those intellectual bandits who have ensured the intellectual anarchy of 'free societies' ever since. These implications will be explored in greater detail in the concluding section of this book. But first it is necessary, in the next chapter, to examine the revolution in thought which the philosophes were trying to bring about.

2 The Goal: a Science of Man

Central to the aspirations of enlightened minds was the search for a true 'science of man'. Different thinkers had different ideas of what this would involve. La Mettrie and other 'materialists' (those who denied the independent existence of 'mind', 'spirit' or 'soul') hoped to develop a medico-scientific physiology of man understood as a delicate piece of machinery, or perhaps as just the most successful of the primates [95]. Some, such as Helvétius, thought it was the mechanisms of man's thinking processes above all which needed to be investigated [46; 91]. Others, like the Italian Vico, believed man would best be understood by tracing the steps and stages of his emergence from some primitive condition, or state of nature – which some envisaged as a golden age and others saw as a level of bestial savagery [83]. Still others thought the key to a science of man lay in analysing the political and economic laws governing the interactions between the individual and society at large [69; 22].

But, however great the differences of emphasis, there was widespread agreement that, in the words of Alexander Pope, the 'proper study of mankind is man'. Many symphathised with the aspiration of the Scottish philosopher, David Hume, to be the 'Newton of the moral sciences' (or, as we would call them nowadays, the human and social sciences) [22]. Understanding why this quest for a science of man was both so attractive, yet also so ambiguous, will take us to the heart of the intellectual adventure of the Enlightenment.

Ever since Jakob Burckhardt's classic mid-nineteenthcentury study, The Civilization of the Renaissance in Italy [23], it has often been said that it was the glory of early modern Italy to have discovered 'man' (as distinct from the Christian pilgrim), and in particular to have developed the idea of human 'individuality'. There is a truth in this, and in the hands of daring spirits, such as Montaigne in sixteenth-century France, who posed the sceptical question, que scais je? (what do I know?), Renaissance Humanism could lead to searching introspection on the human condition. Shakespeare has Hamlet muse, 'what a piece of work is man' [42: vol. 1, Ch. 5].

Yet the 'man' the Renaissance discovered was typically also a somewhat conventional figure. He was still the being initially created (before the Fall) whole and perfect by the Christian God in His own image – in that sense, the humanist philosophy of the Renaissance was every bit as Christian as the faith of Luther or the Council of Trent. Renaissance man, ostentatiously portrayed by artists as the well-proportioned, handsome nude, or the geometrically regular 'Vitruvian man', could still be seen as the microcosmic analogue of the macrocosm at large (the little world of man as an emblem of the great world of the universe). Practically all sixteenth-century thinkers - Copernicus excepted - still believed in the 'homocentric' (man-centred) and 'geocentric' (earth-centred) cosmos first advanced by classical Greek science, with man as the measure of the divinely-created system of the universe. Likewise, most Renaissance scholars felt confident enough in tracing human history back, through a continuous pedigree, to Noah, and ultimately to Adam, the first human. Man thus retained his divinely fixed place in time and space.

Admittedly, the new Renaissance adulation for things Greek and Roman disturbed those evangelical churchmen who preached that Christ had died to redeem mankind from sin and the errors of paganism. But the broad effect of Renaissance Humanism's 'anticomania' (love of antiquity) lay in consolidating a reassuringly harmonious vision of human nature and destiny. Moralists believed that from Classical poets, philosophers, moralists, historians and statesmen – above all, from Seneca, Cicero, and

Livy – models of virtue could be derived which the truly civilised man could pursue, in harmony with the Christian's progress towards spirituality and salvation.

The Renaissance thus emphasised dual but mutually consonant aspirations for man. It restored Classical learning, and thereby recovered a this-worldly model for social and political living. But it also integrated these noble ideals of Antiquity with the purified truths of Christianity as spelt out in Scripture and authorised by the Church. These twin goals, uniting the good man and the good Christian, commanded widespread acceptance for well over a century.

Very slowly, however, they came apart at the seams. For one thing, the ferocious religious and dynastic struggles racking Europe from the Reformation through to the close of the Thirty Years War inevitably challenged the optimistic Renaissance faith that man was a noble being destined to fulfil himself through engaging the public life of the commonwealth: Machiavelli's cynical and pessimistic view of man eventually made itself felt. For another, as Peter Burke has rightly emphasised, with the progress of historical scholarship, a new sense of the past emerged, which finally laid dramatically bare the glaring divide between the 'old world' of Graeco-Roman Antiquity and the 'new world' of statecraft and diplomacy, of guns and the printing press [24]. Moreover, genuinely 'new worlds' were being discovered, above all, America, unknown to the Ancients, presenting scenes of exotic, heathen and savage life that challenged Renaissance intellectuals' cosy assumption that Florence was the modern Athens, and the Holy Roman Empire was the successor to Rome itself.

What is more, the seventeenth century was to prove far more intellectually corrosive than the sixteenth. The brilliant 'new sciences' of astronomy, cosmology and physics, pioneered by Kepler, Galileo, Descartes and their successors, destroyed the old harmonies of an anthropocentric (man-centred) universe, that small closed world focused upon man himself, which both Greek science and the Bible had endorsed. Copernican astron-

omy, assimilated in the seventeenth century thanks to a succession of geniuses from Kepler to Newton, displaced the Earth, and man upon it, from being the centre of the universe. It ended up a tiny, insignificant planet, nowhere in particular in that dauntingly infinite universe (now visible through the newly developed telescope) whose immense spaces so frightened Pascal [48].

The new 'mechanical philosophy', espoused by 'atomistic' scientists who claimed that Nature comprised nothing but particles of matter governed by universal laws whose actions could be expressed mathematically, was, of course, a tremendous triumph of investigation and conceptualisation. But it left what had always been affectionately seen as 'living nature' dead and impersonal. The French philosopher and scientist, René Descartes, moreover contended that all living creatures, man alone excepted, were merely machines or automata, lacking even consciousness. The possibility inevitably arose that man himself might be just another machine, one, however, prone to vanity and self-delusion [55; 56].

Early in the seventeenth century, the metaphysical poet John Donne declared, 'And new philosophie calls all in doubt'. It would be quite wrong to imply that, faced with the discoveries of the 'new science', all thinkers doubted and despaired. But, in the light of this radical transformation of theories of Nature, many believed that received ideas about the history, nature and destiny of man themselves had to be re-examined.

And a further, unsettling element became more prominent in the second half of the seventeenth century. Ever since the Reformation and Counter-Reformation, a ferocious polemical war had been waged between Protestant and Catholic Biblical scholars and theologians over the fundamentals of faith. Central to these battles were rival contentions as to who, where and what precisely was the True Church; whence its authority was derived; whether every syllable of the Scriptures was inspired and literally true, and so forth.

Such wrangling, often acrimonious and unedifying, inevitably, in the eyes of some free spirits and inquiring

minds, sapped the moral authority of the churches. Worse, it compelled acute and honest scholars to come face-to-face with the profound problems of man's history and destiny, which close scrutiny of the Bible forced to be asked but did not (it now seemed) readily answer. Could the world really be only 6000 years old, as the Bible suggested? Was Adam truly the first man? Did a serpent really hold a conversation with Adam and Eve in the Garden of Eden? Could a just and benevolent God really have exterminated the whole of the human race, save only Noah's family, at the Deluge? In any case, where had the water for Noah's Flood come from? Where had it gone? Had the Flood been a miracle? Or was it - and perhaps many other Biblical 'miracles' besides - to be explained as an 'effect' of the regular laws of nature as now, at last, understood by modern science? Had the Sun literally stood still for Joshua at the siege of Jericho? and so on. Questionings of this kind uncovered hundreds of issues – historical, moral, scientific and theological – which posed pressing difficulties of fact and faith that Christians needed to settle. The unquestioned authority of revealed religion was being eroded. Some better route to true knowledge had to be sought.

The Dictionnaire (1697) of the unorthodox Huguenot Pierre Bayle, who had sought refuge in Holland from Louis XIV, gave great prominence to such doubts and dilemmas. Bayle also pinpointed the childish absurdities of pagan worship, in a manner that could be taken as a veiled attack upon Christianity itself. Scholars disagree whether Bayle was, at heart, a 'fideist', that is a believer who thought it the Christian's duty to assent merely on faith to the Church's doctrines, as a means of overcoming rational doubt; or whether he was, rather, a sceptic, taking delight in spreading doubt and confusion. He was certainly adroit in covering his tracks [48; 49; 55; 83].

From the latter part of the seventeenth century onwards, many of Europe's greatest minds came to the conclusion that to understand the true history and destiny of the human race, neither unquestioning faith in the Bible, nor automatic reliance on the authority of the Greeks and Romans (the 'Ancients') would any longer suffice. Man's nature was not properly known; it must become the subject of inquiry. And the proper engine of such an investigation must be that 'scientific method' which natural scientists (the 'Moderns') had pioneered so successfully in the fields of astronomy, physics and biology [42: vol. 2, Ch. 3].

Systematic doubt (as advocated by Descartes), experimentation, reliance upon first-hand experience rather than second-hand authority, and confidence in the regular order of nature - these procedures would reveal the laws of man's existence as a conscious being in society, much as they had demonstrated how gravity governed the motions of the planets in the solar system. This kind of analogy with natural science was precisely what Hume had in mind when he spoke of becoming the 'Newton of the moral sciences' [19; 22]. For the new 'social scientists' of the Enlightenment, the old 'truths', expounded by Christianity and the pagan classics, now became problems: in this respect at least, the 'Moderns' has surpassed the 'Ancients' in what was often dubbed the 'Battle of the Books' (the debate as to whether modern minds truly excelled the Greeks) [56].

Enthusiasts for Enlightenment were thus fired by Francis Bacon's conviction that the methods of natural science would launch the 'advancement of learning'; such newly-acquired knowledge would lead to power, and thereby, in Bacon's phrase, to 'the effecting of all things possible'. As Voltaire emphasised in his *Lettres philosophiques* (1733), Newton's achievement truly demonstrated that science was the key to human progress. Or, in Alexander Pope's couplet,

Nature, and Nature's Laws lay Hid from Sight; God said, 'Let Newton Be!', and all was Light.

If the Roman Catholic Church chose to pronounce Copernicanism heresy, and to persecute Galileo, that merely proved that truth always had its enemies. Yet truth was great and would prevail.

The French historian Paul Hazard termed this lateseventeenth-century time of ferment and unsettlement the 'crisis' of the European mind [48; 49; cf. 58]. Enlightened minds believed that such a 'crisis' was to be overcome by the execution of a programme for the scientific understanding of man. One favourite attempt along these lines lay in the construction of a 'natural history of man' to replace the traditional 'sacred history' of the Old Testament. Many philosophes tried to develop, empirically, imaginatively or systematically, such a historical or anthropological vision, tracing the emergence of European man out of the state of 'savagery' which was assumed to have been his primeval origin, and which could be inferred from the 'primitive' condition of the tribes explorers were beginning to discover in darkest Africa, America and, eventually, Australia [22; 86].

To put such primitive people's capacity for progress to the test of science, natives were sometimes transported to Paris or London, and then exposed to the laboratory of polite society. Captain Cook brought back with him the Polynesian Omai, from the newly discovered Tahiti. Similar experiments were performed upon *enfants sauvages*, feral children found running wild in the woods of Europe. The Enlightenment faith in future 'progress', in the secular 'perfectibility' of man, as proclaimed by Herder and Condorcet, and by Scottish philosophers such as Ferguson and Millar, hinged upon the assumption that much of mankind had already risen from 'savagery' to 'civilisation', or as the Scots usually put it, from 'rudeness' to 'refinement' [22; 12; 53].

Such assumptions about the human capacity for progressiveness would, of course, have been unthinkable without belief in the extraordinary plasticity of man's faculties, and a generous confidence in the species' capacity for learning, change and improvement. Fundamentalist Christian theologies, both Catholic and Protestant, had traditionally characterised man as irremediably flawed by the 'original sin' of the 'Fall': without faith, or the sacraments of the Church, all man did was necessarily evil. The philosophical pessimists of Classical Antiquity had

likewise seen man as inevitably engaged in constant civil war with himself, his nobler faculty of reason being all too easily overwhelmed by rebellious appetites and passions. Hence, thought the Stoics, a certain aloof detachment from his baser self was the best state man might hope to achieve [99].

The new Enlightenment approaches to human nature, by contrast, dismissed the idea of innate 'sinfulness' as unscientific and without foundation, arguing instead that passions such as love, desire, pride and ambition were not inevitably evil or destructive; properly channelled, they could serve as aids to human advancement [31]. In Bernard Mandeville's paradoxical formula, 'private vices' (such as vanity or greed) could prove 'public benefits' (for instance, by encouraging consumption and thereby stimulating the economy). Many Enlightenment thinkers, such as Helvétius in France and the pioneer 'utilitarian', Bentham, in England, developed a psychological approach. Replacing the old moralising vision of man as a rational being threatened by brutish appetites, they newly envisaged man as a creature sensibly programmed by nature to seek pleasure and to avoid pain. The true end of enlightened social policy ought therefore to be to encourage enlightened self-interest to realise the 'greatest happiness of the greatest number' [46; 67; 91].

Traditional preachers would have denounced such advocacy of the 'pleasure principle' as sinful, brutish hedonism. But a new breed of 'political economists', notably the Scot Adam Smith in his Wealth of Nations (1776), contended that the selfish behaviour of individual producers and consumers, if pursued in accordance with the competitive laws of the market, would result in the common good – thanks, in part, to the help of the 'invisible hand' of Providence [22; 27; 46; 53]. Likewise, legal reformers such as the Italian Beccaria argued that a truly scientific jurisprudence needed to be built upon the assumption of a psychology of rational selfishness: the pains of punishment must be precisely calculated to deter the pleasures of crime [97].

If mankind were to be progressive, the species had to

be capable of change, above all, of adapting to new environments. Not surprisingly, therefore, Enlightenment psychologists were preoccupied with the learning process, and held out great hopes for education. The history of the race, suggested many thinkers, following Locke's fundamental Essay Concerning Human Understanding (1690) and his Some Thoughts Concerning Education (1693), could be seen as paralleling the education of an individual infant [108]. Followers of Locke believed that preachers were wrong to judge that man was born sinful, and that Plato had been equally mistaken in claiming that people were born ready equipped with 'innate ideas' (for instance, of right and wrong). Rather, the human mind began as a tabula rasa, a clean slate or a 'blank sheet of paper'. It then continually absorbed data through the senses (eyes, ears, etc.), storing this information and shaping it into 'ideas', which were destined to become our empirical knowledge of the world and our moral values. Man's nature, capacities and knowledge were thus entirely the product of learning from experience, through a process often called the 'association of ideas' (the building of complex ideas out of simple units). Man was thus the child of his environment; but in turn he acquired the capacity to transform those same surroundings [86].

Engaged thus in a constant dialectical interplay with his fellows and environment, man was ever evolving to meet the challenges of a world he was continually changing. Hence it followed for admirers of Locke such as Condillac and Helvétius that man was his own maker, and that his self-developing potential knew no hard-and-fast bounds. Towards the close of the eighteenth century, Condorcet wrote his Esquisse d'un tableau historique de l'esprit humain [Sketch for a Historical Picture of the Human Mind] (1794), which charted, in terms ever more rapturous as the future was approached, all the stages of the progress of the human mind - past, present and to come. Condorcet (who perished in the French Revolution) boldly suggested that man, thanks to his capacity for 'perfectability', would soon overcome want, weakness, disease and even death itself [12; 29: Ch. 6]. Both the French naturalist Lamarck, and his English contemporary, the doctor and scientist Erasmus Darwin – Charles Darwin's grandfather – outlined early biological theories of evolution, which presupposed, in their different ways, just such a capacity of creatures to learn, change, adapt and pass on their acquired characteristics to their offspring [63].

On the brink of the twenty-first century, western civilisation still subscribes to – or, rather, some would say, remains imprisoned within – this secular vision of the limitless human drive towards economic growth, scientific innovation and human progress, which the Enlightenment developed. Today's social sciences – sociology, economics, psychology, anthropology – have all emerged from seeds sown in the Enlightenment [11]. Prime ministers still appeal to the teachings of Adam Smith, to justify their faith in market forces and the tendency of the pursuit of profit to guarantee the general good.

In view of this, we must consider the ambiguities of the science of man as forged in the eighteenth century, and not the complexities of its legacy. The *philosophes* claimed that they had dynamited obsolete religious 'myths' about man, and his place, under God, in Nature, replacing them with true scientific knowledge, objectively grounded upon facts. Many historians, including Gay, praise them for thus breaking with 'mythopoeic' thinking, and advancing 'from myth to reason' [42: vol. 1, Ch. 2].

But it might be better to say that what the *philosophes* essentially did was to replace a Christian with a scientific myth – one more appropriate for an age of technology and industrialisation. At bottom, it has been noted, the two myths have remarkably similar patterns. As Carl Becker contended in his wittily titled *Heavenly City of the Eighteenth Century Philosophers*, the idea of the state of nature, as developed by *philosophe* speculative history, bears an uncanny resemblance to the Garden of Eden and the Fall of Christian theology. Similarly, the Enlightenment idea of indefinite future progress can be seen as the secularisation of the doctrine of Heaven. Far from being cast-iron 'facts', the notions of the noble

savage and of progress are just as speculative, symbolic and dependent upon preconceptions – faith even, one might argue – as the Christian formulations they succeeded [14; 99].

To suggest that the Enlightenment offered, not science in place of myth, but new myths for old, is not to debunk it. But it means that we must not take Enlightenment claims at face value, but treat them as highly effective propaganda. Take, for instance, the development of economics. In his Wealth of Nations (1776), Adam Smith berated governments for their traditional 'mercantilist' and 'protectionist' policies, which (he argued) hamstrung trade for the 'fiscalist' purposes of raising revenue. Smith further attacked the traditional belief that war was the route to wealth; accused vested interests of supporting monopolies contrary to the public interest; and argued that, properly-understood, market mechanisms would, in the long term, prove beneficial to all. In the light of such claims, we may understand why Gay concludes that Smithian, laissez-faire economics were more 'humane' and 'scientific' than the systems they challenged [42: vol. 1].

But it is also important not to forget that Smithian (or 'classical') economics provided an apologetics for capitalism in an age of industrialisation, not least through its recommendations for the deregulation of labour (euphemistically called 'free labour'). Smith himself was frank enough to admit that the extreme division of labour required by modern manufacturing - his prime example was pin-making - reduced the worker to a 'hand', a mentally stunted, slave-like machine. But he was not 'humane' enough to suggest a remedy. Classical economics' theory of the laws of profit and loss and the 'iron law of wages' precluded such 'interference' with market mechanisms (all interference with competition, they claimed, only encouraged inefficiency). Laissez-faire economics thus endorsed an inhumane system in the name of the 'natural laws' of market forces - laws which, the politician Edmund Burke proclaimed, were sacred because they were the 'laws of God'.

The new social sciences developed by the philosophes

were highly critical of Christian conceptions of divinely appointed government, and of feudal hierarchy and subordination. But (with a few exceptions, such as Rousseau [28; 44; 74]) they did not provide anything like such a searching critique of commercial society. sanctification of private property and individual interests. In many ways, the new Enlightenment hymn to 'progress' turned a blind eye to the equally biting inequalities and oppressions of the new commercial and industrial order (after all, wasn't everything getting better?) [64]. It is no accident that a Romantic visionary such as William Blake, so passionate in his denunciation of 'dark, satanic mills', should have condemned such leading philosophes as Bacon and Locke, Newton and Voltaire, as the evil geniuses behind that system. Maureen McNeil has plausibly argued that Erasmus Darwin, doctor, educationalist and scientist - overall the leading philosophe of late-eighteenth-century England – was also the most articulate enthusiast for the values of the new industrial society [63].