

## The Divorce between the Sciences and the Humanities

### I

MY subject is the relation of the natural sciences to the humanities: more particularly, a growing tension between them; and especially the moment when, it seems to me, the great divorce between them, which had been brewing for some time, became clear for all who had eyes to see. It was not a divorce between 'two cultures': there have been many cultures in the history of mankind, and their variety has little or nothing to do with the differences between the natural sciences and the humanities. I have tried but altogether failed to grasp what is meant by describing these two great fields of human inquiry as cultures; but they do seem to have been concerned with somewhat different issues, and those who have worked and are working in them have pursued different aims and methods – a fact which, for better or for worse, became explicit in the eighteenth century.

I begin with a tradition in which many eminent scientists today still stand: the tradition of those who believe that it is possible to make steady progress in the entire sphere of human knowledge; that methods and goals are, or should be, ultimately identical throughout this sphere; that the path to progress has been, as often as not – or perhaps a good deal more often – blocked by ignorance, fantasy, prejudice, superstition and other forms of unreason; that we have in our day reached a stage when the achievements of the natural sciences are such that it is possible to derive their structure from a single integrated set of clear principles or rules which, if correctly applied, make possible indefinite further progress in the unravelling of the mysteries of nature.

This approach is in line with a central tradition in western thought which extends back at least as far as Plato. It appears to me to rest on at least three basic assumptions: (*a*) that every genuine question has one true answer and one only: all the others being false. Unless this is so, the question cannot be a real question – there is a confusion

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in it somewhere. This position, which has been made explicit by modern empiricist philosophers, is entailed no less firmly by the views of their theological and metaphysical predecessors against whom they have been engaged in long and uncompromising warfare. (b) The method which leads to correct solutions to all genuine problems is rational in character; and is, in essence, if not in detailed application, identical in all fields. (c) These solutions, whether or not they are discovered, are true universally, eternally and immutably: true for all times, places and men: as in the old definition of natural law, they are *quod semper, quod ubique, quod ab omnibus*.

Opinions within this tradition have, of course, differed about where the answers were to be sought: some thought they could only be discovered by specialists trained in, let us say, Plato's dialectical method, or Aristotle's more empirical types of investigation; or in the methods of various schools of sophists, or of the thinkers who trace their descent from Socrates. Others held that such truths were more accessible to men of pure and innocent soul, whose understanding had not been corrupted by philosophic subtleties or the sophistication of civilisation or destructive social institutions, as, for example, Rousseau and Tolstoy at times maintained. There were those, especially in the seventeenth century, who believed that the only true path was that of systems based on rational insight (of which mathematical reasoning offered the perfect example), which yielded *a priori* truths; others put their faith in hypotheses confirmed or falsified by controlled observation and experiment; still others preferred to rely on what seemed to them plain common sense – *le bon sens* – reinforced by careful observation, experiment, scientific method, but not replaceable by the sciences; and men have pointed to other roads to truth. What is common to all thinkers of this type is the belief that there is only one true method or combination of methods: and that what cannot be answered by it, cannot be answered at all. The implication of this position is that the world is a single system which can be described and explained by the use of rational methods; with the practical corollary that if man's life is to be organised at all, and not left to chaos and the play of uncontrolled nature and chance, then it can be organised only in the light of such principles and laws.

It is not surprising that this view was most strongly held and most influential in the hour of the greatest triumph of the natural sciences – surely a major, if not the major, achievement of the human mind: and especially, therefore, in the seventeenth century in western

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Europe. From Descartes and Bacon and the followers of Galileo and Newton, from Voltaire and the Encyclopedists to Saint-Simon and Comte and Buckle, and, in our own century, H. G. Wells and Bernal and Skinner and the Viennese positivists, with their ideal of a unified system of all the sciences, natural and humane, this has been the programme of the modern Enlightenment; and it has played a decisive role in the social, legal and technological organisation of our world. This was perhaps bound sooner or later to provoke a reaction from those who felt that constructions of reason and science, of a single all-embracing system, whether it claimed to explain the nature of things, or to go further and dictate, in the light of this, what one should do and be and believe, were in some way constricting – an obstacle to their own vision of the world, chains on their imagination or feeling or will, a barrier to spiritual or political liberty.

This is not the first occasion on which this phenomenon occurred: the domination of the philosophical schools of Athens in the Hellenistic period was attended by a noticeable increase in mystery cults and other forms of occultism and emotionalism in which non-rational elements in the human spirit sought an outlet. There was the great Christian revolt against the great organised legal systems, whether of the Jews or the Romans; there were medieval antinomian rebellions against the scholastic establishment and the authority of the church – movements of this kind from the Cathars to the anabaptists are evidence enough of this; the Reformation was preceded and followed by the rise of powerful mystical and irrationalist currents. I will not dwell on more recent manifestations of this – in the German *Sturm und Drang*, in the romanticism of the early nineteenth century, in Carlyle and Kierkegaard and Nietzsche and the vast spectrum of modern irrationalism both on the right and on the left.

It is not, however, with this that I intend to deal, but with the critical attack upon the total claim of the new scientific method to dominate the entire field of human knowledge, whether in its metaphysical – *a priori* – or empirical-probabilistic forms. This attack, whether its causes were psychological or social (and I am inclined to think that they were, at least in part, due to a reaction on the part of humanists, especially the inward-looking, anti-materialistic Christians among them, against the all-conquering advance of the physical sciences), was itself based on rational argument, and in due course led to the great divorce between the natural sciences and the humanities – *Naturwissenschaft* and *Geisteswissenschaft* – a divorce the validity of

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which has been challenged ever since and remains a central and highly controversial issue to this day.

As everyone knows, the great triumphs of natural science in the seventeenth century gave the proponents of the scientific method immense prestige. The great liberators of the age were Descartes and Bacon, who carried opposition to the authority of tradition, faith, dogma or prescription into every realm of knowledge and opinion, armed with weapons used during the Renaissance and, indeed, earlier. Although there was much cautious avoidance of open defiance of Christian belief, the general thrust of the new movement was to bring everything before the bar of reason: the cruder forgeries and misinterpretations of texts, on which lawyers and clerics had rested their claims, had been exposed by humanists in Italy and Protestant reformers in France; appeals to the authority of the Bible, or Aristotle, or Roman law, had met with a good deal of acutely argued resistance based both on learning and on critical methods. Descartes made an epoch with his attempt to systematise these methods – notably in his *Discourse on Method* and its application in his *Meditations* – his two most popular and influential philosophical treatises. Spinoza's *Treatise on the Improvement of the Mind*, his quasi-geometrical method in the *Ethics* and the severely rationalist assumptions and rigorous logic in his political works and his criticisms of the Old Testament, had carried the war further into the enemy's camp. Bacon and Spinoza, in their different ways, sought to remove obstacles to clear, rational thinking. Bacon exposed what he considered the chief sources of delusion: 'idols' of 'the tribe', 'the den', 'the market-place' and 'the theatre' – effects, in his view, of the uncritical acceptance of the evidence of the senses, of one's own predilections, of misunderstanding of words, of confusions bred by the speculative fantasies of philosophers, and the like. Spinoza stressed the degree to which emotions clouded reason, and led to groundless fears and hatreds which led to destructive practice; from Valla to Locke and Berkeley there were frequent warnings and examples of fallacies and confusions due to the misuse of language.

The general, if not the universal, tendency of the new philosophy was to declare that if the human mind can be cleared of dogma, prejudice and cant, of the organised obscurities and Aristotelian patter of the schoolmen, then nature will at last be seen in the full symmetry and harmony of its elements, which can be described, analysed and represented by a logically appropriate language – the language of the mathematical and physical sciences. Leibniz seems to have believed

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not only in the possibility of constructing a logically perfect language, which would reflect the structure of reality, but in something not unlike a general science of discovery. His views spread far beyond philosophical or scientific circles – indeed, theoretical knowledge was still conceived as one undivided realm; the frontiers between philosophy, science, criticism, theology, were not sharply drawn. There were invasions and counter-invasions; grammar, rhetoric, jurisprudence, philosophy, made forays into the fields of historical learning and natural knowledge, and were attacked by them in turn. The new rationalism spread into the creative arts. Just as the Royal Society in England formally set itself against the use of metaphor and other forms of rhetorical speech, and demanded language that was plain and literal and precise, so there was in France at this time a corresponding avoidance of metaphor, embellishment and highly coloured expression in, for example, the plays of Racine or Molière, in the verse of La Fontaine and Boileau, writers who dominated the European scene; and because such luxuriance was held to flourish in Italy, Italian literature was duly denounced in France for the impurity of its style. The new method sought to eliminate everything that could not be justified by the systematic use of rational methods, above all the fictions of the metaphysicians, the mystics, the poets; what were myth and legend but falsehoods with which primitive and barbarous societies were gulled during their early, helpless childhood? At best, they were fanciful or distorted accounts of real events or persons. Even the Catholic church was influenced by the prevailing scientific temper, and the great archival labours of the Bollandists and Maurists were conducted in a semi-scientific spirit.<sup>1</sup>

It was natural enough that history was one of the earliest victims of what might be called the positivist character of the new scientific movement. Scepticism about historical veracity was no new thing: ignorance and fantasy, as well as malicious invention, had been attributed to Herodotus by Plutarch; and these charges against narrative history had been repeated at intervals by those who preferred certainty to conjecture. The sixteenth century in particular, perhaps as a result of the mobilisation of history in the religious wars by the various factions, saw a rise of scepticism and doubt: Cornelius Agrippa, in 1531,

<sup>1</sup> M. H. Fisch has correctly pointed out that the dissolution of monasteries had released a mass of documentary evidence which had not hitherto been available, and this contributed to the fact that the church, in repelling attacks on her historical claims, had recourse to weapons of historical research.

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dwells on the carelessness and contradictions of historians, and their shameless inventions to cover up their ignorance or fill gaps in knowledge where there is no available evidence ; on the absurdity of idealising the characters of the main actors in the story ; he speaks of the distortion of facts as being due to the historians' passions – wishes, hatreds and fears, desire to please a patron, patriotic motives, national pride – Plutarch glorified the Greeks in comparison with the Romans, and in his own day polemical writers extolled the virtues of Gauls over Franks, and vice versa. How can truth emerge in these conditions? In the same vein Patrizi, at the turn of the century, declares that all history ultimately rests on eye-witness evidence : and argues that those who are present are likely to be involved in the issues, and are therefore liable to be partisan ; while those who can afford to be objective because they are neutral and uninvolved are unlikely to see the evidence jealously preserved by the partisans, and have to depend upon the biased accounts of the interested parties.

Such Pyrrhonism grows with the century : it is characteristic of Montaigne, Charron, La Mothe le Vayer, and of course, later still, in a more extreme form, of Pierre Bayle, to take but a few examples. So long as history is regarded as a school of virtue, the purpose of which is to celebrate the good and expose the wicked, to show the unaltering character of human nature at all times, everywhere, to be simply moral and political philosophy teaching by examples, it may not matter greatly whether such history is accurate or not. But once a desire for truth for its own sake asserts itself, or something more novel is born, the desire to create an advancing science – to accumulate knowledge, to know more than our predecessors and to be aware of this – this leads to the realisation that this can be achieved only if the reputable practitioners in the field recognise the validity of the same principles and methods and can test each other's conclusions, as has been (and is) the case in physics or mathematics or astronomy and in all the new sciences. It is this new outlook that made the claims of history to be a province of knowledge seem so precarious.

Much of the most formidable attack came from Descartes. His views are well known : true science rests on axiomatic premises, from which, by the use of rational rules, irrefutable conclusions can be drawn : this is how we proceed in geometry, in algebra, in physics. Where are the axioms, the transformation rules, the inescapable conclusions, in historical writing? The progress of true knowledge is the discovery of eternal, unalterable, universal truths : every generation

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of seekers after truth stands on the shoulders of its predecessors and begins where these others left off, and adds to the growing sum of human knowledge. This is plainly not the case in historical writing, or indeed in the field of the humanities in general. Where, in this province, is the single, ever-mounting edifice of science? A schoolboy today knows more geometry than Pythagoras: what do the greatest classical scholars of our time know about ancient Rome that was not known to Cicero's servant girl? What have they added to her store? What, then, is the use of all these learned labours? Descartes implies that he does not wish to prevent men from indulging in this pastime – they may find it agreeable enough to while away their leisure in these ways – it is no worse, he says, than learning some quaint dialect, say, Swiss or bas-Breton; but it is not an occupation for anyone seriously concerned with increasing knowledge. Malebranche dismisses history as gossip; this is echoed by other Cartesians; even Leibniz, who composed a sizeable historical work himself, gives a conventional defence of history as a means of satisfying curiosity about origins of families or states, and as a school of morals. Its inferiority to mathematics, and philosophy founded on the mathematical and natural sciences and the other discoveries of pure reason, must be obvious to all thinking men.

These attitudes did not, of course, kill historical studies. Methods of scholarship had advanced greatly since the middle of the fifteenth century, especially by the use made of antiquities. Monuments, legal documents, manuscripts, coins, medals, works of art, literature, buildings, inscriptions, popular ballads, legends, could be employed as aids to, and sometimes even substitutes for, unreliable narrative history. The great jurists of the sixteenth century, Budé, Alciati, Cujas, Dumoulin, Hotman, Baudouin and their disciples, and in the following century Coke and Matthew Hale in England, Vranck in the Low Countries, de Gregorio in Italy and Sparre in Sweden, performed major labours of reconstructing legal texts, both Roman and medieval. The school of universal historians in France – Pasquier, Le Roy, Le Caron, Vignier, La Popelinière, and, indeed, the polymath Bodin – originated at least the conception of cultural history;<sup>1</sup> and were fol-

<sup>1</sup> Phrases like 'les saisons et mutations de moeurs d'un peuple', or 'la complexion et humour' of a nation, or 'façons de vivre', or 'forme de vivre', 'la police' or 'les motifs, les opinions et les pensées des hommes', 'le génie du siècle, des opinions, des moeurs, des idées dominantes', 'des passions qui conduisaient les hommes' were very common throughout the sixteenth and seventeenth centuries.

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lowed in the seventeenth century by writers like the Abbé de Saint Réal, Dufresnoy, Charles Sorel, Père Gabriel Daniel, and, of course, Boulainvilliers and Fénelon. These early outlines of cultural history, and in particular the growing awareness of the differences rather than the similarities between different societies, ages, civilisations, were a novel development, which, in due course, revolutionised historical notions. Nevertheless, their proponents showed a greater propensity for denouncing useless erudition, and for making up programmes of what historians should do, than for indicating precise methods of performing these tasks or, indeed, performing them. Much of this was meta-history, or theories of history, rather than concrete historical writing. Moreover, the scientific model (or 'paradigm') which dominated the century, with its strong implication that only that which was quantifiable, or at any rate measurable – that to which in principle mathematical methods were applicable – was real, strongly reinforced the old conviction that to every question there was only one true answer, universal, eternal, unchangeable; it was, or appeared to be, so in mathematics, physics, mechanics and astronomy, and soon would be in chemistry and botany and zoology and other natural sciences; with the corollary that the most reliable criterion of objective truth was logical demonstration, or measurement, or at least approximations to this.

Spinoza's political theory is a good example of this approach: he supposes that the rational answer to the question of what is the best government for men is in principle discoverable by anyone, anywhere, in any circumstances. If men have not discovered these timeless solutions before, this must be due to weakness, or the clouding of reason by emotion, or perhaps bad luck: the truths of which he supposed himself to be giving a rational demonstration could presumably have been discovered and applied by human reason at any time, so that mankind might have been spared many evils. Hobbes, an empiricist, but equally dominated by a scientific model, presupposes this also. The notion of time, change, historical development, does not impinge upon these views. Furthermore, such truths, when discovered, must add to human welfare. Consequently the motive for the search is not curiosity, or desire to know the truth as such, so much as utilitarian – the promotion of a better life on earth by making man more rational and therefore wiser, more just, virtuous and happy. The ends of man are given: given by God or nature. Reason, freed from its trammels, will discover what they are: all that is necessary is to find the right means for their attainment.

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This is the ideal from Francis Bacon to H. G. Wells and Julian Huxley and many of those who, in our day, believe in moral and political arrangements based on a scientific theory of sociology and psychology. The most famous figure in this entire movement, not in that of science itself, but of the application of its discoveries to the lives of men – certainly its most gifted propagandist – was Voltaire. Its earliest and strongest opponent was the Neapolitan philosopher Giambattista Vico. The contrast between their views may serve to throw light upon the radical difference of attitudes which brought about a crucial parting of the ways.

### II

Voltaire is the central figure of the Enlightenment, because he accepted its basic principles and used all his incomparable wit and energy and literary skill and brilliant malice to propagate these principles and spread havoc in the enemy's camp. Ridicule kills more surely than savage indignation: and Voltaire probably did more for the triumph of civilised values than any writer who ever lived. What were these principles? Let me repeat the formula once more: there are eternal, timeless truths, identical in all the spheres of human activity – moral and political, social and economic, scientific and artistic; and there is only one way of recognising them: by means of reason, which Voltaire interpreted not as the deductive method of logic or mathematics, which was too abstract and unrelated to the facts and needs of daily life, but as *le bon sens*, the good sense which, while it may not lead to absolute certainty, attains to a degree of verisimilitude or probability quite sufficient for human affairs, for public and private life. Not many men are fully armed with this excellent faculty, for the majority appear to be incurably stupid; but those few who do possess it are responsible for the finest hours of mankind. All that is of value in the past are these fine hours: from them alone we can learn how to make men good, that is, sane, rational, tolerant, or, at any rate, less brutish and stupid and cruel; how to enact laws and governments which will promote justice, beauty, freedom and happiness and diminish brutality, fanaticism, oppression, with which the greater part of human history is filled.

The task of modern historians is therefore plain: to describe and celebrate these moments of high culture and contrast them with the

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surrounding darkness – the barbarous ages of faith, fanaticism and stupid and cruel acts. In order to do this historians must give more attention than the ancients to ‘customs, laws, manners, commerce, finance, agriculture, population’: and also trade, industry, colonisation and the development of taste. This is far more important than accounts of wars, treaties, political institutions, conquerors, dynastic tables, public affairs, to which historians have attached far too much significance hitherto. Madame du Châtelet, Voltaire tells us, said to him: ‘What is the point for a Frenchwoman like me . . . of knowing that in Sweden Égil succeeded King Haquin; or that Ottoman was the son of Ortogul?’ She was perfectly right: the purpose of the work which he wrote ostensibly for the illumination of this lady (the famous *Essai sur les mœurs*) is, therefore, not ‘to know in which year one prince who doesn’t deserve to be remembered succeeded another barbarian prince of some uncouth nation’. ‘I wish to show how human societies came into existence, how domestic life was lived, what arts were cultivated, rather than tell once again the old story of disasters and misfortunes . . . those familiar examples of human malice and depravity.’ He intends to recount the achievement of ‘the human spirit in the most enlightened of ages’, for only that is worthy of mention which is worthy of posterity.

History is an arid desert with few oases. There are only four great ages in the west in which human beings rose to their full stature and created civilisations of which they can be proud: the age of Alexander, in which he includes the classical age of Athens; the age of Augustus, in which he includes the Roman Republic and the Empire at their best; Florence during the Renaissance; and the age of Louis XIV in France. Voltaire assumes throughout that these are élitist civilisations, imposed by enlightened oligarchies on the masses, for the latter lack reason and courage, want only to be amused and deceived, and so are naturally prey to religion, that is, for him, to abominable superstitions. ‘Only governments can . . . raise or lower the level of nations.’

The basic assumption is, of course, that the goals pursued in these four great cultures are ultimately the same: truth, light, are the same everywhere, it is only error that has myriad forms. Moreover, it is absurd to confine inquiry to Europe and that portion of the near east whence sprang little but the cruelties, fanaticism and nonsensical beliefs of the Jews and the Christians who, whatever Bossuet may seek to demonstrate, were and remain enemies of truth and progress and toleration. It is absurd to ignore the great and peaceful kingdom of

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China, governed by enlightened Mandarins, or India, or Chaldaea and other parts of the world which only the absurd vanity of Christian Europe excludes from the orbit of history. The purpose of history is to impart instructive truths, not to satisfy idle curiosity, and this can only be done by studying the peaks of human achievement, not the valleys. The historian should not peddle fables, like Herodotus, who is like an old woman telling stories to children, but teach us our duties without seeming to do so, by painting for posterity not the acts of a single man but the progress of the human spirit in the most enlightened ages. 'If you have no more to tell us than that one barbarian succeeded another barbarian on the banks of the Oxus or the Iaxartes, what use are you to the public?' Why should we be interested in the fact that 'Quancum succeeded Kincum, and Kicum succeeded Quancum'? We do not wish to know about the life of Louis the Fat, or Louis the Obstinate, or even the barbarous Shakespeare and the tedious Milton: but about the achievements of Galileo, Newton, Tasso, Addison; who wants to know about Shalmaneser of Mardokempad? Historians must not clutter the minds of their readers with accounts of religious wars or other stupidities that degrade mankind, unless it be to show them how low human beings can sink: accounts of Philip II of Spain, or Christian of Denmark, are cautionary tales to warn mankind of the dangers of tyranny; or if, like Voltaire himself, one does write a lively and entertaining biography of Charles XII of Sweden, it is for the sole end of pointing out to men the dangers of a life of reckless adventure. What *is* worth knowing is why the Emperor Charles V did not profit more by his capture of King Francis I of France; or what the value of sound finance was to Elizabeth of England, or Henry IV or Louis XIV in France, or the importance of the *dirigiste* policy of Colbert compared with that of Sully. As for horrors, they too are to be detailed if we are to avoid another St Bartholomew's Eve or another Cromwell.

The task of the historian, he says again and again, is to recount the achievements of those regrettably rare periods when the arts and sciences flourished and nature was made to yield the necessities, comforts and pleasures of man. Meinecke rightly described Voltaire as 'the banker of the Enlightenment', the keeper of its achievements, a kind of scorer in the contest of light against darkness, reason and civilisation against barbarism and religion, Athens and the Rome of the virtuous Caesars against Jerusalem and the Rome of the Popes, Julian the Apostate versus Gregory of Nazianzus. But how are we to tell what

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actually happened in the past? Has not Pierre Bayle thrown terrible doubts on the authenticity of particular reports of facts, and shown how unreliable and contradictory historical evidence can be? This may be so, but it is not particular facts that matter, according to Voltaire, so much as the general character of an age or a culture. The acts of single men are of small importance, and individual character is too difficult to elucidate: when we can scarcely tell even what the true character of Mazarin was like, how can we possibly do this for the ancients? 'Soul, character, dominant motives, all that sort of thing is an impenetrable chaos which can never be firmly grasped. Whoever, after centuries, would disentangle this chaos simply creates more.'

How, then, are we to recover the past? By the light of natural reason – *le bon sens*. 'Anything not in keeping with natural science, with reason, with the nature [*trempe*] of the human heart is false' – why bother with the ravings of savages and the inventions of knaves? We know that monuments are 'historical lies' and 'that there is not a single temple or college of priests, not a single feast in the church, that does not originate in some stupidity'. The human heart is the same everywhere; and good sense is enough to detect the truth.

*Le bon sens* served Voltaire well: it enabled him to discredit much clerical propaganda and a good many naïve and pedantic absurdities. But it also told him that the empires of Babylon and Assyria could not possibly have coexisted next door to each other in so confined a space; that accounts of temple prostitutes were obvious nonsense; that Cyrus and Croesus were fictional beings; that Themistocles could not possibly have died of drinking ox blood; that Belus and Ninus could not have been Babylonian kings, for '-us' is not a Babylonian ending; that Xerxes did not flog the Hellespont. The Flood is an absurd fable: as for the shells found on tops of mountains, these may well have dropped from the hats of pilgrims. On the other hand, he found no difficulty at all in accepting the reality of satyrs, fauns, the Minotaur, Zeus, Theseus, Hercules, or the journey of Bacchus to India, and he happily accepted a forged Indian classic, the *Ezour-Veidam*. Yet Voltaire undoubtedly expanded the area of proper historical interest beyond politics, wars, great men, by insisting on 'the need to describe how men travelled, lived, slept, dressed, wrote', their social and economic and artistic activities. Jacques Coeur was more important than Joan of Arc. He complains that Pufendorf, who has had access to the state archives of Sweden, has told us nothing about the natural resources of that country, the causes of its poverty, what part it played in the

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Gothic invasions of the Roman Empire ; these are novel and important demands. Voltaire denounced Europocentrism ; he sketched the need for social, economic, cultural history, which, even though he did not himself realise his programme (his own histories are marvellously readable but largely anecdotal in character – there is no real attempt at synthesis), stimulated the interest of his successors in a wider field. At the same time he devalued the historical nature of history, for his interests are moral, aesthetic, social : as a *philosophe* he is part moralist, part tourist and *feuilletoniste*, and wholly a journalist, albeit of incomparable genius. He does not recognise, even as a cultural historian – or cataloguer – the multiplicity and relativity of values at different times and places, or the genetic dimension in history : the notion of change and growth is largely alien to him. For Voltaire there are only bright ages and dark, and the dark are due to the crimes, follies and misfortunes of men. In this respect he is a good deal less historical than some of his predecessors in the Renaissance. He looks on history, in a loose fashion, as an accumulation of facts, casually connected, the purpose of which is to show men under what conditions those central purposes which nature has implanted in the heart of every man can best be realised : who are the enemies of progress, and how they are to be routed. Thereby Voltaire probably did more than anyone else to determine the entire direction of the Enlightenment : Hume and Gibbon are possessed by the same spirit.

Not until the reaction against the classification of all human experience in terms of absolute and timeless values – a reaction which first began in Switzerland and England among critics and historians of Greek and Hebrew literature, and, penetrating to Germany, created the great intellectual revolution of which Herder was the most influential apostle – did history, as we understand it today, come into its own. Nevertheless, it is to Voltaire, Fontenelle and Montesquieu (who, contrary to the accepted view of him, was no less convinced of the absolute and timeless nature of ultimate human ends, however much means and methods might vary from clime to clime) that we owe the more scientific branches of later historical writing : economic history, the history of science and technology, historical sociology, demography, all the provinces of the knowledge of the past which owe their existence to statistical and other quantitative techniques. But the history of civilisation which Voltaire supposed himself to be initiating was in the end created by the Germans, who looked on him as the arch-enemy of all that they held dear.

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Yet even before the Counter-Enlightenment of the Swiss and the English and the Germans, a new conception of the study of history came into being. It was anti-Voltairean in character, and its author was an obscure Neapolitan whom Voltaire had almost certainly never heard of: and if he had, would have treated with disdain.

### III

Giambattista Vico was born in Naples in 1668 and lived there or in its environs until his death in 1744. Throughout his long life he was little known, the very exemplar of a lonely thinker. He was educated by priests, worked for some years as a private tutor, became a minor professor of rhetoric at the University of Naples, and after many years of composing inscriptions, Latin eulogies and laudatory biographies for the rich and the great in order to supplement his meagre income, was rewarded in the last years of his life by being appointed official historiographer to the Austrian Viceroy of Naples.

He was steeped in the literature of humanism, in the classical authors and antiquities, and especially in Roman law. His mind was not analytical or scientific but literary and intuitive. Naples under Spanish and Austrian rulers was not in the vanguard of the new scientific movement; although experimental scientists were at work there, so were the church and the Inquisition. If anything, the Kingdom of the Two Sicilies was something of a backwater, and Vico, by inclination a religious humanist with a rich historical imagination, was not in sympathy with the great scientific materialist movement that was determined to sweep away the last relics of the scholastic metaphysics. Nevertheless, in his youth, he fell under the sway of the new currents of thought: he read Lucretius, and the Epicurean conception of gradual human development from primitive, semi-bestial beginnings remained with him, despite his Christian faith, all his life. Influenced by the all-powerful Cartesian movement, he began by believing mathematics to be the queen of the sciences. But evidently something in him rebelled against this. In 1709, at the age of forty, in an inaugural lecture, with which professors in the University of Naples were obliged to start each academic year, he published a passionate defence of humanist education: men's minds (*ingenia*) were shaped by the language – the words and the images – which they inherited, no less than their minds, in turn, shaped their modes of

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expression; the search after a plain, neutral style, like the attempt to train the young exclusively in the dry light of the Cartesian analytic method, tended to rob them of imaginative power. Vico defended the rich, traditional Italian 'rhetoric', inherited from the great humanists of the Renaissance, against the austere and deflationary style of the French rationalist science-influenced modernists.

Evidently he continued to brood on the two contrasted methods, for in the following year he arrived at a truly startling conclusion: mathematics was indeed, as had always been claimed for it, a discipline which led to wholly clear, irrefutable propositions of universal validity. But this was so not because the language of mathematics was a reflection of the basic and unalterable structure of reality, as thinkers since the days of Plato or even Pythagoras had maintained: it was so because mathematics was not a reflection of anything. Mathematics was not a discovery but a human invention: starting from definitions and axioms of their own choosing, mathematicians could, by means of rules of which they or other men were authors, arrive at conclusions that did indeed logically follow, because the man-made rules, definitions and axioms saw to it that they did so. Mathematics was a kind of game (although Vico did not call it that), in which the counters and the rules were man-made; the moves and their implications were indeed certain, but at the cost of describing nothing – a play of abstractions controlled by their creators. Once this system was applied to the natural world – for instance, as in physics or mechanics – it yielded important truths, but inasmuch as nature had not been invented by men, and had its own characteristics and could not, like symbols, be freely manipulated, the conclusions became less clear, no longer wholly knowable. Mathematics was not a system of laws which governed reality, but a system of rules, in terms of which it was useful to generalise about, analyse and predict, the behaviour of things in space.

Here Vico made use of an ancient scholastic proposition at least as old as St Augustine: that one could know fully only what one had oneself made. A man could understand fully his own intellectual or poetical construction, a work of art or a plan, because he had himself made it, and it was therefore transparent to him: everything in it had been created by his intellect and his imagination. Indeed, Hobbes had asserted as much in the case of political constitutions. But the world – nature – had not been made by men: therefore only God, who had made it, could know it through and through. Mathematics seemed so

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marvellous an achievement precisely because it was wholly man's own work – the nearest to divine creation that man could attain to. And there were those in the Renaissance who spoke of art, too, in this fashion, and said that the artist was a creator, *quasi deus*, of an imaginary world created alongside the real world, and the artist, the god who had created it, knew it through and through. But about the world of external nature there was something opaque: men could describe it, could tell how it behaved in different situations and relationships, could offer hypotheses about the behaviour of its constituents – physical bodies and the like; but they could not tell why – for what reason – it was as it was, and behaved as it did: only he who made it, namely God, knew that – men had only an outside view, as it were, of what went on on the stage of nature. Men could know 'from the inside' only what they had made themselves and nothing else. The greater the man-made element in any object of knowledge, the more transparent to human vision it will be; the greater the ingredient of external nature, the more opaque and impenetrable to human understanding. There was an impassable gulf between the man-made and the natural: the constructed and the given. All provinces of knowledge could be classified along this scale of relative intelligibility.

Ten years later Vico took a radical step: there existed a field of knowledge besides that of the most obviously man-made constructions – works of art, or political schemes, or legal systems, and indeed, all rule-determined disciplines – which men could know from within: human history; for it, too, was made by men. Human history did not consist merely of things and events and their presences and sequences (including those of human organisms viewed as natural objects) as the external world did; it was the story of human activities, of what men did and thought and suffered, of what they strove for, aimed at, accepted, rejected, conceived, imagined, of what their feelings were directed at. It was concerned, therefore, with motives, purposes, hopes, fears, loves and hatreds, jealousies, ambitions, outlooks and visions of reality; with the ways of seeing, and ways of acting and creating, of individuals and groups. These activities we knew directly, because we were involved in them as actors, not spectators. There was a sense, therefore, in which we knew more about ourselves than we knew about the external world; when we studied, let us say, Roman law, or Roman institutions, we were not contemplating objects in nature, of whose purposes, or whether they had any, we could know nothing. We had to ask ourselves what these Romans were at, what

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they strove to do, how they lived and thought, what kind of relationships with other men they were anxious to promote or frustrate. We could not ask this about natural objects: it was idle to ask what cows or trees or stones, or molecules or cells, were *at*: we had no reason to suppose that they pursued purposes; or if they did, we could not know what they were; since we had not made them, we could have no God-like 'inside' view of what ends, if any, they pursued or had been created to fulfil. There was, therefore, a clear sense in which our knowledge was superior, at least in kind, about intentional behaviour – that is, action – to our knowledge of the movement or position of bodies in space, the field of the magnificent triumphs of seventeenth-century science. What was opaque to us when we contemplated the external world was, if not wholly transparent, yet surely far more so when we contemplated ourselves. It was therefore a perverse kind of self-denial to apply the rules and laws of physics or of the other natural sciences to the world of mind and will and feeling; for by doing this we would be gratuitously debarring ourselves from much that we could know.

If anthropomorphism was falsely to endow the inanimate world with human minds and wills, there was presumably a world which it was proper to endow with precisely these attributes, namely, the world of man. Consequently, a natural science of men treated as purely natural entities, on a par with rivers and plants and stones, rested on a cardinal error. With regard to ourselves we were privileged observers with an 'inside' view: to ignore it in favour of the ideal of a unified science of all there is, a single, universal method of investigation, was to insist on wilful ignorance in the name of a materialist dogma of what could alone be known. We know what is meant by action, purpose, effort to achieve something or to understand something – we know these things through direct consciousness of them. We possess self-awareness. Can we also tell what others are at? Vico never directly tells us how this is achieved, but seems to take it for granted that solipsism needs no refutation; and, moreover, that we communicate with others because we can and do grasp in some direct fashion, less or more successfully, the purpose and meaning of their words, their gestures, their signs and symbols; for if there were no communication, there would be no language, no society, no humanity. But even if this applies to the present and the living, does it also apply to the past? Can we grasp the acts, the thoughts, the attitudes, the beliefs, explicit and implicit, the worlds of thought and feeling of societies dead

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and gone? If so, how is this achieved? Vico's answer to this problem is perhaps the boldest and most original of his ideas.

He declared that there were three great doors that lead into the past: language; myths; and rites, that is, institutional behaviour. We speak of metaphorical ways of expression. The aesthetic theorists of his day (Vico tells us) regard this simply as so much embellishment, a heightened form of speech used by poets as a deliberate device to give us pleasure or move us in particular ways, or ingenious ways of conveying important truths.<sup>1</sup> This rests on the assumption that what is expressed metaphorically could, at least in principle, be as well expressed in plain, literal prose, although this might be tedious and not give us the pleasure caused by poetic speech. But, Vico maintains, if you read primitive utterances (Latin and Greek antiquities, which he knew best, provide him with the majority of his examples) you will soon realise that what we call metaphorical speech is the natural mode of expression of these early men. When we say that our blood is boiling, this may for us be a conventional metaphor for anger, but for primitive man anger literally resembled the sensation of blood boiling within him; when we speak of the teeth of ploughs, or the mouths of rivers, or the lips of vases, these are dead metaphors or, at best, deliberate artifice intended to produce a certain effect upon the listener or reader. But to our remote ancestors ploughs actually appeared to have teeth, rivers, which for them were semi-animate, had mouths; land was endowed with necks and tongues, metals and minerals with veins, the earth had bowels, oaks had hearts, skies

<sup>1</sup> So Fontenelle, whose influence was inferior only to Voltaire's, identifies progress in the arts (as in everything else) with increase in order, clarity, precision, *netteté*, whose purest expression is geometry – the Cartesian method which cannot but improve whatever it touches, in every province of knowledge and creation. Mythology for him, as for Voltaire, is the product of savagery and ignorance. He is suspicious of all metaphor, but especially of *images fabuleuses*, which spring from a 'totally false and ridiculous' conception of things – their use can only help to disseminate error. Poets in primitive times employed mythological language ornamentally, but also as a stratagem to represent themselves as directly inspired by the gods; modern writers should at least use *images spirituelles* – personified abstractions – about, say, time, space, deity, which speak to reason, not to irrational feeling. The intellectual power, courage, humanity and unswerving pursuit of truth with which the *lumières* of the age fought against nonsense and obscurantism in theory and barbarous cruelties in practice need not blind us to the vices of their virtues, which have exacted their own terrible price.

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smiled and frowned, winds raged, the whole of nature was alive and active. Gradually, as human experience changed, this, once natural, speech, which Vico calls poetical, lingered on as turns of phrase in common speech whose origins had been forgotten or at least were no longer felt, or as conventions and ornament used by sophisticated versifiers. Forms of speech express specific kinds of vision; there is no universal, 'literal' speech which denotes a timeless reality. Before 'poetical' language, men used hieroglyphs and ideograms which convey a vision of the world very different from our own – Vico declares that men sang before they spoke, spoke in verse before they spoke in prose, as is made plain by the study of the kinds of signs and symbols that they used, and the types of use they made of them.

The task before those who wish to grasp what kinds of lives have in the past been led in societies different from their own is to understand their worlds: that is, to conceive what kind of vision of the world men who used a particular kind of language must have had for this type of language to be a natural expression of it. The difficulty of this task is brought home most forcibly by the mythological language which Vico cites. The Roman poet says 'Jovis omnia plena.' What does this mean? Jove – Jupiter – is to us the father of the gods, a bearded thunderer, but the word also means sky or air. How can 'everything' be 'full' of a bearded thunderer, or the father of the gods? Yet this, evidently, is how men spoke. We must therefore ask ourselves what the world must have been like for those to whom such use of language, which is almost meaningless to us, made sense. What could be meant by speaking of Cybele as an enormous woman, and also, at the same time, as the whole of the earth, of Neptune as a bearded marine deity wielding a trident, and also as all the seas and oceans of the world? Thus Heracles is a demigod who slew the Hydra, but is at the same time the Athenian and Spartan and Argive and Theban Heracles; he is many and also one; Ceres is a female deity but also all the corn in the world.

It is a very strange world that we must try, as it were, to transpose ourselves into, and Vico warns us that it is only with the most agonising effort that we can even attempt to enter the mentality of the primitive savages of whose vision of reality these myths and legends are records. Yet it can, to some degree, be achieved, for we possess a faculty that he calls *fantasia* – imagination – with which it is possible to 'enter' minds very different from our own.

How is this done? The nearest we can come to grasping Vico's

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thought is his parallel between the growth of a species and the growth of the individual: just as we are able to recollect the experiences of childhood (and in our day psychoanalysis has probed further than this), so it must be possible to recapture to some degree the early collective experience of our race, even though this may require terrible effort. This is based on the parallel of the macrocosm to the individual microcosm – phylogenesis resembling ontogenesis, an idea which dates back at least to the Renaissance. There is an analogy between the growth of an individual and that of a people. If I can recollect what it was to have been a child, I shall have some inkling of what it was to have belonged to a primitive culture. Judging others by analogy with what I am now will not do: if animism is the false attribution of human characteristics to natural objects, a similar fallacy is involved in attributing to primitives our own sophisticated notions; memory, not analogy, seems closer to the required faculty of imaginative understanding – *fantasia* – whereby we reconstruct the human past.<sup>1</sup>

The categories of experience of different generations of men differ; but they proceed in a fixed order which Vico thinks he can reconstruct by asking the right questions of the evidence before us. We must ask what kind of experience is presupposed by, renders intelligible, a particular use of symbols (that is, language), what particular vision is embodied in myths, in religious rites, in inscriptions, in the monuments of the past. The answers will enable us to trace human growth and development, to visualise, 'enter into' the minds of men creating their world by effort, by work, by struggle. Each phase of this process conveys, indeed communicates, its experience in its own characteristic forms – in hieroglyphs, in primitive song, in myths and legends, in dances and laws, in ceremonial and elaborate religious rites, which to Voltaire or Holbach or d'Alembert were merely obsolete relics of a barbarous past or a mass of obscurantist hocus-pocus. The development of social consciousness and activity is traceable (Vico maintains) also in the evolution of etymology and syntax, which reflects successive phases of social life, and develops *pari passu* with them. Poetry is not conscious embellishment invented by sophisticated writers, nor is it secret wisdom in mnemonic form – it is a direct form of self-expression of our remote ancestors, collective and communal; Homer is the

<sup>1</sup> This is a contrast which Leon Pompa has stressed both in writing and in conversation with the author. I am inclined to think that his interpretation comes closest to Vico's thought, and that I did not pay sufficient attention to this issue in my previous discussions of the subject.

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voice not of an individual poet but of the entire Greek people. This notion, in this specific formulation of it, was destined to have a rich flowering in the theories of Winckelmann and Herder, who, when they first developed their ideas, had not, so far as one can tell, so much as heard of Vico.

As for the unaltering character of basic human nature – the central concept of the western tradition from the Greeks to Aquinas, from the Renaissance to Grotius, Spinoza, Locke – this could not be so, for man's creations – language, myth, ritual – tell a different story. The first men were savage brutes, cave-dwellers who used 'mute' signs – gestures and then hieroglyphs. The first peal of thunder filled them with terror. Awe – a sense of a power greater than themselves brooding over them – awakened in them. They gathered together for self-protection; there follows the 'age of the gods' or *patres*, stern heads of primitive human tribes. Outside their fortifications there is no security: men attacked by other men stronger than themselves seek protection and are given it by the 'fathers' at the price of becoming slaves or clients. This marks the 'heroic' age of oligarchies, of harsh and avaricious masters, users of 'poetic' speech, ruling over slaves and serfs. There comes a moment when these last revolt, extort concessions, particularly with regard to marriage and burial rites, which are the oldest forms of human institution. They cause their new rites to be recorded – this constitutes the earliest form of law. This, in turn, generates prose, which leads to argument and rhetoric, and so to questioning, to philosophy, scepticism, egalitarian democracy, and, in the end, the subversion of the simple piety, solidarity and deference to authority of primitive societies, to their atomisation and disintegration, to destructive egoism and alienation,<sup>1</sup> and ultimate collapse, unless some Augustus restores authority and order, or an earlier, more primitive and vigorous tribe, with still unexhausted energies and firm discipline, falls upon it and subjugates it; if this does not happen, there is a total breakdown. The primitive life in caves begins again, and so

<sup>1</sup> The passage in Vico's *New Science* describing the end of a decadent civilisation is worth quoting: ' . . . no matter how great the throng and press of their bodies, [men] live like wild beasts in a deep solitude of spirit and will, scarcely any two being able to agree since each follows his own pleasure or caprice'. *The New Science of Giambattista Vico*, trans. Thomas Goddard Bergin and Max Harold Fisch, revised ed. (New York, 1968), paragraph 1106. All subsequent quotations from the *New Science* are from this translation, and all subsequent references are to its paragraphs, thus: *N.S.* 1106.

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the entire cycle repeats itself once more, *corsi e ricorsi*, from the barbarism of savage life to the second barbarism of decay.

There is no progress from the imperfect towards perfection, for the very notion of perfection entails an absolute criterion of value; there is only intelligible change. The stages are not mechanically caused each by its predecessor, but can be seen to flow from the new needs created by the satisfaction of the old ones in the unceasing self-creation and self-transformation of perpetually active men. In this process, war between the classes, in Vico's schema, plays a central role. Here again, Vico draws heavily on mythology. Voltaire tells us that myths are 'the ravings of savages and the inventions of knaves', or at best harmless fancies conjured up by poets to charm their readers. For Vico they are, as often as not, far-reaching images of past social conflicts out of which many diverse cultures grew. He is an ingenious and imaginative historical materialist: Cadmus, Ariadne, Pegasus, Apollo, Mars, Heracles, all symbolise various turning points in the history of social change.<sup>1</sup> What to the rational thought of a later age

<sup>1</sup> For instance, the story of Theseus and Ariadne is concerned with early seafaring life: the Minotaur represents the pirates who abduct Athenians in ships, for the bull is a characteristic ancient emblem on a ship's prow, and piracy was held in high honour by both the Greeks and the ancient Germans. Ariadne is the art of seafaring, the thread is a symbol of navigation, and the labyrinth is the Aegean Sea. Alternatively, the Minotaur is a half-cast child, a foreigner come to Crete – an early emblem of racial conflict. Cadmus is primitive man, and his slaying of the serpent is the clearing of the vast forest. He sows the serpent's teeth in the ground – the teeth are the teeth of a plough, the stones he casts about him are the clods of earth which the oligarchy of heroes retain against the land-hungry serfs; the furrows are the orders of feudal society; the armed men who spring up from the teeth are heroes, but they fight, not each other, as the myth relates (here Vico decides to 'correct' the evidence), but the robbers and vagabonds who threaten the lives of the settled farmers. The wounding of Mars by Minerva is the defeat of the plebeians by the patricians. In the case of Pegasus, wings represent the sky, the sky represents the birds, flight yields the all-important auspices. Wings plus a horse is equivalent to horse-riding nobles with the right of taking auspices, and therefore authority over the people, and soon such myths represent powers, institutions, and often embody radical changes in the social order; mythological creatures like Draco – a serpent found in China and Egypt too – or Heracles, or Aeneas (whose descent to Avernus is, of course, a symbol of sowing), are not for Vico historical persons, but, like Pythagoras and Solon, are viewed by him as mere symbols of political structures, and not to be fitted into any chronological framework.

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seemed bizarre combinations of attributes – Cybele, who is both a woman and the earth, horses with wings, centaurs, dryads and the like – are in reality efforts by our ancestors to combine certain functions, or ideas, in a single concrete image. Vico calls such entities ‘imaginative universals’, images compounded of incompatible characteristics, for which their descendants, who think in concepts and not in sensuous terms, have substituted an abstract phraseology. The transformation of the denotations of particular words and their modifications can also, for Vico, open windows on to the evolution of social structures. This is because language tells us ‘the histories of the institutions signified by the words’. Thus the career of the word ‘lex’ tells us that life in ‘the great forest of the earth’ was followed by life in huts, and after that villages, cities, academies.<sup>1</sup>

Vico’s particular attributions are at times wholly implausible or wild. But this matters less than the fact that he conceived the idea of applying to the accumulated antiquities of the human race a species of Kant’s transcendental method, that is, an attempt to conceive what the experience of a particular society must have been like for this or that myth, or mode of worship, or language, or building, to be their characteristic expression. This opened new doors. It discredited the idea of some static spiritual kernel of timeless and unchanging ‘human nature’. It reinforced the old Epicurean-Lucretian notion of a process

<sup>1</sup> *N.S.* 239–40. This is a good example of Vico’s freely roaming historical imagination: he groups together ‘lex’ (acorn), ‘ilex’, ‘aquilex’, ‘legumen’ and ‘legere’ as typical ‘sylvan’ words, plainly drawn from life in the forest, which then came to mean quite different activities and objects. At first, ‘lex’ ‘must have meant a collection of acorns’. ‘Ilex’ is ‘oak’, ‘for the oak produces the acorns by which the swine are drawn together’ (so, too, ‘aquilex’ means ‘collector of waters’). ‘Lex’ was next a collection of vegetables, from which the latter were called *legumina*. Later on, at a time when vulgar letters had not yet been invented for writing down the laws, *lex* by a necessity of civil nature must have meant a collection of citizens, or the public parliament; so that the presence of the people was the *lex*, or ‘law’, that solemnised the wills that were made *calatis comitiis*, in the presence of the assembled *comitia*. Finally, collecting letters, and making, as it were, a sheaf of them for each word, was called *legere*, reading.’ This is a characteristically fanciful piece of genetic sociological philology; yet in due course this socio-linguistic approach led to rich and important branches of the humanities in the form of historical jurisprudence, social anthropology, comparative religion and the like, particularly in their relations with the genetic and historical aspects of linguistic theory.

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of slow growth from savage beginnings. There is no timeless, unalterable concept of justice or property or freedom or rights – these values alter as the social structure of which they are a part alters, and the objects created by mind and imagination in which these values are embodied alter from phase to phase. All talk of the matchless wisdom of the ancients is therefore a ludicrous fantasy: the ancients were frightening savages, *orribili bestioni*, roaming the great forest of the earth, creatures remote from us. There is no omnipresent natural law: the lists of absolute principles spelt out by the Stoics or Isidore of Seville or Thomas Aquinas or Grotius were neither explicitly present in the minds, nor implicit in the acts, of the barbarous early fathers, even of the Homeric heroes. The rational egoists of Hobbes, Locke or Spinoza are arbitrary and unhistorical; if men had been as they are depicted by these thinkers, their history becomes unintelligible.

Each stage of civilisation generates its own art, its own form of sensibility and imagination. Later forms are neither better nor worse than earlier, but simply different, to be judged each as the expression of its own particular culture. How can early men, whose signs were 'mute', who 'spoke with their bodies', who sang before they spoke (as, Vico adds, stammerers still do), be judged by the criteria of our own sophisticated culture? At a time when the great French arbiters of taste believed in an absolute standard of artistic excellence and knew that the verse of Racine and Corneille (or, indeed, Voltaire) was superior to anything by the shapeless Shakespeare or the unreadable Milton, or, before them, the bizarre Dante, and perhaps the works of the ancients too, Vico maintained that the Homeric poems were a sublime expression of a society dominated by the ambition, avarice and cruelty of its ruling class; for only a society of this kind could have produced this vision of life. Later ages may have perfected other aids to existence, but they cannot create the *Iliad*, which embodies the modes of thought and expression and emotion of one particular kind of way of life; these men literally saw what we do not see.

The new history is to be the account of the succession and variety of men's experience and activity, of their continuous self-transformation from one culture to another. This leads to a bold relativism, and kills, among other things, the notion of progress in the arts, whereby later cultures are necessarily improvements on, or retrogressions from, earlier ages, each measured by its distance from some fixed, immutable ideal, in terms of which all beauty, knowledge, virtue, must be judged. The famous quarrel between the ancients and the moderns can have

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no sense for Vico: every artistic tradition is intelligible only to those who grasp its own rules, the conventions that are internal to it, an 'organic' part of its own changing pattern of the categories of thought and feeling. The notion of anachronism, even if others had some inkling of it, is rendered central by him. Vico tells us that Polybius once said that it was a misfortune for mankind that it was priests and not philosophers who had presided over its birth; how much error and cruelty would have been spared it but for these mendacious charlatans.<sup>1</sup> Lucretius passionately reiterated this charge. To those who live after Vico, it is as if one were to suggest that Shakespeare could have written his plays at the court of Genghis Khan, or Mozart composed in ancient Sparta. Vico goes far beyond Bodin and Montaigne and Montesquieu:<sup>2</sup> they (and Voltaire) may have believed in different social *esprits*, but not in successive stages of historical evolution, each phase of which has its own modes of vision, forms of expression, whether one calls them art or science or religion. The idea

<sup>1</sup> This is in fact based on a misreading of Polybius' text, but it furnished Vico with an occasion for his historicist thesis: and even though Polybius did not commit this fallacy, it forms a strand in the tradition of the Enlightenment against which Vico rebelled.

<sup>2</sup> The difference of the earlier and later attitudes is brought out by the interest in myths and fables on the part of, say, Bodin and Bacon and even Montesquieu on the one hand, and Vico on the other. The former thinkers do not think of myths and fables as inventions of lying priests or merely results of 'human weakness' (to use Voltaire's phrase), but they look to antiquities of this kind for information about the *moeurs* and *façons de vivre* in early or remote societies for the express purpose of discovering whether there are historical lessons to be learned with relevance to their own times and circumstances. Even though temperamentally they may have been intensely curious about other societies, and collected these facts for their own sakes, the ostensible motive was certainly utilitarian – they wished to improve human life. Vico looks at myths as evidence of the different categories in which experience was organised – spectacles, unfamiliar to us, through which early man and remote peoples looked at the world in which they lived: the purpose is to understand whence we come, how we came to be where we are, how much or how little of the past we still carry with us. His approach is genetic, for it is only through its genesis, reconstructed by *fantasia*, guided by rules which he thinks he has discovered, that anything can be truly understood: not by some intuition of timeless essences, or empirical description or analysis of an object's present state. This marks a genuine turning-point in the conception of history and society.

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of the cumulative growth of knowledge, a single corpus governed by single, universal criteria, so that what one generation of scientists has established, another generation need not repeat, does not fit this pattern at all. This marks the great break between the notion of positive knowledge and that of understanding.

Vico does not deny the utility of the latest scientific techniques in establishing facts. He claims no intuitive or metaphysical faculty which can dispense with empirical investigation. Tests for the authenticity of documents and other evidence, for dating, for chronological order, for establishing who did or suffered what and when and where, whether we are dealing with individuals or classes or societies, for establishing bare facts, the newly established scientific methods of investigation, may well be indispensable. The same applies to the investigation of impersonal factors – geographical or environmental or social – to the study of natural resources, fauna, flora, social structure, colonisation, commerce, finance; here we must use the methods of science, which establish the kind of probability of which Bodin and Voltaire spoke, and every historian who uses sociological and statistical methods has done ever since. With all this Vico has no quarrel. What, then, is novel in his conception of history, over which he tells us he spent twenty years of continuous labour?

It is, I think, this: that to understand history is to understand what men made of the world in which they found themselves, what they demanded of it, what their felt needs, aims, ideals were; he seeks to discover their vision of it, he asks what wants, what questions, what aspirations determined a society's view of reality; and he thinks that he has created a new method which will reveal to him the categories in terms of which men thought and acted and changed themselves and their worlds. This kind of knowledge is not knowledge of facts or of logical truths, provided by observation or the sciences or deductive reasoning; nor is it knowledge of how to do things; nor the knowledge provided by faith, based on divine revelation, in which Vico professed belief. It is more like the knowledge we claim of a friend, of his character, of his ways of thought or action, the intuitive sense of the nuances of personality or feeling or ideas which Montaigne describes so well, and which Montesquieu took into account.

To do this, one must possess imaginative power of a high degree, such as artists, and, in particular, novelists require. And even this will not get us far in grasping ways of life too remote from us and unlike our own. Yet even then we need not totally despair, for what we are

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seeking to understand is men – human beings endowed, as we are, with minds and purposes and inner lives – their works cannot be wholly unintelligible to us, unlike the impenetrable content of non-human nature. Without this power of what he describes as ‘entering into’ minds and situations the past will remain a dead collection of objects in a museum for us.

This sort of knowledge, not thought of in Descartes’ philosophy, is based on the fact that we do know what men are, what action is, what it is to have intentions, motives, to seek to understand and interpret, in order to make oneself at home in the non-human world, what Hegel called *bey sich selbst seyn*. The most famous passage in the *New Science* expresses this central insight most vividly:

...in the night of thick darkness enveloping the earliest antiquity, so remote from ourselves, there shines the eternal and never failing light of a truth beyond all question: that the world of civil society has certainly been made by men, and that its principles are therefore to be found within the modifications of our own human mind. Whoever reflects on this cannot but marvel that the philosophers should have bent all their energies to the study of the world of nature, which, since God made it, He alone knows; and that they should have neglected the study of the world of nations, or civil world, which, since men had made it, men could come to know.<sup>1</sup>

Men have made their civil world – that is, their civilisation and institutions – but, as Marx was later to point out, not out of ‘whole cloth’, not out of infinitely malleable material; the external world, men’s own physical and psychical constitution, play their part. This does not concern Vico: he is interested only in the human contribution: and when he speaks of the unintended consequences of men’s actions, which they have not deliberately ‘made’, he attributes them to Providence, which guides men for their ultimate benefit in its own inscrutable way. That too, then, like nature, is outside man’s conscious control. But what he means is that what one generation of men has experienced and done and embodied in their works, another generation can grasp, although, it may be, with difficulty and imperfectly. For this one must possess a developed *fantasia* – Vico’s term for imaginative insight, which he accuses the French theorists of undervaluing. This is the capacity for conceiving more than one way of categorising reality, like the ability to understand what it is to be an

<sup>1</sup> *N.S.* 331.

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artist, a revolutionary, a traitor, to know what it is to be poor, to wield authority, to be a child, a prisoner, a barbarian. Without some ability to get into the skin of others, the human condition, history, what characterises one period or culture as against others, cannot be understood. The successive patterns of civilisation differ from other temporal processes – say, geological – by the fact that it is men – ourselves – who play a crucial part in creating them. This lies at the heart of the art or science of attribution: to tell what goes with one form of life and not with another cannot be achieved solely by inductive methods.

Let me give an example of Vico's method: he is arguing that the story that the Romans borrowed the Twelve Tables (the original Roman code of laws) from the Athens of Solon's day cannot be true; for it is not possible for such barbarians as the Romans must have been in Solon's time to have known where Athens was, or that it possessed a code that might be of value to them. Moreover, even on the improbable assumption that these early Romans knew that there was a more civilised or better organised society to the south-east of them (even though the barbarous tribes of early Rome could scarcely have entertained, however inchoately, such notions as civilisation or a city state), they could not have translated Attic words into idiomatic Latin without a trace of Greek influence on it, or used, for example, such a word as *auctoritas*, for which no Greek equivalent existed.

This kind of argument rests not on an accumulation of empirical evidence about human behaviour in many times and places upon which sociological generalisations can be made to rest. Such notions as advanced culture, and what distinguishes it from barbarism, are for Vico not static concepts, but describe stages in the growth of self-awareness in individuals and societies, differences between the concepts and categories in use at one stage of growth from those that shape another, and the genesis of one from another, to understand which ultimately stems from understanding what childhood and maturity are. In the early fifteenth century, the Italian humanist Bruni had declared that whatever was said in Greek could equally well be said in Latin too. This is precisely what Vico denies, as the example of *auctoritas* shows. There is no immutable structure of experience, to reflect which a perfect language could be invented, and into which imperfect approximations to such a language could be transposed. The language of so-called primitives is not an imperfect rendering of what later generations will express more accurately: it embodies its own unique vision

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of the world, which can be grasped, but not translated totally into the language of another culture. One culture is not a less perfect version of another: winter is not a rudimentary spring; summer is not an undeveloped autumn.

The worlds of Homer, or the Bible, or the Kalevala, cannot be understood at all if they are judged in terms of the absolute criteria of Voltaire or Helvétius or Buckle, and given marks according to their distance from the highest reaches of human civilisation, as exemplified in Voltaire's *Musée imaginaire*, where the four great ages of man hang side by side as aspects of the single, selfsame peak of human attainment. To say this is a truism which I may be thought to have laboured far too long: it was not a truism in the early eighteenth century. The very notion that the task of historians was not merely to establish facts and give causal explanations for them, but to examine what a situation meant to those involved in it, what their outlook was, by what rules they were guided, what 'absolute presuppositions' (as Collingwood called them) were entailed in what they (but not other societies, other cultures) said or did – all that is certainly novel and profoundly foreign to the thought of the *philosophes* and scientists of Paris. It coloured the thoughts of those who first reacted against the French Enlightenment, critics and historians of national literatures, in Switzerland, in England, in Germany – Bodmer and Breitinger and von Muralt, Hebrew scholars like Lowth, and the Homeric critics like Blackwell, social and cultural thinkers like Young and Adam Ferguson, Hamann and Möser and Herder. After them came the great generation of classical scholars, Wolf and Niebuhr and Boeckh, who transformed the study of the ancient world, and whose work had a decisive influence on Burckhardt and Dilthey and their successors in the twentieth century. From these origins came comparative philology and comparative anthropology, comparative jurisprudence and religion and literature, comparative histories of art and civilisation and ideas – the fields in which not merely knowledge of facts and events, but understanding – what Herder was the first to call *Einfühlung*, empathy – is required.

The use of informed imagination about, and insight into, systems of value, conceptions of life of entire societies, is not required in mathematics or physics, geology or zoology, or – though some would deny this – in economic history or even sociology if it is conceived and practised as a strictly natural science. This statement is intentionally extreme, intended to emphasise the gap that opened between

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natural science and the humanities as the result of a new attitude to the human past. No doubt in practice there is a great overlap between impersonal history as it is conceived by, say, Condorcet or Buckle or Marx, who believed that human society could be studied by a human science in principle analogous to that which tells us about the behaviour of 'bees or beavers' (to use Condorcet's analogy), contrasted with the history of what men believed in and lived by, the life of the spirit, blindness to which Coleridge and Carlyle imputed to the utilitarians, and Acton to Buckle (in his famous attack upon him), and Croce to the positivists. Vico began this schism: after that there was a parting of the ways. The specific and unique versus the repetitive and the universal, the concrete versus the abstract, perpetual movement versus rest, the inner versus the outer, quality versus quantity, culture-bound versus timeless principles, mental strife and self-transformation as a permanent condition of man versus the possibility (and desirability) of peace, order, final harmony and the satisfaction of all rational human wishes – these are some of the aspects of the contrast.<sup>1</sup>

These conceptions of their subject-matter and method, which are by now taken for granted by historians of literature, of ideas, of art, of law, and by historians of science too, and most of all by historians and sociologists of culture influenced by this tradition, are not as a

<sup>1</sup> Erich Auerbach seems to me to have put this with eloquence and precision: 'When people realise that epochs and societies are not to be judged in terms of a pattern concept of what is desirable absolutely speaking but rather in every case in terms of their own premises; when people reckon among such premises not only natural factors like climate and soil but also the intellectual and historical factors; when, in other words, they come to develop a sense of historical dynamics, of the incomparability of historical phenomena . . . so that each epoch appears as a whole whose character is reflected in each of its manifestations; when, finally, they accept the conviction that the meaning of events cannot be grasped in abstract and general forms of cognition and that the material needed to understand it must not be sought exclusively in the upper strata of society and in major political events but also in art, economy, material and intellectual culture, in the depths of the workaday world and its men and women, because it is only there that one can grasp what is unique, what is animated by inner forces, and what, in both a more concrete and a more profound sense, is universally valid . . .'. I know of no better formulation of the difference between history as science and history as a form of self-knowledge incapable of ever becoming fully organised, and to be achieved – as Vico warned us – only by 'unbelievable effort'. *Mimesis* (Princeton, 1968), pp. 443-4.