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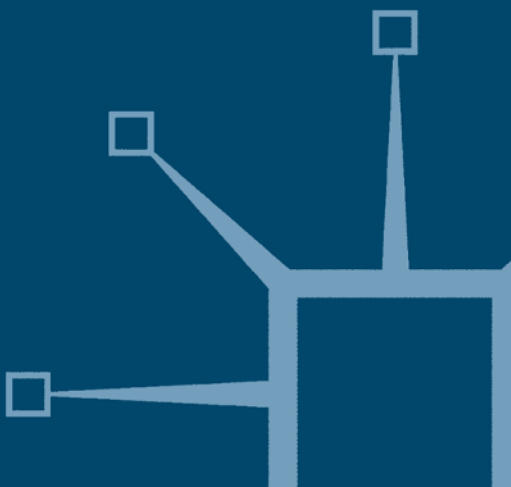
Ordering the World in the Eighteenth Century

Edited by
Diana Donald and Frank O'Gorman



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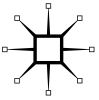

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Preface

This volume originated in a conference organized by the editors, which took place at Manchester Metropolitan University in 2002. It was one of a series held in Manchester under the aegis of the British Society for Eighteenth-Century Studies, and on this occasion the two organizers received valuable assistance from various members of staff of the Victoria University of Manchester, notably Jeremy Gregory, Natalie Zacek and Matthew McCormack. The conference drew academics from all over the world, and from a wide range of disciplines. It was an exciting occasion, productive of many new insights, and our decision to publish a selection of the excellent papers stemmed from our recognition of the importance of the themes discussed. These, we believed, deserved a wider audience.

The choice of subject, 'Ordering the World', breaks new ground in eighteenth-century studies, as a unitary study of concepts of order at this period. It reflects our shared interest in issues of hierarchy and authority in the long eighteenth century. In particular, we are keen to examine and to compare ideas of order not only in politics and society, but also in philosophy, the arts and the natural and social sciences. Many aspects of thought linked these diverse fields. However, we made no *a priori* assumption that there was a single, overriding notion of order in the eighteenth century; indeed, one of the virtues of this collection of essays is its revelation of a variety of different, if overlapping, conceptions of order in the world. Nor did we assume that systems of order actually prevailed in the eighteenth century. An important theme of the book is the *frailty* and restricted scope of all such systems, which proved vulnerable to adverse events, to intellectual challenge, and to the refashioning of the scientific and political worlds towards the end of the period.

We should like to express our gratitude to many people who have contributed to the production of the volume. First, we must thank all those who were associated with the Manchester conference: our co-organizers, and all those who attended, chaired panels and gave papers. We should like to thank contributors to the book for their assiduity, care and kind cooperation in delivering their essays to schedule. We wish to express our thanks to those who hold copyright in the images that form the illustrations, for their generous permission to publish them. We are also

grateful to Palgrave Macmillan for their patience and forbearance as this volume has worked its way through the production process. Finally, we are particularly indebted to Jonathan Clark, for his interest in the project, and for his invitation to publish the volume in the present series.

Diana Donald
Frank O'Gorman

Notes on the Contributors

David Adams is Professor of French Enlightenment Studies at the University of Manchester, from which he graduated, and where he has taught for many years. His major scholarly achievement is the two-volume *Bibliographie des œuvres de Denis Diderot, 1739–1900* (2000) which describes every known edition of Diderot's works. He has also published *Diderot: Dialogue and Debate* (1986), a study of the author's early works, and a critical edition in translation of Diderot's *Thoughts on the Interpretation of Nature* (1999). He has a number of publications on the French Encyclopedia, including an essay, *Slavery in the Encyclopedia* (2003). His next book, *Taxes, Copperplates and Propaganda*, will be published in 2006, as will a volume of essays on *Print and Power in France and England 1500–1800* which he has co-edited.

Barbara Anderman is Assistant Professor and Chair of the Department of the History of Art at Lebanon Valley College, Pennsylvania. After many years working as an editor in general trade publishing she completed her PhD on 'Petits sujets, grandes machines: Critical Battles over Genre Painting in France, 1660–1780' in 2000. She has delivered papers at a number of conferences in the USA. She is the author of 'La notion de peinture de genre à l'époque de Watteau', in *Watteau et la fête galante*, catalogue of an exhibition at the Musée des Beaux-Arts de Valenciennes, 2004.

Costica Bradatan is a Postdoctoral Fellow at Miami University. Previously he taught philosophy at Cornell University and at several universities in Europe (England, Germany, Hungary and Romania). His book *The Other Bishop Berkeley* is forthcoming. He is also the author of two other books (in Romanian): *An Introduction to the History of Romanian Philosophy in the 20th Century* (Bucharest, 2000) and *Isaac Bernstein's Diary* (Bucharest, 2001). Bradatan is the Senior Editor of *Janus Head: A Journal of Interdisciplinary Studies in Literature, Continental Philosophy, Phenomenological Psychology, and the Arts* (www.janushead.org).

J.C.D. Clark is the most authoritative and certainly the most controversial writer on the social and political history of Britain during the long eighteenth century. His first book, *English Society, 1688–1832* (1985) promoted an entirely original view of Britain as a traditional, Christian and monarchical *ancien régime* rather than as an advanced industrial economy.

His revisionist approach, which he developed further in *Revolution and Rebellion: State and Society in England in the Seventeenth and Eighteenth Centuries* (1986) has encouraged a total rethink of the nature of British society and politics in the period. This controversial agenda has dominated much eighteenth-century historical writing ever since. Indeed, Clark has extended this approach to the American Revolution in *The Language of Liberty* (1993). His latest book is *Our Shadowed Present* (2003). He has been a Fellow of All Souls College, Oxford, and is at present Hall Distinguished Professor of British History at the University of Kansas at Lawrence, Kansas.

Diana Donald was, until her retirement, Professor and Head of the Department of History of Art and Design at Manchester Metropolitan University. She is the author of *The Age of Caricature: Satirical Prints in the Reign of George III* (1996). She has produced several essays on the graphic arts of the Georgian period, including the works of Hogarth, and on aspects of popular prints in the eighteenth and nineteenth centuries. More recently, she has begun to publish articles on the representation of the natural world, and on attitudes to animals in the eighteenth and nineteenth centuries. A major book, *A Divided Nature: The Representation of Animals in Britain c.1750–1850* is nearing completion.

Judith Hawley is Senior Lecturer in English at Royal Holloway College in the University of London. Her research is focused on two areas: women writers and encyclopedism in the long eighteenth century. She is general editor of the anthology series *Literature and Science, 1660–1832* (2003–4). She has published articles on Tristram Shandy and on eighteenth-century women's poetry. She has edited a number of volumes, including editions of the works of Elizabeth Carter (1999) and of Henry Fielding. She is currently working on *The Circle of Arts and Sciences: Literature and Encyclopedias in the Long Eighteenth Century.*

Frank O'Gorman has been Professor of History at the University of Manchester since 1992, having been previously Lecturer, Senior Lecturer and Reader in the same institution. He has published on a wide variety of subjects, including the development of political parties, the history of political thought, the electoral politics of the period and the nature of popular political ritual behaviour. His latest work was *The Long Eighteenth Century*: *Political and Social History, 1688–1832* (1998). More recently, he has extended his interests to an international comparison of popular politics and ritual in the eighteenth and nineteenth centuries. His current interest in the comparative achievement of political stability

in eighteenth-century Europe is prefigured in his essay in the present volume.

Jonathan Simon is a researcher in the history of medicine at the Charité in Berlin, and teaches history and philosophy of science at the Université Louis Pasteur in Strasbourg. He completed his PhD at the University of Pittsburgh in 1997. He is the author of a number of papers on mineral collections and classification. His first book, *Pharmacy, Chemistry and Revolution*, will be published in late 2005. He is currently working on a comparative collaborative project on the history of serum therapy for the treatment of diphtheria in France and Germany.

Rosemary Sweet is Reader in Eighteenth-Century History in the School of Historical Studies and Director of the Centre for Urban History at the University of Leicester. She completed her undergraduate degree and D.Phil. at the University of Oxford and was a Junior Research Fellow at St John's College. Her publications include *The Writing of Urban Histories in Eighteenth-Century England* (1997) and *The English Town: Government, Society and Politics, 1680–1840* (1999). Her most recent book, *Antiquaries: The Discovery of the Past in Eighteenth-Century Britain*, was published in 2004.

Introduction: Concepts of Order in the Eighteenth Century – Their Scope and Their Frailties

Diana Donald

The arts of Western Europe in the eighteenth century exude a sense of order. Consider, for example, the characteristic cadences of English literature: the regularity and closure of rhyming couplets; the balancing of phrases and ideas in the orotund prose writing of the period; the preoccupation with correctness and 'finish', and the adaptation of style to subject and literary genre. All bespeak an approach which differentiates itself both from the passion and wilfulness of seventeenth-century writing and from the lyrical expressiveness of the Romantic era. In the visual arts of Britain, the symmetry and restraint of buildings in the Palladian or the Neoclassical manner appear to symbolize social order and good taste, making them a frequent model for the postmodern architects of today. Eighteenth-century portraits, with their poise and carefully subordinated grouping of figures, similarly project a confidence both in hierarchy and in family dynasty. The predominating aesthetics of high culture thus provide a counterpart to the rhetoric of politicians and their publicists, when picturing the values supposedly threatened by their antagonists. In the satirical prints of the period, the 'Temple of Liberty' and the unwritten 'British Constitution' were both symbolized by a perfect, circular, columned structure. Alternatively, the constitution was represented by a tripod: the three legs of King, Lords and Commons lean together, counterbalancing and at the same time reinforcing each other, producing a system of optimal stability and endurance.[1]

Order in the human sphere was a microcosm of the order which prevailed in the entire universe under the directing hand of God. Joseph Addison, in an 'ode' of 1712, which pleased even the anti-clerical deist Tom Paine, celebrated what seemed an incontrovertible truth: the 'spangled heav'ns, a shining frame, / Their great Original proclaim'. 'In reason's ear' the heavenly bodies 'all rejoice', 'strengthening and confirming' religious

faith in the mind of man.[2] Addison's evocation of the solar system recalls a popular contemporary model of it, the orrery. Although his sense of sublime scale transcends the effect of any such table-top contrivance, the reference to a 'frame' still evokes an impression of the universe as an artefact designed to excite the wonder of the human observer. As he wrote in the *Spectator* in that same year, God 'has given almost every thing about us the Power of raising an agreeable Idea in the Imagination … We are every where entertained with pleasing Shows and Apparitions … and see some of this Visionary Beauty poured out upon the whole Creation'.[3] Charles Bonnet, in his aptly titled *Contemplation de la Nature* of 1764, explained, in the same spirit, that he did not intend to delve into natural causes, but rather 'à élever le cœur & l'esprit à la SOURCE ADORABLE dont tout émane essentiellement … le magnifique spectacle de l'Univers … de son unité … de l'enchaînement merveilleux de toutes ses Parties', leading from the patterned movements of the heavenly bodies to 'le Tableau de l'Homme'.[4] Oliver Goldsmith, in his *History of the Earth*, imagined God's 'pictures', 'shows' and 'spectacles' as taking place in a grand palace or theatre, 'fitted up' for mankind, the intended audience. Not that everything was *made* only for the use of man: Pope and others warned against such a presumptuous notion. Yet man alone, 'the great master of all' on earth, could apprehend the 'pre-established order' of the Creation.[5]

In the imagination of Addison and Bonnet, God's wisdom and power are marvellously and everlastingly manifested in nature. When one compares rhapsodies of this kind with the scientific writing of the Victorian age, one is struck by an impression of fixity, or rather of predetermined, regular seasons and cycles, in the eighteenth-century view of the natural world. Nothing could be more different from the consciousness of violent upheaval, impermanence and endless transformation which nineteenth-century geologists, palaeontologists and zoologists introduced into visions of the earth's history. However, in both periods, a close connection was presumed to exist between the workings of nature and those of the human mind and society. As Keith Thomas pointed out in *Man and the Natural World*, 'it is an enduring tendency of human thought to project upon the natural world … categories and values derived from human society and then to serve them back as a critique or reinforcement of the human order'. Some favoured policies or social arrangements are consequently treated as more 'natural' than their alternatives.[6] In the case of the eighteenth century, an ordering of the world based on settled hierarchy and the power of reason appeared to be divinely sanctioned. At a time when the various branches of science had yet to achieve a professional or institutional status, and when most writers on the natural

sciences, including those I have quoted, had an equal interest in religion and the humanities, the flow of ideas passed easily from one sphere to another.[7] Descriptions of the natural world were consciously aesthetic, while criticism of the arts was often couched in terms that presupposed a more general frame of reference, embracing all of human affairs and the cosmic order of which they formed a part.

A theory of the arts and its philosophical coordinates

Sir Joshua Reynolds, first President of the Royal Academy, delivered his *Discourses* at the Academy's annual prize-giving ceremonies, to an audience of his fellow artists, students and distinguished visitors. His intention was to raise the reputation of the visual arts in Britain, and to make them worthy of comparison with the 'grand style' and venerable traditions of Italian and French art. More than most other eighteenth-century art critics, therefore, he drew authority from the past, and from the ideas that informed political philosophy, the conduct of public life and the rules of polite literature in his day.[8] The *Discourses* thus provide an excellent example of the ordering principles of high culture in eighteenth-century Britain. On the basis of artistic and literary theory which had crystallized since the sixteenth century, Reynolds ranked the styles and subjects of art (the two were integrally connected) in a hierarchy of worth and nobility. At its summit was an art modelled on that of the Florentine and Roman masters of the Renaissance. It was characterized by 'intellectual grandeur … impressing the appearance of philosophick wisdom, or heroic virtue'. This 'epick style', which roused the 'nobler passions', was marked by 'severity', expressed either in sober tones or in bold, simple colour contrasts, which had a synaesthetic resemblance to 'martial musick'. Idealization of the figures conveyed mental and moral 'greatness', in a manner appropriate to men of high social rank, or to heroes and saints. From this high point, the scale of art descended to more trivial and 'vulgar' human subjects, thence to pictures of mere animals, and, below them again, to still life: a gradation which implicitly matched the 'Great Chain of Being' then believed to order the whole cosmos.[9]

Threats to the rightful preeminence of the 'great style' came not from humble flower painters, however, but from the idealizing yet sensuous art of Renaissance Venice, and from the still vigorous painterly tradition it had inspired. According to Reynolds, this kind of art 'seduced' or 'debauched' the young painter, with its nuanced colours and effects of flickering light. It was expressive of affectation, superficiality, 'vanity or caprice', 'instability of affections', 'more luxuriancy than judgement': all

character traits which would then have been considered *female*. Reynolds did not hesitate to place excessive gracefulness in art at 'the brink of all we hate' – a direct quotation from Pope's *Epistle to a Lady*, with its sour satire on the characters of women. Indeed, Reynolds seems to have borrowed from Pope the tone and epithets of his whole anti-Venetian diatribe.[10] Aesthetic qualities were defined by value-laden metaphors, so that the 'effeminacy' of the Venetian and Flemish mode stood in *moral* antithesis to the masculine qualities of the one great style. It could be tolerated only if it were 'subordinate'; if the painter could 'restrain and keep under' the captivating but intellectually inferior aspects of his work. If thus 'properly reduced' – not trying to be 'principal', or standing forward 'with any pretensions' – they might even serve to soften the 'harshness' and 'rigour' of the 'great style', and to embellish its 'manly strength and energy': a faithful parallel to the contemporary model for the ideal relation of the sexes in eighteenth-century British society.[11] Nevertheless, the cultural relativity of Reynolds's gendered construct was masked by his appeal to absolutes: to the providentially established hierarchy of all created things, expressed in 'nature'. For Reynolds, the term 'nature' did not mean anything local or specific, but instead suggested a lofty, enduring, universal truth: 'not only the forms which nature produces, but also the nature and internal fabrick and organization, as I may call it, of the human mind and imagination'.[12] His own carefully measured, pondered and restrained phraseology was itself an exemplification of this rational ideal, which conferred a kind of authority on his *ex cathedra* dictates: the expression of a natural order which linked the minds of cultivated men with the mind that had fashioned the universe.

The 'Great Chain of Being': theories of the natural order

If Reynolds's art criticism echoed the system of values which informed the religious, scientific, political and social attitudes of his day, it is equally true to say, conversely, that scientists represented nature in figurative terms. The creation, with all its astonishing variety of living forms, was imagined as an ordered sequence which descended from God and His angels through man – placed at the point of junction of the spiritual and material worlds – to the animal kingdom, and finally to vegetables, minerals and, beyond these again, to nothingness. It could be imagined as Jacob's ladder, ascending into the clouds, or as a 'Great Chain' of unbroken links. This ancient concept, which had its philosophical roots in Platonism and in the theories of Leibniz, was frequently and eloquently expressed in the literature of the eighteenth century: we have already

encountered it in Bonnet's *Contemplation de la Nature*.[13] For Locke, admittedly, the 'continued series of Things' was less a demonstration of intelligible order than of the baffling *lack* of clear and essential identity in species of beings. 'There are Fishes that have Wings, and are not Strangers to the airy Region', while seals and porpoises seemingly confused the characteristics of terrestrial and aquatic creatures. These examples of what would now be recognized as convergent evolution were, however, less worrying than the existence of equivocal beasts such as apes, and of semi-humans such as mermaids, that appeared to blur the distinction between mankind and the 'lower' animals.[14] In the essentially optimistic vision of Addison and Pope, however, the teeming plenitude and variety of nature simply expressed the benevolence of the Creator: in Addison's words, 'every part of Matter affording proper Necessaries and Conveniencies for the Livelihood of Multitudes which inhabit it'.[15] Moreover, man's dual existence, at the same time physical and spiritual, was conceived as being itself a kind of balance, forming the pivot of the whole creation. Pope, in his *Essay on Man* (1733–4), traced a logical progression not simply in morphology, but also in mental endowments, from the 'green myriads in the peopled grass', through dogs and elephants to 'Man's imperial race':

> Without this just gradation, could they be
> Subjected these to those, or all to thee?
> The pow'rs of all subdu'd by thee alone,
> Is not thy Reason all these pow'rs in one?[16]

Divine providence had guaranteed the dominion of man over the other species. Moreover, the system of 'subjection' in nature also extended into the realm of human society, including the conduct of politics. The Rev. Humphry Primatt remarked that 'Subordination is as necessary in the natural, as in the political world; it connects the whole together … and … preserves that harmony, variety, beauty, and good order, which would be lost in a perfect sameness and equality.'[17] Soame Jenyns, in his *Disquisitions,* compared subordination to 'the colours of a skilful painter … blended together', with telling contrasts of light and shade: equality would yield only a flat monochrome. As it was, 'the brutal Hottentot' was clearly inferior in the scale of nature to civilized European man.[18] In *A Free Enquiry into the Nature and Origin of Evil* (1757), Jenyns suggested that 'the Universe resembles a large and well-regulated Family', with its chain of 'subservience' in the ordering of servants and domestic animals. The existence of social ranks in actual human societies has the same

inevitability. It would therefore be both unkind and against nature to educate the poor. 'Ignorance … the appointed lot of all born to poverty, and the drudgeries of life, is the only opiate capable of infusing that insensibility which can enable them to endure the miseries of the one and the fatigues of the other … a cordial administered by the gracious hand of Providence.' Through education, or the withholding of education, 'the Prince and the Labourer, the Philosopher and the Peasant, are in some measure fitted for their respective situations'.[19]

Samuel Johnson, whose *Rasselas* satirized all complacent advocates of 'the great and unchangeable scheme of universal felicity' embodied in nature, published an excoriating review of Jenyns's *Free Enquiry*. The idea of one *continuous* chain in nature could not be sustained, for there must necessarily be 'chasms' between finite and infinite beings, between 'the lowest positive existence' and nothing, and even between known species of animals. However, Johnson's main objection was to the social determinism that the theory of the 'Great Chain' engendered. It was cruel and unjust to leave the lower orders in permanent poverty and ignorance, and was, furthermore, 'wholly contrary to the maxims of a commercial nation, which always suppose and promote a rotation of property, and offer every individual a chance of mending his condition by his diligence'.[20]

The discrepant views of Jenyns and Johnson alert us once again to the interplay of religious, scientific and political opinions in variant systems of ordering the world in the eighteenth century. In fact, the essentially pre-scientific model of the 'Great Chain' was under attack from many directions. The notion of hierarchy in nature not only put an unacceptable constraint on human endeavour: it also invidiously implied that there were different degrees of 'perfection' in God's creatures. The comte de Buffon, director of the *Jardin du Roi*, whose fifteen-volume *Histoire naturelle*, published between 1749 and 1767, dominated zoological theory in Europe for at least half a century, certainly believed that nature had its abortions and its failures. Everything which *could* exist *did* exist, or *had* existed in the past, filling up 'the intermediate points of the chain'. But 'Nature … in the construction of beings, is by no means subjected to the influence of final causes', nor to considerations of 'moral fitness'. 'Why should she not sometimes give redundant parts, when she so often denies those which are essential?' The unusual physical adaptations and anomalous features that would now be attributed to the effects of natural selection were for Buffon so many examples of monstrosity, condemning the creatures in question, such as bats and sloths, to a life of continual frustration and misery. Some of nature's 'bungled sketches' were indeed destined to be 'struck out of the list of beings'. Buffon was

cautious enough to retract, in various parts of his great work, the heretical implications of these views, by an admission of human subjectivity. 'Though all beings are equally perfect in themselves, since they proceed from the hands of the same Creator; yet, in relation to man, some beings are more accomplished, and others seem to be imperfect or deformed.'[21]

The natural theologians of late seventeenth- and eighteenth-century Britain believed that *any* criticisms of God's creatures were a reflection of pride that was atheistic in tendency. John Ray, in *The Wisdom of God Manifested in the Works of the Creation* (1691), and William Derham, in *Physico-Theology*, based on sermons of 1711–12, both reverently and painstakingly described the distinctive forms and habits of a great range of creatures.[22] All of them, in their different ways, manifested the wisdom and loving care of their Creator, and were designed in such a way as to ensure their well-being. In this view of nature, nothing was ugly, defective, unfortunate or unnecessary. Even the tiny concealed eyes, disproportionate forefeet and vestigial tail of the supposedly 'poor and contemptible' mole were a 'palpable Argument of Providence', while the intricacy of insect anatomy, seen through the microscope, displayed a delicate artistry that put all human productions to shame.[23] Man, made in the image of God, was still a peculiarly privileged species; but Ray, Derham and their many disciples had little to say about hierarchy or subordination in nature. The Rev. Gilbert White, whose journals and *Natural History of Selborne*, published in 1789, stand in the direct tradition of natural theology, was unrivalled in Europe at that time in his acute observations of animal behaviour 'in the field'. White provided insights not simply into phenomena such as bird migration, but also into the whole complex interaction of species in the vicinity of human settlement, including the effects of different patterns of agriculture. 'The most insignificant insects and reptiles', he noted, had a 'mighty' influence in the 'oeconomy of nature'. 'Earthworms, though in appearance a small and despicable link in the chain of nature, yet, if lost, would make a lamentable chasm', since they aerate the soil, draw down vegetable matter, manure the surface with their casts, and provide food for birds.[24] This view of the 'chain' of created things is suggestive less of a vertical scale of degrees of perfection or worth than of the multifarious lateral relations of interdependence traced by modern ecologists. For White's friend, the Rev. John Mulso, the vision of a harmonious, integrated natural order presented in the collection of letters that formed *Selborne* had a 'naked & genuine Beauty' which reminded him of a 'Plan of Palladio'.[25] However, White's vision of man's ideal role in nature, a benign stewardship akin to his own social paternalism, was subtly different from the notion of human lordship embodied in most

eighteenth-century natural philosophy. Although religious in inspiration, it could be taken as marking the inception of a modern and truly scientific attitude to the natural world, which would ultimately invalidate the old notions of hierarchy.

Taxonomic order

The growing interest in the minutiae of animal structure and behaviour which Ray and Derham fostered in eighteenth-century Britain contributed to a Europe-wide project to define, name and group species in a comprehensive taxonomic system (see Figure I.1).[26]

Foucault, in *Les mots et les choses* (translated as *The Order of Things*), characterized the 'classical age' of the eighteenth century as a period when belief in mystical affinities linking all the objects in the cosmos gave way to rational systematization, based on purely scientific observation of natural forms.[27] The key figure in this development, central to Foucault's thesis, was the Swedish naturalist Linnaeus. His *Systema naturae*, the tenth edition of which (1758) included a full treatment of animals as well as plants, introduced binomial designations for all known organic entities, according to genus and species.[28] Genera in turn were grouped in orders, established on the basis of selected features, in the case of animals notably the form of teeth and sexual organs. 'Homo sapiens' himself was thus placed in the order of *Mammalia Primates*, along with 'Homo sylvestris Orang Outang', monkeys, lemurs and bats.[29] While the practicality of Linnaeus's system ensured wide acceptance, it was not universally admired. For Buffon, its 'phraseological jargon' was a preposterous attempt to reduce nature's infinitely diversified and multifaceted productions to a tidy system that existed only in the human mind. It was doomed to failure, and even to absurdity. How, for example, could bats – traditionally despised as grotesque creatures situated ambiguously between birds and quadrupeds, with the virtues of neither – be ranked with man, the master of the world?[30] Goldsmith, who followed Buffon closely, declared that Linnaeus's choice of a few external features as a basis for categorizing species was as arbitrary and meaningless as distinguishing men by the number of buttons on their coats.[31] The true character of animals, including man, could only begin to be grasped by a holistic study on the lines of Aristotle's *Historia animalium*, encompassing not just structure but 'manners' or habits of life. Yet Linnaeus and his disciples had never claimed more for their confessedly man-made and partial system than convenience in identification of species and in the provisional ordering of knowledge. The author of one account of the *Systema naturae* remarked

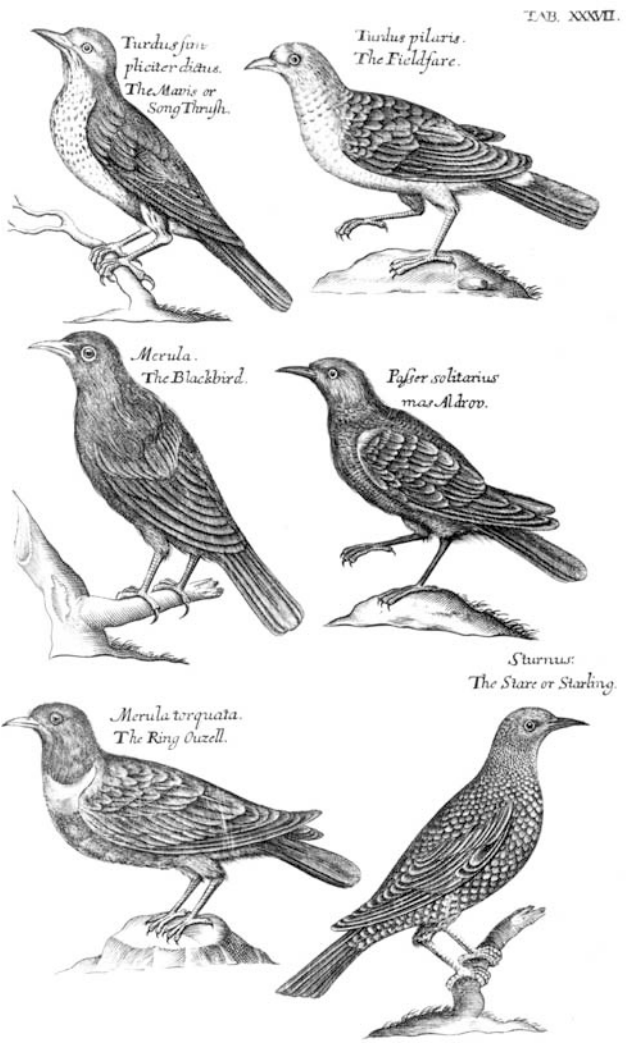

Figure I.1

John Ray, *The Ornithology of Francis Willughby … Wherein All the Birds hitherto known, being reduced into a Method sutable to their Natures, are accurately described … Illustrated by most Elegant Figures, nearly resembling the live Birds* (London, 1678), plate XXXVII, engraving and etching. Willughby's and Ray's 'natural' approach to taxonomy, grouping birds by type, character and habits, was greatly admired in eighteenth-century Britain. Here several members of the family of *Turdidae* are recognized as kin; however, the starling actually belongs to another family. (Reproduced by courtesy of the University Librarian and Director, The John Rylands University Library, The University of Manchester.)

ruefully that, 'as nature does not seem to have observed *any* system, ours must be artificial, and will ever have its anomalies'.[32]

Eighteenth-century attempts to order the natural world did, nevertheless, engender a more searching comparative study of animal physiology. John Hunter's researches, undertaken from the 1760s onwards, yielded a *number* of series, often exemplified by sets of specimens; through these, he plotted the 'ascending' degrees of complexity of particular organs and faculties in different species, with developmental implications.[33] From the turn of the century, Georges Cuvier decisively shifted the emphasis from external morphology to the key anatomical and physiological characteristics shared by the members of any given group: characteristics which were vital to their way of life and functionally related to each other, and therefore indicative of real affinities between the species concerned.[34] The concept of the one 'Great Chain' then became increasingly untenable. According to Johann Friedrich Blumenbach, in *A Manual of the Elements of Natural History*, 'All these ideas of chain, scale, progression, &c., in Nature' might serve a useful purpose in directing the attention of scientists to general homologies and to family likenesses in clusters of species. However, to make unbroken linear continuity 'a part of the plan of the Creation, and to look there for the unity and perfection of that Creation', was, Blumenbach believed, an unsustainable theological fantasy.[35] Even so, as late as the 1820s–30s, scientists had not relinquished their attempts to find a divine plan in nature. The 'Quinary' system, promoted in Britain by the guiding spirits of the Zoological Society of London and by naturalists as eminent as William Swainson, located all animal species in circles of five according to generic type. These circles supposedly intermeshed with others, at every level of taxonomic differentiation, each circle accommodating, among its five representatives, both the ideal and the destructive or evil tendencies in nature.[36] Nevertheless, the ever-increasing body of scientific knowledge, especially advances in palaeontology and in the understanding of transformism, eventually destroyed all such fixed, quasi-mystical patternings of phenomena. Foucault may have exaggerated both the eighteenth century's confidence in classification, and the homogeneity of its scientific culture and *episteme,* but he presents a compelling picture of the seismic changes in thought which heralded the end of the 'classical age'. It began to be recognized that dynamic fluctuation and cycles of extinction were endemic to the processes of nature. Rather than displaying the 'calm image of characters', the new science indicated the 'incessant transition from the inorganic to the organic … and the inverse transformation, brought about by death, of the great functional structures into lifeless dust'.[37]

The best of all possible worlds?

In the view of Ray, Derham, Addison and many others, the natural world perfectly reflected the benign, paternal providence of the Creator: a conviction which persisted among natural theologians well into the nineteenth century. However, already in the mid-eighteenth century, a different emphasis began to emerge: a consciousness of endless flux, violence and dissolution in nature. Overall stability might be preserved, but millions of creatures were, it seemed, destined to suffer and die daily. This changing vision was as closely related to concepts of the *political* order and of human destiny as the hierarchical 'Great Chain' had been. It reflected above all a heightened awareness of competition, predation and destruction as laws of nature. Religious writers and natural historians had generally attributed the bloodthirstiness of the carnivores to the Fall of Man. In the Garden of Eden all had lived in amity; but Adam and Eve's original sin had corrupted even the natural world, and turned once harmless animals into murderers.[38] However, for believers in the literal truth of the Biblical account of creation, as a single act of God at the beginning of time, the physique of the predatory species was a major difficulty. Their sharp teeth and claws, and even their short digestive tract (unsuited to a herbivorous diet), must have developed since the Fall; or else they were, in some unexplained way, part of the Creator's plan from the beginning. The primal innocence of Eden would surely be recovered in the millennial 'peaceable kingdom', where the wolf, so it was promised by Isaiah, would dwell with the lamb, and the leopard lie down with the kid.[39] For the present, however, predation had to be accepted, rather contradictorily, as an intrinsic aspect of nature. It could even be viewed as a necessary part of the divine dispensation, through which populations of over-prolific species were kept in check.

This was the argument adopted by the majority of mid eighteenth-century scientific writers. Buffon, in the *Histoire naturelle*, inserted two essays, 'Of Nature', in which he adopted a tone of lofty abstraction. Men may be distressed by the vicissitudes of fortune and the omnipresence of death, Buffon admits, but the enlightened philosopher 'thinks and judges in a manner more sublime and general'. True, *individual* lives may be 'of no value in the universe'; but *species* are all impartially preserved. Nature, acting according to the Creator's 'original plan', holds the whole system in equilibrium. Its 'active forces … balance, mix, and oppose, without being able to annihilate each other'. Death is compensated by regeneration, so that nature is, paradoxically, both transient and 'always the same'; 'fixed and stable'.[40]

This optimistic concept of an irresistible but self-righting mechanism is strongly reminiscent of Adam Smith's model of capitalism in *The Wealth of Nations* (1776).[41] Smith thought of the opposed and entirely self-interested forces in a free market economy as complementing each other and contributing, almost in spite of themselves, to the good of the whole. The country augmented the prosperity of the city, and vice versa, by 'the exchange of rude for manufactured produce'. The rent on land, the profit on stock and the wages of labour represented an essentially stabilizing concatenation of interests. Prices might be inflated or depressed by an imbalance of supply and demand, but this quickly corrected itself: everything had a tendency to gravitate to the 'natural' price, as a 'centre of repose and continuance'.[42] Smith's emphasis on the circulation of money in a capitalist economy reminds one of Buffon's view of the life force, embodied in endlessly changing forms of matter.[43] However, in capitalism, as in nature, the individual might lose out in the great scheme of things. The system might appear benign when viewed as a whole, in a 'sublime and general' manner, as nature was viewed by Buffon's philosopher. The strongest forces within it are nevertheless rapacious and ruthless. Smith it was who pointed out that 'Every species of animals naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it'. Levels of child mortality were closely and demonstrably dependent on the state of the economy. In a civilized society, however, 'it is only among the inferior ranks of people that the scantiness of subsistence can set limits to the further multiplication of the human species'.[44] Smith, confident of capitalism's potential for the amelioration of the human condition, proposed that the greed of profiteers should be restrained, and higher wages paid to labourers; but he could hardly claim that an unrestrained free-market economy *by itself* guaranteed the benefit of all.

There were, in fact, many writers disposed to query the famous view of Dr Pangloss, in Voltaire's *Candide*, that everything worked out as well as it could, in 'the best of all possible worlds'.[45] Adam Smith's friend David Hume, in *Dialogues concerning Natural Religion*, made his sceptical speaker, Philo, deny the natural theologians' claim that the intricate adaptations of all living things to their respective ways of life are proof of the wise and benevolent contrivance of their creator. Nor is there any reason to imagine an 'author of nature … somewhat similar to the mind of man'. In Philo's opinion, 'order, arrangement, or the adjustment of final causes is not, of itself, any proof of design', since the properties of matter remain unknown. Even if the world *is* created and directed by God, the picture it presents hardly suggests that His will prevails; or, if it does

prevail, it cannot be benevolent. 'Observe … the curious artifices of nature, in order to embitter the life of every living being. The stronger prey upon the weaker, and keep them in perpetual terror and anxiety … And thus on each hand, before and behind, above and below, every animal is surrounded with enemies, which incessantly seek his misery and destruction.' Nature may preserve species, but they survive 'barely', and only through constant struggle, so that the happiness of their members is precluded. Nor is the human race exempt from this wretched system: as Buffon, too, had acknowledged, man is a perpetrator of violence, as well as its victim. Even now he has subdued nature and its ferocious wild species, he invents '*imaginary* enemies, the demons of his fancy … superstitious terrors'. In Hume's view, human societies are sources of, not remedies for, conflict: 'Man is the greatest enemy of man.'[46]

Even as late as the opening decades of the nineteenth century, pious natural theologians could still cling to a providential view of the natural order and of human life, a view that Hume had rejected. For the Rev. William Bingley, writing in 1803, the 'whole material system' was 'rich in use and beauty, in which nothing is lost'; 'Thus does the uniform voice of Nature exclaim aloud that "God is Love".'[47] However, the eighteenth-century concept of a prevailing equilibrium and permanence, which even Hume had scarcely doubted, could not withstand the growing evidence of catastrophe, periodic extinction, and an evolutionary process that denied the 'argument from design' and final causes.[48] In 1798, the Rev. Malthus, in his epochal *Essay on the Principle of Population*, already presented nature not as the ever-abundant, ever-nurturing maternal figure of ancient myth, but as an indigent parent who could not provide for all her fecklessly produced offspring. Implicitly rejecting Adam Smith's belief that a modern economy could supply the needs of all sectors of the population, Malthus maintained that there was a 'constant tendency in all animated life to increase beyond the nourishment prepared for it'. Only 'Necessity, that imperious, all pervading law of nature' kept the populations of the various species, including man, within bounds. 'The race of plants and the race of animals shrink under this great restrictive law; and man cannot by any efforts of reason escape from it.'[49]

Charles Darwin's allusion to the influence of Malthus on his own theory of the 'survival of the fittest' and natural selection has been endlessly cited as a remarkable and fateful conjunction of economic and scientific thought.[50] Yet, as this essay has shown, such interchanges of ideas were the rule rather than the exception, and Malthus's economics were themselves grounded in formulations of the laws of nature that had been developed fifty years earlier. Concepts of order in the eighteenth

century encompassed both natural science and political, economic and social theory, and drew strength from the fancied analogy of microcosm and macrocosm. The system that prevailed in the cosmos was, or should be, the guiding principle in the organization of society and of human knowledge. However, not only were the various systems of order themselves in frequent conflict: each was full of uncomfortable inconsistencies, and proved vulnerable to the force of contrary facts and events. Each, while purporting to present an enduring truth, revealed its own historical contingency, and its susceptibility to change. The essays gathered in this volume, which deal with various aspects of French and British culture in the long eighteenth century, all contribute in different ways to the elucidation of this central theme.

The essays

Part I deals with the correlation of philosophy, religion, politics and social attitudes in concepts of order. Jonathan Clark strongly opposes the view that the eighteenth century was a period when the optimistic rationalism of Enlightenment thinkers seriously diminished the influence of religious belief, and dispelled the fatalism associated with it. In fact, natural science and faith in revealed religion were not, in the eighteenth century, the hostile antithetical forces that they later became. Scientists from Boyle and Newton onwards were conscious of the unresolved mysteries of the cosmos and its physical laws. They were open, in varying degrees, to the possibility that God intervened directly both in natural phenomena and in the destinies of nations and individual human beings. A sense of helplessness in the face of events might be expressed by allusions to the sway of 'Fortune', but in religious and philosophical debate the notion of divine 'Providence' remained powerful. Belief in 'Providence' was brought to bear on the doctrines of predestination and human free will, and it was also crucial in disputes about the nature of miracles. More generally, it informed people's reactions to natural catastrophes – instances of apparent *dis*order in nature – and to deliverances from danger. Providential notions were no less important in the interpretation of major political upheavals such as the American War of Independence and the French Revolution. As Clark shows, a conviction that the course of human affairs was governed by the divine will cannot be dismissed as a residual superstition of the ignorant and credulous. On the contrary, it was maintained by leaders of opinion, and even entered into fields such as the mathematical study of probability and the writing of history. Only in the mid-nineteenth century did a rift develop between

traditional religious explanations of events in the natural world and new scientific theories of causation which, at least in the case of Darwin's system of natural selection, obviated belief in 'Providence' and teleology. At the same time, the emergence of secular and positivist views of human progress inflected Victorian historiography, and created a false or biased impression of eighteenth-century ideas which is, arguably, still enshrined in modernism.

Costica Bradatan's essay on Bishop Berkeley's *Siris* also throws light on the integral nature of eighteenth-century concepts of order and of the divine dispensation. He shows how belief in the 'Great Chain of Being', which I discussed earlier, had a central importance far beyond the field of natural philosophy. The idea that everything in existence was linked together in a continuous hierarchy invested even tar-water – supposedly a transmutation or condensation of sunlight – with a providential efficacy in the treatment of disease. Bradatan here demonstrates the association between Berkeley's cosmology and that of the alchemists: the 'panacea' of tar-water could be identified with the *elixir vitae* or the philosophers' stone. Its medicinal effect related to man's own inherent place in the system of order decreed by the Almighty. As we have seen in discussing the 'Great Chain' theory, humanity was believed to form a junction between the material and spiritual worlds. Bradatan shows further that even man's mental processes represented, in Berkeley's view, a 'gradual evolution or ascent'. Sense data were laid up as images in the memory, and thence acted on successively by imagination, reason and understanding: an affinity with the 'Great Chain' that explained how man could gain knowledge of the world. As in Clark's essay, we are reminded of the dangers of treating eighteenth-century thought as a staging post in the development of modern secular science. Berkeley's holistic view of the material world and of human nature and health reflects a philosophical unity of vision that would be lost in the following century. While wholly unscientific, it was humane and poetic: 'philosophy as a spiritual technique and a way of recovering an immemorial wisdom'.

Models of order in the eighteenth century included human affairs as one aspect of the larger system of balance and subordination in the cosmos. However, the turbulence created by warfare, popular riots, rebellions and dynastic changes frequently undermined the security of order and authority in the political world. Frank O'Gorman's study of politics interrogates the long-established 'myth' that the eighteenth-century British state was an essentially stable entity. Threats to the integrity, peace and safety of the nation occurred repeatedly. These were not simply rivalries within the political class or local discontents, but fundamental challenges

to the legitimacy of government itself. O'Gorman convincingly traces political instability to divisions over the Hanoverian succession, and to the heavy-handed nature of attempts to amalgamate Scotland and Ireland into the British state. There was also a lack of state machinery for the peaceful resolution of serious political issues. Most importantly, the structures of power denied a constitutional role to religious minorities, while political convention seriously inhibited the approved role of the parliamentary Opposition. Thus the apparently cyclical phases of unrest reflected the absence of recognized and peaceful means of replacing any long-entrenched but discredited administration. O'Gorman's conclusion is, however, that periods of war and rebellion ultimately strengthened Britain's stability, by bringing into play those forces in society that were conducive to the maintenance of the status quo: notably the loyalty and patriotism of the middling sort. Nevertheless, O'Gorman, like Clark and Bradatan, cautions against the dangers of reading the eighteenth century backwards and imposing on it a specious teleology. War, insecurity and recurrent political instability, not unbroken tranquillity and civil order, were the common experiences of British people in the eighteenth century.

The structure of society, like its governance, was ideally an extension or epitome of the divine order. Within this structure, the family became, as Rosemary Sweet points out, 'a metaphor for society as a whole'. It will be recalled that Soame Jenyns even compared the universe to a 'large and well-regulated Family', while for Sir Joshua Reynolds the subordination of 'feminine' grace to 'masculine' mental energy in the ideal work of art echoed the proper relation of the sexes in society. The stability of the family, with its pattern of male authority, differentiation of gender roles and firm positioning within the class structure, formed a basis for the order and cohesion of the nation. The idea of a chain of connection was again operative here: family lineage and inheritance gave a valued sense of continuity with the past, while networks of kinship, obligation and dependence bonded the members of communities at every social level. However, the ideals of mutual love, companionable marriage and ordered family life, variously promoted in the fiction and conduct literature of the period, cannot be construed as an unproblematic representation of the norm, much less of the real experience of men and women in the eighteenth century. Nor is it possible to mark out, without many qualifications, a fundamental shift in the pattern of marriage at this time. An alleged trend towards the 'nuclear' family, towards the privacy and domesticity of the family unit and the development of separate, complementary spheres for men and women, may have some basis in reality. However, many factors pulled in the opposite direction, notably the

enduring importance of the extended family, the prominence of such kinship in business partnerships, and the subtle but important role that women continued to play in the political ambitions and the economies of their families. In fact, Sweet shows, the eighteenth-century family cannot be defined in any single or formulaic way. It proved to be flexible, highly variable and shifting in its membership and organization, reminding us that 'the model of the nuclear family is historically contingent and never a universal experience'. Once again, an ideal of harmonious order in the eighteenth-century world was at variance with the complex reality.

Part II of the book is concerned with the ordering of *knowledge* of the world, whether in the construction of hierarchies of subjects, in taxonomy, in the organization of fields of study, or in the interpretation of cognitive processes themselves. Again, we are confronted by the discrepancy between theories of order and lived experience. Barbara Anderman revisits the notion that the practice of art in eighteenth-century France, especially at the Académie royale, was ruled by a hierarchy of genres, which placed history painting at the top of a scale of esteem, and ranked portraiture, animal painting, landscape and still life in descending order below it. This construct, which I have already exemplified in the teaching of Reynolds within the British Royal Academy of Arts, was clearly indebted both to ancient philosophy and to Italian Renaissance aesthetics. However, its reformulation in seventeenth-century France projected the views of a small circle of court appointees and *littérateurs*, the *petite académie*, directed by Colbert, who were eager to guide artists in their glorification of Louis XIV, and to dignify the establishment, the Académie royale, where such artists were schooled. Anderman shows that the system articulated by Félibien, as mouthpiece of the *petite académie*, featured surprisingly little in subsequent French art theory and criticism. The ordering of types of subject matter in a regular hierarchy was never fully adopted by the Academy itself, and was, indeed, specifically resisted or 'adroitly sidestepped' by many artists. The categorization of subjects in painting and the designation of their practitioners were never precise, and conformed only loosely to the hierarchy. Biblical, allegorical or historical subjects might be specified for reception pieces or for entries to the Prix de Rome. However, leading artists in supposedly inferior fields such as portraiture or animal painting – together with new subject types that did not even figure in Félibien's list, such as the *fêtes galantes* of Watteau and his followers, and Greuze's *genre* scenes – were fully recognized and promoted within the Academy. These subjects certainly proved more congenial to eighteenth-century Salon visitors than

historical *grandes machines* were. While history painting retained its special prestige, and was actively promoted by the authorities as a perceived corrective to public taste, the idea of a comprehensive ordering of all other subjects proved to be of little interest. One might add that in Britain, similarly, the vital growing points of art and their diverse, indeterminate character bore little relation to the official doctrine of Reynolds. The popularity of portraits, scenes of country life, sporting pictures and so on far exceeded that of grand historical paintings. In practice even Reynolds himself concentrated on portraits and on subjects of a humorous or sentimental nature.

Jonathan Simon's essay on French eighteenth-century mineral collections also offers an instructive analysis of the divergence between ordering systems – in this case, scientific taxonomies – and the actual practices of the time. However, it does so from the opposite perspective: the influence of practice *on* classification. Simon analyses collectors' taste for various categories of specimens, their approach to the arrangement of these objects in private *cabinets*, and the effect this had on scientific publication: a situation he contrasts with the 'immateriality' of present-day 'virtual reality' modelling of scientific data. The eighteenth century was, as we have seen, an era of systematic taxonomy, whether in Linnaeus's distribution of plants and animals into orders, genera and species, or in the efforts of Daubenton, Wallerius and others to classify minerals by visual appearance and by chemical analysis. Collectors were keen to apply these organizing principles, especially when the series of objects they had assembled were to be used for instructional purposes. Nevertheless, there were competing considerations: the value placed on beauty, or on the apparently figurative nature of certain minerals, led to their overrepresentation in many collections. Aesthetic taste was a criterion that 'both preceded and subsumed system', and was often a more important determinant of selection and mode of display than a desire for scientific logic. Simon shows that the penchants of collectors even affected the classificatory methods of taxonomists. Systems were stretched in order to accord a separate designation to all the decorative varieties of, for example, agate and Florentine marbles. After the French Revolution, however, when the new Muséum national d'histoire naturelle provided the focus for a more rigorous and informed approach to taxonomy, and public education became a principal objective, the practices of *ancien régime* collectors were rejected as self-indulgent, capricious and disorderly.

The difficulties of eighteenth-century intellectuals in ordering the many fields of knowledge and modes of knowing within a single framework were particularly acute when it came to the compilation of encyclopedias,

and this is the theme of the final two essays in the collection. The *Encyclopédie* is often treated as a self-consistent and definitive statement of Enlightenment values. However, David Adams explains that this was far from being the case. The schemata embodied in Diderot's *Système figuré des connaissances humaines* and d'Alembert's *Discours préliminaire* to the *Encyclopédie* were premised on the value of objective and empirical methods in the establishment of truth, but they actually contained many anomalies. The tripartite division of mental functions into 'Memory', 'Reason' and 'Imagination', partly based on a system devised by Francis Bacon, failed to clarify how the various fields of knowledge could be coordinated in the mind. Nor did it explain precisely how the mind was able to process and order sensory impressions – a problem which Locke had left unsolved. The *Système figuré*, with its arbitrary compartmentalization of knowledge, was even inconsistent with Diderot's theories in some of his other works, in which he expressed greater consciousness of the subjectivity of the mind, and of the close connections between its different activities. Diderot's purpose in presenting the putative organizing principles of the *Encyclopédie* in this tabular form was, in Adams's view, more subversive ('strategic camouflage') than it was epistemological or truly taxonomic. By treating religion not as an autonomous subject, but as a subset of 'Reason' and 'Philosophy', and by listing 'Superstitions', 'Divination' and 'Black Magic' as offshoots from it, Diderot implicitly challenged the supremacy and the unquestionable veracity of received religion. Belief in an affinity between human nature and the creation as a whole – central to notions of the 'Great Chain of Being' – was also thrown into doubt. As we have learned from Bradatan's essay, Bishop Berkeley pictured the mind's operations as a representation in miniature of the divinely ordered cosmos. For the *Encyclopédistes*, however, the relationship between the external phenomena of nature – whose laws were themselves unknown – and human psychology posed intractable problems. Diderot's thoughts on this subject were, Adams shows, speculative and variable rather than truly systematic.

The tendentious or polemical nature of encyclopedic compilation is also the subject of the last essay, Judith Hawley's study of British encyclopedism after the French Revolution. She compares Coleridge's concept of the proper organization of knowledge, in his abortive plans for the *Encyclopaedia Metropolitana*, with Hannah More's views on education, especially that of girls. Both Coleridge and More deplored the allegedly irreligious and proto-revolutionary opinions that the *Encyclopédie* had promulgated 'under the neutral flag of scientific instruction'. Even British encyclopedias were, they believed, tainted by dissenting and heterodox

views, and dangerously democratic in tendency. At a deeper level, Coleridge and More both objected to the fragmentation of knowledge implied by the alphabetic arrangement of the articles in encyclopedias, as destructive of true understanding. Coleridge sought instead to revive the older, circular or cyclical concept of these works, indicated by the word 'encyclopedia' itself. It conveyed the wished-for wholeness of learning, embracing theology, the arts and the sciences in one ordered system. Rejecting Lockean psychology, Coleridge maintained that ideas existed in the mind previous to the reception of sense impressions. These ideas were the basis of the 'pure' sciences, which included metaphysics and theology. In contrast, 'mixed' or 'applied' sciences – sciences in the modern sense – dealt with the external world; they were thus merely 'theoretical' or hypothetical, and subordinate to the so-called 'pure' sciences. The arts, as dependent on both innate genius and sensory impressions, were idiosyncratically lodged between the two categories of sciences in Coleridge's hierarchy. This approach to the composition of encyclopedias, which Hawley characterizes as both quasi-Platonic and elitist, could not, however, withstand either commercial pressures or the huge expansion of information which took place in the nineteenth century. With the explosion of factual knowledge, the separation of disciplines, the institutionalization of science and professional specialization in research, the old unitary methods of ordering the world, with which this book has been concerned, were swept away for ever.

Notes

1. H. T. Dickinson, *Caricatures and the Constitution 1760–1832* (Cambridge: Chadwyck-Healey, 1986), plates 11, 19, 22, 56.
2. Joseph Addison, *Spectator*, No. 465, 23 August 1712. The ode was based on Psalm XIX. Thomas Paine, *The Age of Reason: Being an Investigation of True and False Theology* (1794), in Philip S. Foner (ed.), *The Life and Major Writings of Thomas Paine* (New York: Citadel Press, Carol Publishing Group, 1993), p. 485.
3. Addison, *Spectator*, No. 413, 24 June 1712.
4. Charles Bonnet, *Contemplation de la Nature*, new edn, 3 vols (Hamburg: J. G. Virchaux, 1782), Vol. I, pp. xxiv–xxvi.
5. Oliver Goldsmith, *An History of the Earth, and Animated Nature*, 8 vols (London: J. Nourse, 1774), Vol. I, pp. 1–2, 15, 397; Vol. II, p. 51. Alexander Pope, *An Essay on Man* (1733–4), especially Epistle III, lines 27 ff.
6. Keith Thomas, *Man and the Natural World: Changing Attitudes in England 1500–1800* (London: Penguin Books, 1984), p. 61.
7. Ludmilla J. Jordanova (ed.), *Languages of Nature: Critical Essays on Science and Literature* (London: Free Association Books, 1986), Introduction, pp. 16, 18.
8. John Barrell, in *The Political Theory of Painting from Reynolds to Hazlitt* (New Haven, CT and London: Yale University Press, 1986), relates Reynolds's ideas

to the tradition of 'civic humanism' in political thought. Reynolds conspicuously avoided the speculative tone of recent works such as Hogarth's *Analysis of Beauty* (1753), and Edmund Burke's *Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful* (1757), with their associative, affective and psychological explanations of aesthetic effects.

9. Sir Joshua Reynolds, *Discourses on Art*, ed. Robert R. Wark (New Haven, CT and London: Yale University Press, 1981), Discourse III (1770), pp. 50–2; Discourse IV (1771), pp. 60–3.
10. Reynolds, *Discourses*, Discourse III, pp. 48–9; IV, pp. 64, 67, 72–3. Pope, Epistle II, *To a Lady. Of the Characters of Women* (1735), line 52, from *Epistles to Several Persons* (1731–5). Herbert Davis (ed.), *Pope: Poetical Works* (Oxford, London, New York: Oxford University Press, 1978), pp. 291–9.
11. Reynolds, *Discourses*, Discourse IV, pp. 59, 72; V (1772), p. 80.
12. Discourse VII (1776), p. 124.
13. Arthur O. Lovejoy, *The Great Chain of Being: A Study of the History of an Idea* (Cambridge, MA and London: Harvard University Press, 1936, 1964).
14. John Locke, *An Essay concerning Human Understanding* (1690), ed. Peter Nidditch (Oxford: Clarendon Press, 1975), Book III, Chapter vi, pp. 446–7, 450–1.
15. Addison, *Spectator*, No. 519, 25 October 1712.
16. Pope, *An Essay on Man*, Epistle I, lines 229–32. Davis (ed.), *Pope: Poetical Works*, pp. 239–79.
17. Rev. Humphry Primatt, *A Dissertation on the Duty of Mercy and Sin of Cruelty to Brute Animals* (London: R. Hett for T. Cadell, J. Dodsley, J. Johnson, 1776), pp. 4–6.
18. Soame Jenyns, *Disquisitions on Several Subjects* (London: J. Dodsley, 1782), Disquisition I, 'On the Chain of Universal Being', pp. 8–10.
19. Soame Jenyns, *A Free Enquiry into the Nature and Origin of Evil* (London: R. and J. Dodsley, 1757; facsimile reprint, New York and London: Garland Publishing, 1976), pp. 34–5, 40.
20. *The Works of Samuel Johnson … with an Essay on his Life and Genius*, ed. Arthur Murphy, new edn, 12 vols (London: J. Nichols & Son [*et al.*], 1806 onwards), Vol. VIII (1810), pp. 23–61 (pp. 30, 35). Cf. Johnson's *The History of Rasselas, Prince of Abissinia* (1759), Chapter XXII, 'The Happiness of a Life Led According to Nature'.
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27. Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (London: Routledge, 1970); first published as *Les Mots et les choses* (Paris: Editions Gallimard, 1966).
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29. *Caroli Linnaei Systema Naturae: A Photographic Facsimile of the First Volume of the Tenth Edition [1758]* (London: Trustees of the British Museum, Natural History, 1956), pp. 20–32.
30. Buffon, *Natural History*, ed. Smellie, Vol. IV, pp. 317 ff.; Vol. V, pp. 146–7. Cf. Vol. VI, pp. 220–5.
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35. Johann Friedrich Blumenbach, *Handbuch der Naturgeschichte* (Göttingen, 1779); 10th edn of 1820 translated by R. T. Gore as *A Manual of the Elements of Natural History* (London: W. Simpkin and R. Marshall, 1825), pp. 3–5.
36. Cf., for example, William Swainson, *On the Natural History and Classification of Birds* [*The Cabinet Cyclopaedia*], 2 vols (London: Longman, Rees, Orme, Brown, Green and Longman, and John Taylor, 1836–7), Vol. I, pp. 4, 6 ff., 193 ff.; Vol. II, pp. 1 ff., 34–5. Knight, *Ordering the World*, pp. 93 ff. Adrian Desmond, 'The Making of Institutional Zoology in London 1822–1836: Part I', *History of Science*, 23:2, no. 60 (June 1985), pp. 153–85 (pp.159 ff.).

37. Foucault, *Order of Things*, p. 277. Foucault dates this change to the early nineteenth century, but I argue below that it becomes apparent in the mid-eighteenth century.
38. The idea is expressed in, for example, Joseph Fletcher's *The Perfect-Cursed-Blessed Man* (1629); Rev. Alexander B. Grosart (ed.), *The Poems of Joseph Fletcher*, privately printed (1869), pp. 18 ff. Cf. John Milton, *Paradise Lost*, published 1667, Book X, lines 706 ff.
39. Isaiah, 11:6.
40. Buffon, *Natural History*, ed. Smellie, Vol. VI, pp. 249 ff.; Vol. VII, pp. 89 ff.
41. Buffon's 'optimism' should be understood in the eighteenth-century, philosophical sense, stemming from the work of Leibniz and others. Since all possible things existed in the world, evils were inevitable, and even necessary to the well-being of the whole. Lovejoy, *Great Chain of Being*, pp. 208 ff. Cf. note 45.
42. Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), in an edition of Books I–III (London: Penguin, 1986), pp. 150 ff., 160–1, 189, 201 ff., 356 ff., 474, 479 ff.
43. However, Smith made a distinction between the 'accidental concurrence' of animals' interests and the deliberate cooperation of men (p. 118).
44. Smith, *Wealth of Nations*, pp. 182–4.
45. Voltaire, *Candide ou l'Optimisme* (1759), in part a satire on the theories of Leibniz (see the end of Chapter XXVIII). The points of comparison with Johnson's contemporary *Rasselas* (see note 20) have often been remarked.
46. David Hume, *Dialogues concerning Natural Religion*, written in the 1750s, published 1779; ed. Martin Bell (London; Penguin Books, 1990), pp. 53, 56, 93, 105, 109, 121.
47. Rev. William Bingley, *Animal Biography; Or, Anecdotes of the Lives, Manners, and Economy, of the Animal Creation, Arranged according to the System of Linnaeus*, 3 vols (London: R. Phillips, 1803), Vol. I, p. 18.
48. This change of world view was greatly influenced by Charles Lyell's *Principles of Geology: Being an Inquiry How Far the Former Changes of the Earth's Surface are Referable to Causes Now in Operation*, 3rd edn, 4 vols (London: John Murray, 1834). However, Lyell, while quoting the opinions of Lamarck extensively, rejected the view that existing species had evolved over the millennia. He later changed his opinion, largely accepting Darwin's thesis.
49. Rev. Thomas Robert Malthus, *An Essay on the Principle of Population* (1798, 1803); ed. T. H. Hollingsworth, from Malthus's 6th edn of 1826 (London: J. M. Dent, 1973), pp. 5–6.
50. However, writers disagree in their assessments of Darwin's debt to Malthus. Cf., for example, Adrian Desmond and James Moore, *Darwin* (London: Michael Joseph, 1991), especially pp. 264 ff. Ted Benton, 'Science, Ideology and Culture: Malthus and *The Origin of Species*', in David Amigoni and Jeff Wallace (eds), *Charles Darwin's The Origin of Species: New Interdisciplinary Essays* (Manchester and New York: Manchester University Press, 1995), pp. 68–94.

Part I

The Ordering of the World and of Human Affairs

1

Providence, Predestination and Progress: Or, Did the Enlightenment Fail?

J. C. D. Clark

Order, disorder and the Enlightenment

Early in 2002, the earth experienced a near miss: an asteroid passed within a whisker (in astronomical terms) of the planet.[1] Had it struck, it would have done so with a force six hundred times greater than the bomb dropped on Hiroshima. No observer saw it coming, and it was tracked only after it had passed; yet this event produced little surprise. It was already a truism that the secure foundations of modernism had moved: the idea of continental drift; then pollution; then global climate change; then epidemic disease, AIDS; now the realization that life on earth is regularly challenged, and at longer periods catastrophically transformed, by bursts of intergalactic ultraviolet radiation or the impact of extraterrestrial objects. Asteroids are rational in that they obey mechanical laws well-understood since Newton; yet their intrusion says nothing of human or divine reason, and seems to reassert the old doctrine: chance rules all.

Mankind has, of course, long sought to impose order on threatening surroundings, whether by practical precaution or by intellectual systematizing. The social sciences represent sustained attempts to render an external reality controllable by making it intelligible. It was long conventional to think that this enterprise was a major, and cumulative, success: the world would become a more and more ordered place. Yet much now contradicts this confidence in the predictability of the 'natural order' and in the possibility of human improvement, a faith which it later became conventional to call the Enlightenment. It is taken as axiomatic in this essay that 'the Enlightenment' is a polemical term devised in the nineteenth century to place interpretations on what had

happened in the eighteenth: the term did not therefore correspond to any clearly demarcated eighteenth-century phenomena, and could be made to mean whatever its nineteenth- and twentieth-century users wished. Its use here acknowledges, without endorsing, the meanings conventionally ascribed to the term in recent discourse.

Yet the Enlightenment has often been identified by historians as the moment when nature first comprehensively yielded to human analysis, and by analogy supposedly gave rise to the related goal of a science of man. That science was held to have generated an optimism premised on the possibility of demonstrating order in human affairs as in the physical realm. While this scenario was constructed from diverse parts, its major premise held that providential discourse was replaced by naturalistic discourse;[2] and that the natural was now to be understood as the regular, the ordered. Religion (taken to be the sphere of prejudice, the irrational, representing an authoritarianism built on elite mystification) was held to have been eroded by a widespread process of secularization. Miracles, a major support of Christianity, were discredited by philosophers and scientists. Newtonian physics set human existence in a wider framework of intelligible, regular, general principles. Christians who persisted in their private beliefs were henceforth obliged to express their idea of the Deity in revised terms: He was now rationality personified, the impersonal benign, a generalized First Cause, and the rationality of the universe so conceived guaranteed that happiness, if rationally pursued, could be securely attained.[3] In time, this familiar account was reinforced for later reasons, notably in repudiations of Nazism and in defences of the public doctrine of the United States against postmodern critiques.[4]

As long as these assumptions were securely entrenched, it seemed appropriate to treat the question of order in eighteenth-century England at the micro level only: public order, whether the role of the mob, the threat of revolution from 1789 to Chartism, or, more recently, the disorderly but very local challenges posed by consumerism and postmodern self-definition.[5] This now conventional account will be examined and qualified here. Part of the case of the cosmic optimists must of course be accepted. There are indeed stories to tell about the development of astronomy and physics, about the spread of statistical analysis and actuarial science, of the Linnaean classification of species, of ideas about human evolution, stories of navigators, chemists, improvers. The eighteenth century, like all ages, had its cosmic optimists. Yet are historians entitled to say that the optimists won a battle that they had so defined, and that the world view available to educated Englishmen between

Newton and Darwin rested on securely ordered certainties? It will be argued here that the observable pattern of belief was on the contrary diverse, predictability and unpredictability being locked in unresolved conflict, and that the long survival of providential responses to uncertainty demands a reconsideration of many features of a received account of secular certainty. The familiar model of 'the Enlightenment' had indeed relied partly on the exclusion of certain areas of evidence, partly on the consequent misunderstanding of others. Centrally, the received picture of a long eighteenth century increasingly dominated by naturalistic ideas of order neglects evidence that Providential discourse was not swept away at an early date, but substantially survived into the nineteenth century and later as the prevalent idiom in which the course of events was encountered and reflected upon in England.[6] This providential idiom had its own internal dynamic and evolution, away from Calvinism and miracle but towards a reassertion of special providences and generating a larger framework within which national history was explained.

Providence, fortune and chance

The triumph of a new mindset cannot be measured against a parody of preceding ages' credulousness in their subscription to an old one. Providence, as an implicit demand for submission to divine purposes, had always been challenged, debated and neglected. It 'had but a disturb'd Possession in the minds of Men', argued the Rev. Abraham Campion in 1694, 'sometimes confess'd, sometimes doubted of, or disputed against, but almost always practiced against'.[7] Yet such statements are not necessarily evidence for a collapse of popular providentialism, for it was a definition of man's fallen condition that he should not always see and cooperate with Providence. There is in addition widespread evidence in a range of other discourses for popular willingness to interrogate fate, chance and design outside 'Enlightenment' paradigms but irrespective of Christian faith. This evidence of providential and other discourses has been, in part, acknowledged by students of popular belief, but seldom integrated into the dominant model sustained by historians of a 'High' Enlightenment. If fate, chance and fortune contradicted related Christian ideas of Providence, they contradict twentieth-century faith in an Enlightenment even more directly.

It should nevertheless be relevant to the way in which an 'Enlightenment' was constructed that, while serious astrology lost its hold on elite opinion, the population at large provided a lasting market for chapbooks

and almanacs offering guides to the vicissitudes of human existence: 'after Man is come into the World', wrote one such author in 1697, 'it's natural to all, to be inquisitive about future Events, or their Lotts or Chances in this Elementary Life, whether they are born for Great, Mean or Small Fortune'.[8] Life experiences therefore provided repeated occasion for such debates. Natural disasters, too, were one aspect of human experience that fell into the familiar category of 'vicissitude'.[9] Popular fiction similarly expressed a mindset that disclosed no clear watershed between pre-modern and modern attitudes to life chances. Thomas Dekker's play of 1600, *The Pleasant Comedy of Old Fortunatus*, echoed a familiar assumption: what man needed most was to be not rational, but fortunate. *The History of Fortunatus*, a chapbook, was reprinted again and again into the nineteenth century. Being fortunate was to enjoy 'good fortune': Fortune still sometimes appeared as the Roman goddess Fortuna. Plays spoke to this assumption: the reflections on the 'sovereign lady' Fortune in the opening scene of William Shakespeare's *Timon of Athens* (?1604); Thomas Heywood's *Fortune by Land and Sea* (written *c.*1606–9, published in 1655);[10] George Villiers, 2nd Duke of Buckingham's *The Chances* (1682), adapted from Beaumont and Fletcher; Thomas Otway's *The Souldier's Fortune* (1681); Aphra Behn's *The Luckey Chance* (1687).

Being 'fortunate' ideally involved acquiring 'a fortune'. James Carlile's *The Fortune-hunters* (1689) stood in a long line of plays on marriage strategies, heiresses and providential enrichment that included Charles Macklin's *The Fortune-hunters* (1750); it was a theme that became prominent in the late eighteenth-century novel. So was the device of reverses of fortune, as in James Holroyd Fielding's *Beauchamp; or the Wheel of Fortune* (1817). Richard Cumberland's play of 1795 on the same theme reinforced its moral in the Epilogue:

> There are – what shall I call them? – two great Powers,
> Who turn and overturn this world of ours,
> Fortune and Folly. – Tho' not quite the same
> In property, they play each other's game;
> Fortune makes poor men rich, then turns them o'er
> To Folly, who soon strips them of their store.[11]

One very public embodiment of the ancient image of the wheel of fortune was indeed the lottery (Figure 1.1). Public lotteries were promoted with elaborate classical imagery personifying Fortuna and attempting to redescribe outcomes as other than random. One sales promotion of 1698 also featured Astraea, goddess of justice, for the same reason. Destiny,

Figure 1.1

William Hogarth, *The Lottery* (1721), etching and engraving. In his complex and ambivalent allegory, Hogarth pictured both the national benefits of the State Lottery, as a source of funds for public enterprises, and the potential evils of its incitement to gambling. The balanced symmetry of the whole design, in which a figure representing 'National Credit' presides, resting on a column supported by 'Justice', is a good example of the eighteenth-century faith in order. However, elements of chance and instability are suggested by the blindfolded figure of 'Fortune' on her wheel (right) and 'Wantonness' with a windmill (left), operating the lottery wheels. Below them are displayed the contrasting effects of 'Good Luck' (right) and 'Misfortune' (left). British Museum, Department of Prints and Drawings. (© British Museum.)

announced a Miss Porter, representing Fortuna and drawing the lots, was not in charge:

> No; this Decision lies in *Fortune's* Sphere:
> From random *Chance* no partial Judgment fear.
> Then, *Jove*, resign: 'Tis I reign Goddess here …
> *Fortune* commands all Hearts: I bend each knee:
> The Court of all Mankind's addresst to Me.[12]

The theme was perennial. Audiences at the Theatre Royal, Dorset Gardens in 1698 could see *The Fool's Expectation: or, The Wheel of Fortune*.[13] In 1810, *Fortune's Levee, or Her Votaries Metamorphised* personified the lottery as Fortune herself, enthroned in her palace, 'whom all solicit, and whom all revere'.

Providence and human vicissitude

Christians were obliged to respond. That reputed spokesman for modernity, Daniel Defoe, dealt conventionally with the issue of human vicissitude in a providential context: his *Robinson Crusoe* (1719) related the misfortunes of a man who wilfully disobeyed clear warnings that he should not 'tempt Providence to my ruine' by abandoning his divinely appointed station, a man who reflected, after his shipwreck on a desert island, 'why Providence should thus completely ruine its creatures … that it could hardly be rational to be thankful for such a life'. Crusoe's prominent and evolving answers to this question made the book a providentially directed pilgrimage in which, finally, 'I acquiesced in the dispositions of Providence, which I began now to own and to believe ordered every thing for the best'.[14] Defoe's fiction had a dominant ethical dimension, but this dimension was a specifically providential one, albeit obscured by later preoccupations that both abbreviated his titles and 'modernized' the themes in his plots. *Moll Flanders* (1722) was originally titled *The Fortunes and Misfortunes of the Famous Moll Flanders*; its successor *Roxana* (1724) was originally titled *The Fortunate Mistress, or a History of the Life and Vast Variety of Fortunes of Mademoiselle de Beleau … Lady Roxana*. The Whig novelist Henry Fielding, in his role as a reforming magistrate, produced in 1750 a collection of remarkable discoveries of murders to prove the interposition of Providence: murders were often detected by 'the most unaccountable, indeed miraculous means'.[15]

Almanacs or handbooks predicting one's fortune in the vicissitudes of life might therefore sit next to competing but related volumes systematizing the record of Providence. These anthologies of tales of deliverance, retribution or prosperity appeared repeatedly, from Thomas Beard's collection of 1597[16] through a folio by Matthew Poole (1624–79) published in 1697[17] to *The Book of Fate* [*c*.1780] and beyond, a substantial genre neglected by students of English literature. Individuals' own narratives of their lives were conventionally composed within such a general explanatory framework. Fortune, vicissitude and Providence were the themes of much-reprinted tracts like Jonathan Dickenson's in 1700[18] and Peter Williamson's account of delivery from 'French and Indian Cruelty' in 1757.[19] Such populist texts

were widely current long before better-known but more pessimistic works of the literary elite like Voltaire's *Candide* and Samuel Johnson's *Rasselas* (1759), both questioning the sustainability of cosmic optimism in face of the vicissitude of human affairs. In popular discourse, Fate, Fortune or Chance were still widely reified or personified and might (as in the ancient world) wear a benevolent or malevolent face; they competed for popular allegiance above all with the systematically developed and widely inculcated Christian doctrine of Providence.

This providential genre, moreover, flourished into the nineteenth century. James Stanier Clarke, the Prince of Wales's chaplain and naval historian, produced a compendium of deliverances from shipwreck in two volumes in 1805–6,[20] using much the same arguments that had informed James Janeway's compendium on the subject of 1675.[21] A formerly reputed source for Defoe's *Robinson Crusoe*, the shipwreck narrative of Alexander Selkirk, was published in 1712 and reprinted in the *Harleian Miscellany* in 1745 under the title *Providence Displayed*: Providence was Defoe's cue, not the specific details of survival and capitalist accumulation on a desert island.[22] In 1816 a former naval officer, now an Evangelical Anglican clergyman, Richard Marks, reflected on the incidents of a career that illustrated the Scriptural teaching 'one shall be taken, and the other left'.[23] In 1818, Thomas Young published a similar compendium.[24] So did Joseph Taylor in 1821.[25] Joseph Fincher's *The Interpositions of Divine Providence: selected exclusively from the Holy Scriptures* (1829) fell into the same mould. So did the Rev. John Young's *The Record of Providence* (1832), a learned work drawn from a wide range of published sources. The continued viability of this genre into the nineteenth century is evidence for the credence given to its central concept.

These collections could retain their currency partly because they were not identified as expressing a world view that was seen as contradicted by a reified 'modernity'.[26] Natural science diminished but did not seriously reduce natural catastrophe: Harrison's marine chronometer did not end shipwreck, as naval officers well knew. But other widespread assumptions identified persisting natural catastrophes as not just chance events; they revealed divine intentions. A naval disaster in 1694 showed that God 'hath a controversie with us', argued Jonathan Owen, a London Dissenting minister: the cause was not the nation's rejection of James II, as Jacobites falsely claimed, but its adding '*Inventions of Men*' to 'the true Worship of God'.[27] Calamities 'short of utter Destruction' were all intended for 'Reformation', contended Edward Fowler, latitudinarian Bishop of Gloucester, in 1695.[28] The hurricanes of 1698 and 1703 were similarly used: it was God's way to punish sinners 'by Concurring with

Second Causes', argued William Offley, former Fellow of Kings, in 1704.[29] The two earthquakes in London in 1749–50 were similarly interpreted. John Mason argued in 1750 that earthquakes, tempests, conflagrations, wars and epidemics were all produced by natural or second causes; 'but are they for that reason not to be acknowledged as divine judgements?'[30] Disastrous fires like that at Honiton, Devon, in 1765 again drove men back to Job.[31] So did an explosion at Chester in 1772.[32] Nor did the elite respond differently from the middling orders. In 1832 the rector of Carshalton, Surrey, Charles Cator, in his published sermon *The Cholera Morbus a Visitation of Divine Providence*, reacted in the same way as did Joseph Allen, Archdeacon of Westminster, preaching to the House of Commons on 'the day appointed by His Majesty's royal proclamation, to be observed as a day of solemn fasting and humiliation'.[33]

Providence did not provide assured answers in these situations: rather, it was the site of anguished questioning. No sooner had the fair face of nature impressed man with the force of the argument from design (the inferring of a Creator from the complexity of Creation) and provided an easy proof of the 'superintendancy of Providence', wrote John Ogilvie, Scots Presbyterian minister and author in 1764, introducing a poetical vindication of the Almighty, than 'Whirlwinds, storms, volcanos, earthquakes; – whatever, in short, of this kind we have been accustomed to consider as productive of evil, reclaims loudly against this decision, and leads us to call in question, if not to deny truths, which appeared to stand upon the best foundation'.[34]

Christian providentialism and natural science

If Christian providentialism was congruent with a still widespread popular mindset, how did it coexist with the developing natural sciences? One reason for their compatibility was that the limitations of the natural sciences at this stage of their development were as evident as their achievements. Newtonian physics illuminated something, but how much might easily be questioned. Robert Wallace, Scots clergyman and demographer, sounded a note of caution in 1761:

> After all that we can conceive of the magnificence with which we are surrounded, there is a mystery in the works of God that we cannot fully comprehend. We are not only ignorant of the means by which various effects are produced, and of the immediate causes from whence they proceed, which are either not at all, or only faintly discerned; but many of the ends which nature proposes, though in

> themselves most certainly excellent, are, nevertheless, so far beyond our thoughts, and so contrary to our common apprehensions, that their fitness becomes less perspicuous. Clouds and darkness intercept our view, and being held in anxious suspense about the great design of nature, we are often doubtful concerning the final issue of all her mighty works.[35]

Many English scientists would have agreed.

Cartesianism may have proposed a Godless, mechanical universe, with matter inert, and atoms colliding like billiard balls to create secondary qualities, but by the late 1660s this model had aroused English fears that the French doctrine would exclude Providence. Newton's *Principia* (1687) revealed the mathematical basis of gravity, action from a distance (a concept denounced by continental critics including Leibniz as miraculous or occult); his *Opticks* (1704) implied a new theory of matter itself as fields of force, an element in the book that grew with successive editions to 1717. Both theories attributed to nature a tendency to decay, and so involved the Creator in the continuing support of Creation.[36] As Samuel Clarke explained in his exchange of 1715 with Leibniz, 'nothing is done without his [God's] continual government and inspection'.[37] Nor was it always clear that Newton confined God to using only second causes in bringing about the necessary reformation of the universe;[38] his views evolved on that question.[39] In May 1694, David Gregory noted Newton saying: 'A continual miracle is needed to prevent the Sun and fixed stars from rushing together through gravity'.[40] The 'holy alliance' between natural science and the Church had quickly seen the point: Newton soon intended his *Principia* to refute Hobbesian materialism, and Richard Bentley used the *Principia* in the first series of Boyle lectures in 1692 to prove God's providential design for the universe.[41] Bentley argued that 'all the powers of mechanism are dependent on the Deity', since 'gravity, the great basis of all mechanism, is not itself mechanical, but the immediate *fiat* and finger of God, and the execution of divine law'.[42]

Yet if God was continually involved in supporting the universe at every moment and in every detail, events that had previously seemed against the course of nature became consistent with it: miracles would thereby lose their older function as proofs of Christian revelation. It has been argued that Clarke, Whiston, and others dealt with this problem in a novel way:

> By deleting all reference to breaches of laws of nature and by locating the essence of the miraculous in the concatenation of natural causes,

> miracle accounts could become immune to the standard criticisms which have become familiar to us since Hume's 'Of Miracles'. Moreover, such a conception allows for a far more durable synthesis of science and religion than had been possible with the conception of nature promoted by Boyle and others.[43]

Academic analysis thereby aligned itself with a still powerful popular discourse in which astonishing deliverances, providences and miracles overlapped. Reason was not enough to govern even man's actions in 'the Corporeal world', argued Abraham Campion in 1694; there must be 'some general Overseer of the works of nature'.[44] Nature, according to the Tory MP and industrialist Sir Humphry Mackworth in 1704, must be 'an *understanding powerful Being'*, not '*a dead Lump of Matter'*; chance alone could never have constructed the world. Without reference to Newton, Mackworth too described a world that rested at each moment on God's support.[45] No machine 'is or can be *simply* and *absolutely* mechanical', argued Henry Stebbing, defender of Anglican orthodoxy against Whitefield and Hoadly in 1757, 'for mechanical Causes and Effects cannot go backwards forever'; God was necessary to underwrite 'that GRAVITATING FORCE which gives Consistency and Stability to all material Substances'.[46]

Nor was this position confined to churchmen. Joseph Priestley, Unitarian and chemist, rejected free will as inconsistent with Providence.[47] For John Fawcett, Yorkshire Baptist minister, in 1797, 'The laws of nature, as they are called, are no other than the uniform agency of Providence'.[48] For William Tucker, Calvinist, in 1798, 'Created understanding cannot grasp, nor fully comprehend, the least of God's designs, or works. It is non-plused in its researches after the real essence of a plant, a pebble, or the least dust of a balance'.[49] Nature, for the Rev. Thomas Etherington of St Alban Hall, Oxford, in 1799, was not enough: 'the heavenly bodies cannot have moved from eternity; because their velocity, gradually decreasing, must have come to an end, and the whole disposition of the system must, long before this time have been destroyed'.[50] The Rev. David Savile, in Edinburgh in 1807, quoted Samuel Clarke: we should not ascribe events to nature as if 'the word *nature*, was *a real intelligent agent*; or meant any thing more than the *usual* and *ordinary* method of God's governing the world'.[51] It has been argued that there was a 'secularization of matter theory' in the century after Newton;[52] but this argument calls for qualification. A mechanical reading of Newtonianism as synonymous with 'classical physics' only became the norm in the light of the programmatic work of later mathematicians and physicists, notably Pierre-Simon Laplace in Paris in the 1790s and Hermann von Helmholz in Berlin in the 1890s. Yet the secularizing implications of

Laplace's ideas were quickly understood and resisted by English or Scottish scientists like John Robison, David Brewster, Samuel Vince and William Whewell: in both countries, a providential natural science was evidently still prevalent.[53]

Christian providentialism and probability theory

It has been argued that advances in the mathematical study of probability steadily diminished the sphere of the random, and this is in some senses correct as far as it goes; yet such notions of regularity applied retrospectively, and only to the whole sample studied: within lived experience, vicissitudes still impinged unpredictably and catastrophically on the individuals composing the sample. Providence was not therefore excluded, and statisticians themselves sustained a religious faith. One such was the Dutch physicist and mathematician Christiaan Huygens (1629–95), who published in 1657 a Latin treatise on probability, translated by John Arbuthnot in 1692 as *Of the Laws of Chance* (reprinted in 1714 and 1738).[54] Arbuthnot supplied a worldly Preface, arguing that man's success in any affair depended on his conduct and on Fortune, that is, chance: in other words, events whose causes we cannot see – 'for it is no Heresy to believe, that Providence suffers ordinary matters to run in the Channel of second Causes'.[55] Huygens had taken a more pious view, however; he elsewhere excused his speculations about life on other planets, since such a discovery would mean that

> we shall worship and reverence that God the Maker of all these things; we shall admire and adore his Providence and wonderful Wisdom which is displayed and manifested all over the Universe, to the confusion of those who would have the Earth and all things formed by the shuffling Concourse of Atoms, or to be without beginning.[56]

The mathematician Abraham de Moivre (1667–1754), who founded actuarial science in England, was a Huguenot. His treatise *The Doctrine of Chances* (1718) offered to show how to fix 'certain Rules, for estimating how far some sorts of Events may rather be owing to Design than Chance' – that is, 'how to collect, by a just Calculation, the Evidences of exquisite Wisdom and Design, which appear in the *Phenomena* of Nature throughout the Universe', and dispel the '*Superstition*' that there was such a thing as luck. The universe was rational because of God: '*where Uniformity, Order and Constancy reside, there also reside Choice and Design*'.[57] In due course the man who first tidied up the history of the subject,

Isaac Todhunter, author of *A History of the Mathematical Theory of Probability from the Time of Pascal to that of Laplace* (London, 1865), was also the author of *The Doctrine of a Divine Providence is inseparable from the belief of an absolutely perfect Creator* (Cambridge, 1849). Nor was the practical application of probability theory extensive until much later: writers like Huygens, Moivre and others still worked out their mathematical techniques in relation to card games, not to the general fabric of daily life.

The theodicy problem and the status of miracle

A perfect Creator presumably could not have been responsible for evil;[58] but how, in that case, could the presence of evil in the world be explained? The theodicy problem, as it was known from Leibniz's work of 1710,[59] also involved the nature of Providence. Why did evil men prosper, and good men suffer? Was there a larger pattern within which all was for the best? Christians of all denominations insisted that there was. Chance, argued Sir Humphry Mackworth in 1704, was the surface appearance of things, but it also often rewarded good men, preserved the Church, punished the wicked: '*the Rewards and Punishments of Chance and Accident, are all as wisely done, as if there had been nothing of Chance or Accident in it*'.[60] The opposite position, too, was a theological one: a Deist like Thomas Chubb argued equally against original sin, predestination and special providences on the grounds that they would deprive man of free choice and remove from him responsibility for his actions.[61]

In 1738, Joseph Hallett, Presbyterian minister and critic of the Deists, saw a debate polarizing over Providence and determinism. 'Some late *metaphysical* writers have taught, that all the motions of the heavenly bodies, gravitation, the tides, and all other events are owing to the *immediate action* of the creator'; but this must be wrong, since it would make God the author of the Crucifixion. 'The other *extreme* is to teach, as Mr. C[hubb] does, that God does not now interpose at all by any *particular* providence in the affairs of mankind', but ruled instead by general providences.[62] Particular providences, Hallett contended, were the middle way. But if Providence was particular as well as general, where did that leave miracles?

The debate on miracles was extensive even in that age of controversies. It was not begun (as was once thought) by deists speaking for modern science and using new ideas of scientific rationality to attack orthodox religion; rather, it was initiated as a Deist reaction against churchmen, for it was churchmen who were deeply involved in and committed to the

scientific innovations of the age.[63] Such divines and scientists were also the most keen to defend the idea of miracle. Deists by contrast were theorists, distant from the latest developments in the natural sciences. These developments inevitably raised the general question of how laws of nature were to be understood;[64] and initially they were pictured very differently from the immutable secular principles that they became in the nineteenth century. Robert Boyle described miracles as 'extraordinary and supernatural interpositions of divine providence' in which one might see God 'to over-rule or controul the established course of things in the world by his own omnipotent hand'.[65] For good reasons, Newton 'both believed in and did not believe in miracles'.[66] The prevalence of a Christian Newtonianism in the natural sciences meant that the philosophical attack on miracles largely ended with Hume, rather than finding in him a culmination and a triumph. Miracles survived him, under the heading of providences.[67] Publications on miracles were much less frequent after the 1750s; works on Providence continued in full flood.[68] It is necessary to understand more clearly why that was.

The rise of natural science had indeed promoted discussion of miracles by defining more sharply those laws of nature to which some things might need to be exceptions. Twentieth-century modernists too often assumed a two-bucket theory, science rising as miracle declined; it seems on the contrary that both at this period rose together. Even if mutual exclusivity was the nineteenth-century outcome, for Boyle and Newton the laws of nature still seemed provisional and local. Newton, in his *Opticks*, argued that God could 'vary the laws of nature, and make worlds of several sorts in several parts of the universe'.[69] This idea made it more urgent to discover empirically just what the laws of nature in this world were. What might be exceptions to them, and what might be examples of God changing his mind? The new understanding of laws of nature as divine commands, after all, implied that God might command differently. The Stoic idea of Fate must be rejected, argued Walter Charleton (1619–1707), later a Fellow of the Royal Society, in so far as it 'blasphemously invades the Cardinal Praerogative of Divinity, Omnipotence, by denying him [God] a reserved power, of infringing, or altering any one of those laws which he himself ordained and enacted, and chaining up his armes with adamantine fetters of Destiny'.[70] Even Robert Boyle (1627–91), a founder of the natural sciences, argued that God could 'do whatever involves no contradiction'.[71]

The conventional view has been that Protestant thought came to rely on miracles conceived as breaches of the laws of nature in the context of the debate on Christian evidences: miracles were regarded as the strongest

proof of the credentials of a person or institution. Thus some Protestant thinkers, most famously Conyers Middleton in 1749, argued (or in the case of religious sceptics apparently argued) for the reality of ancient miracles allegedly reported in Scripture, but denied recent miracles allegedly wrought by the Catholic Church, and, by implication, witnessed anywhere else in the eighteenth-century world. The publication of Middleton's tract and Hume's essay in successive years has been assumed to show that the argument was won by those who advanced a secular rejection of the possibility of intervention by a Deity, but the adverse reaction to Middleton and the silence that greeted Hume may indicate otherwise.[72] The degree of overlap between miracle and Providence working through second causes (the astonishing concatenation of events, each of which, alone, was commonplace) meant that divine interventions survived under another label. The question 'do miracles happen?' was overtaken in public debate by another: 'does God act through general or special providences?' Special providences remained a link between theology and natural science that might negate determinism, and these providences could be understood in a hard or a soft sense.

The Protestant denial of modern Roman Catholic miracles involved a denial in the hard sense: the modern Roman Church could not suspend the laws of nature. This was exploited by Hume for the cause of scepticism, by his argument that the testimony of witnesses to a miracle could never be more reliable than the uniformity of natural laws. Hume here depended on an assumption that natural laws were indeed uniform; but there was a major gap in his knowledge of the natural sciences, for Newtonian physics had indeed left room for irregularities that demanded divine intervention, and this element of Newtonianism was widely known. In brief, Newton did not underwrite Hume. Even if Newtonians of the generation of Clarke and Whiston rephrased the question (as Peter Harrison has argued in 'Newtonian Science'), miracles understood as providential results of the concatenation of second causes might still astonish.

Religious sceptics therefore preferred to debate miracle in the hard sense: did the Red Sea part to admit the passage of the Israelites? Were Shadrach, Meshach and Abednego preserved unharmed when Nebuchadnezzar had them thrown into the fiery furnace? But few people in the eighteenth century experienced apparent suspensions or reversals of physical laws in their daily lives. What they might easily experience were instead astonishing conjunctures, or vicissitudes, or survivals, or reversals in human affairs, like 1688; and the forces at work in such cases were, each separately considered, not unusual.

If God operated through second causes, there could be a simple identity between providences and miracles. A 'miracle' would be an instance of God's using the laws of nature to a good end in an astonishing conjuncture. The preservation of English rights and privileges over so many centuries since 1066 'hath to a miracle, been solely from the Providence of God', argued the aged republican Slingsby Bethel in 1691; the rise and preservation of Protestantism were a sure sign of Providence. In Bethel's discourse, 'providence' and 'miracle' performed the same function (Abraham Campion similarly wrote in 1694 of 'a standing miracle of Providence').[73] Yet Bethel's long list of astonishing events in 1688 that had brought about the Revolution was perfectly commonplace: it was not against nature that the wind had remained in the east, for example, wafting William down the Channel while keeping James's fleet in the Thames estuary. A miracle might be an improbable but deeply desired event produced by second causes. Miracle proved the reality of Providence, argued the Rev. Henry Topping in 1715; but as an example of a miracle he gave only the Restoration of Charles II.[74] Yet miracle in the hard sense survived too, since science developed fast enough to emphasize its own ignorance. For the ecclesiastical historian Samuel Roffey Maitland, in 1831, a miracle was a suspension of the laws of nature; but what were the laws of nature? How could we know them for certain? History recorded many unusual, irregular occurrences; why were these too not part of the natural order?[75]

Predestination and special providences

Religion prevented scientific and philosophical debates from being academic affairs only, and the conflicts between Calvinist predestination and Arminian free will were already ancient. In a tract of 1705 dated from Shatton in Cumberland, Jane Fearon recorded being provoked to a critique of Calvinism by hearing a sermon in an Independent congregation at Cockermouth. Her argument was a series of 48 points, mostly depending on a single Scriptural text, mentioning no theologian and no social dimension except her having known one man who was led into a vicious life by the doctrine of absolute predestination.[76] The minister in question, John Atkinson, duly replied in a tract of his own: predestination and special providences, for him, evidently went together; they were consequences of God's sovereignty, and he was enabled to reply by the '*Special Providence*' that had placed him among his flock.[77] Knowledge of these alternatives had penetrated far beyond the elite.

Between the Arminian and the predestinarian positions ran an argument later revived at Oriel College in the 1820s. It was first classically

expressed by William King (1650–1729), Archbishop of Dublin, in his sermon on predestination of 1709. The problem he addressed was that 'there yet remain form'd and separate Parties, that mutually refuse to communicate with one another', the Calvinist and the Arminian. King's attempted eirenic solution was that God's attributes were so much beyond human understanding that they were to be interpreted 'by way of Analogy and Comparison'. Literalism was to be rejected.[78] The Deist Anthony Collins seized on King's arguments: King had given the game away. God, if not literally described in Scripture, must be understood as 'a *Being that is a general Cause of the wonderful Effects in Nature, to which we cannot give any particular Attributes or Perfections*'.[79] John Edwards, a Cambridge Calvinist divine, critic of Socinianism and Locke's *The Reasonableness of Christianity*, similarly pointed out in 1710 that King conceded a key advantage to Deists and Unitarians, for the doctrine of the Trinity would thereby become mere figurative language.[80]

Those who believed in determinism and those who believed in free will had equally to argue that their positions were consistent with God's superintendence. Deism, especially, obliged its subscribers to consider what they meant by Providence. Since open atheism was a rare and dangerous position, religious sceptics could at most push back the sphere of action of the divine: Providence for them was to be redefined as general providence, that beneficent provision which God had made for all things in common by establishing fully sufficient, but unvarying, natural laws. For Thomas Chubb, divine oversight entailed merely a 'general providence', that is, 'God, at the creation, put the natural world under the direction of certain laws.' But this was all. Particular providences, defined as special interventions of the Deity '*above*, or *beside* the ordinary course of nature, or of those *laws* by which the world is governed', were not provable; they would be synonymous with miracles. Some people, argued Chubb, saw special providences as rare, others as common; in either case, they would make God a party to the evil in the world, and would imply that creation was imperfect, in need of perpetual '*patching* and *mending*'.[81] Like Chubb, the Deist Thomas Morgan sided with 'general Laws' that were 'so perfect as not to require any farther Alterations or Amendments'.[82] But what was a general providence, what a special providence? Presumably the Deist John Toland placed into the first category the event predicted in his tract of 1718, *The Destiny of Rome: or, the probability of the speedy and final destruction of the Pope*. Deists were not necessarily more consistent than anyone else.

A Socinian like the Independent minister Caleb Fleming could join in the denunciation of Chubb: the Deist had not proved that there were not

continual divine interventions; he had not proved that special providences and miracles were the same. How could 'beings or things continue to exist, without that *energy* being continued which first caused their existence'? Chubb's was in fact a '*doctrine of predestination*'.[83] Abolishing particular providences turned God 'the kind Father of the Universe' into 'the God of *Fate* or necessity'.[84] An Anglican like Lawrence Jackson could seize on Chubb's argument to abolish the difficulty of miracles: 'general Providence is made up of an infinite Number of particular Providences', and hence 'God has been continually working Miracles: for to create and sustain the System of Nature is a continued Miracle, and requires a Power equal to that of suspending or overturning the Course of Nature'.[85] The Deist Lord Bolingbroke insisted that particular providences would subvert 'the Whole Order of Nature';[86] this strategy was recognized and resisted by William Dodwell, canon of Salisbury, on the grounds that there was no difference between particular and general providence; and, especially relevant in the Deist controversy, that Providence could be established from natural religion itself.[87]

Free will versus determinism

The debate about miracles, the debate about predestination and the debate about providences all significantly overlapped; in turn, they overlapped with another debate, the philosophers' dispute over free will. It, too, was undecided, and it, too, was theological. Classically educated, the participants in this conflict had routinely situated it in a long retrospect reaching back to the Epicureans and the Stoics, as well as Augustine; but this philosophical debate again came to a theological head in the 1650s, when Hobbes set the argument within his doctrine of materialistic determinism.[88] In his view, ideas and motives were movements of the brain and produced by causes in the external world; the will thereby became identified with appetite and fear. The experience of defeat in the Civil War, regicide and exile gave a practical dimension to the urge to interrogate Providence, and an urge of exceptional force. Hobbes's fellow royalist exile in Paris, John Bramhall, Bishop of Derry and later Archbishop of Armagh, rightly saw that Hobbes's argument, however effective as a justification for the restoration of a strong monarchy, would exclude the Anglican God entirely.[89] What Hobbes had done was to take Lutheran and Calvinist teaching on predestination and press it to an extreme, in the context of a materialist philosophy that made God irrelevant; and he had done so under cover of Scriptural reference.[90] Both sides believed in Scriptural authority, claimed Hobbes, but he adhered to the view that

'the Will of God makes the Necessity of all things'; Bramhall, Hobbes asserted, contended that man was free to will as he chose, and that 'many things come to pass without Necessity, by Chance', by arguing that divine foreknowledge did not undermine human freedom. Free will was a Popish doctrine, Hobbes shrewdly claimed, not found in Scripture.[91] Yet Hobbes's irreligion and notoriety placed such doctrines out of bounds for many.

Locke attempted to solve the dilemma expressed in the Hobbes–Bramhall debate, whether we are free not just to will, but to will what we will, by focusing on the question whether we are free to *do* what we will;[92] but Locke did not necessarily emancipate men from an old dilemma. The Rev. Richard Warner, Foxite and antiquary, preaching in Bath on the peace in 1814, quoted 'the incomparable Locke': he had been equally sure that he was free and that God was omnipotent, but how were they consistent? Locke had written: 'I have long given off the consideration of that question, resolving all into this short conclusion, that *if it be possible for God to make a free agent, then man is free, though I see not the way of it*.'[93] Without a better argument Locke did not end the debate, which continued unresolved.[94]

Calvinism versus Arminianism

It should come as no surprise that most of the participants were either clergymen, or arguing with clergymen. For this was not a secular question, but one that concerned the interpretation of God's interaction with Creation. After the Deist controversies of the 1730s the conflict between free will and determinism was fought out in the 1740s chiefly within the Church, under the heading of predestination, between the followers of the Calvinist George Whitefield and the Arminian John Wesley.[95] Reassertions of militant predestinarianism within the ranks of Methodists provoked Wesley's publication of a deliberately anti-Calvinist sermon in 1739, and he followed it with publications defining Calvinist teaching in a hard sense.[96] Once more, the allegedly antinomian consequences of predestinarianism were an issue. Whitefield replied,[97] and the starkly polarized debate ran on into the 1750s.[98] William Parker kept the debate alive with his discourses before the University of Oxford in 1759,[99] and the controversy of the 1740s and 1750s led straight to the debate of the 1770s,[100] triggered by Augustus Toplady's edition of Jerom Zanchius in 1769,[101] which asserted absolute predestination.[102] Wesley in turn replied, and his close associate John Fletcher took an ever more prominent role; Toplady was seconded by Sir Richard Hill.[103] The argument broke out

again with the revival of Calvinistic Dissent in the 1790s, which, according to Thomas Le Mesurier, Anglican vicar and Bampton lecturer, brought predestination 'into fashion, almost exclusively, among the uninformed and labouring classes of mankind';[104] at the same time, it might be added, as Calvinism softened among much more comfortably placed Evangelical churchmen.

Were the Thirty-Nine Articles Calvinistic or not? Did they commit churchmen to the doctrine of predestination, and, if so, in what sense? This debate, too, ran throughout the century, and John Henry Newman's *Remarks on Certain Passages in the Thirty-Nine Articles* (the famous *Tract XC* of 1841) revisited an old debate in a new context. It could be very old indeed: *The Churchman's Remembrancer* for 1806 reprinted an anti-Calvinist tract of 1653 by John Plaifere, reprinted before in the Cambridge collection of writings on predestination of 1719.[105] The idea that predestination was an Anglican doctrine in the Articles, argued Thomas Le Mesurier in 1809, had been refuted by the charges of George Pretyman Tomline, Bishop of Lincoln, Richard Laurence's Bampton lectures, and Dean Tucker's letters to Kippis.[106] Others were certainly involved, but it might be argued that Le Mesurier was correct in his understanding of how the debate had developed, and it was this Arminian predominance that Newman later sought to extend.

Active as this debate on the Articles was, the major theological explosion over free will and necessity came in and after 1821. In that year the Provost of Oriel College, Edward Copleston, Pittite, reformer and classicist, published *An Inquiry into the Doctrines of Necessity and Predestination*, arguing against Calvinism. His argument was fully consistent with Archbishop William King's sermon on predestination and foreknowledge, he wrote.[107] From Oriel again, in 1821, Richard Whately republished King's sermon, with notes, claiming that King's notions 'must be the proper basis of all sound theology'.[108] Calvinists were outraged, as were all those who saw the Christian message resting on a literal use of language. If the attributes of God were only known analogically, argued the Rev. E. W. Grinfield, a Biblical scholar and anti-Calvinist, all certainty in religion was at an end; such a position would have the same effect as 'the well-known mystical interpretations of Mr. Woolston respecting the miracles of Christ'. Grinfield, in his reply to Copleston of 1822, sided with Bishop Butler: whether we are free or not, men are always treated in the New Testament *as if* they were free. Collins's objection to Archbishop King was right: if language describing the divine attributes was only a 'representation and resemblance', that position gave up the doctrine of the Trinity to the Unitarians.[109]

Providence applied: the debate on national fortunes

Did God intend the general pattern of development of eighteenth-century England? One of the largest bodies of evidence that providential discourse was not erased by naturalistic or social-scientific discourse is found in commentary on political events.[110] This, too, had its wider premises: English historiography since Bede was familiar with providential survival as an organizing category, and providentially ensured triumph was shared out to many sides in the kaleidoscope of seventeenth-century politics. The vicissitudes of political affairs still brought the periodic disappointment of sizeable sections of the population. The events of 1660 meant 'the experience of defeat' for the republican cause, 1689 (and many later events) meant the same for the Jacobites, 1760 for the Old Corps Whigs, 1784 for the Foxites; 1714 was no secure arrival of pudding time, but merely a prelude to armed insurrection. A transforming series of military victories in the *annus mirabilis* of 1759 was unexpected, coming as it did after the indecisive war of 1739–48 and the early reverses of the Seven Years' War, and the hopes of 1759 were dashed in 1776. In turn, 1789 provoked profound reflection: even a Whig reformer like Burke thought the 'ostensible causes' of the French Revolution wholly inadequate to explain what occurred,[111] and many observers interrogated the Almighty for a clue to the providential meanings of events. Much political commentary did not explicitly invoke the Deity; but much did, and with no sense of inconsistency between providential and political discourse. Throughout the long eighteenth century, political events were scrutinized to find in them the hand of God: the accessions, depositions, or deaths of monarchs; the outbreaks or terminations of wars; political revolutions. The most providentially charged of all the 'classic' revolutions indeed took place within a transatlantic realm of discourse, in 1776.

Other images and discourses survived to explain these events in the political realm. One such, the idea of the wheel of Fortune, enjoyed a continued currency. A satire on Laud, published in 1640, was entitled *Fortune's tennis-ball … or, a proviso for all those that are elevated, to take heed of falling*. In 1790, Burke's *Reflections on the Revolution in France* used the same image of the great brought low and the elevation of the base as the source of its emotional intensity and its analysis of the nature of revolution itself. Fortune's wheel was an image offering no sense of structured process, for its very point was its capriciousness; it was revolutionary optimism that was now premised on the possibility of (a new) order. Locke was not such a cosmic optimist, for he saw God's intentions for man (in revealed and natural law) continually threatened by absolute

monarchy. Optimism about political outcomes was not fully formulated until the freethinker Paine, for it was he who devised a concept of society as a free-standing entity, independent of the state and not indebted to it, that would embody the ability of mankind to lead their daily lives by cooperation. Yet Paine's analysis did not adequately describe what happened in the American colonies after 1776, or in France after 1789: spontaneously arising social order was an idea that could be entertained only by a minority: by men like William Godwin, dominated by their own theological preoccupations.[112]

Optimists, like pessimists, had political agendas, and both could be found at all points on the political spectrum. The Restoration was widely described by royalists as a special Providence. Whigs then elevated Providence after 1688 to justify the change of regime:

> The Providence of God, tho' for several reasons it may not always be a good rule of action, yet may be a good rule of after-compliance. If God has a right to pull down one King and set up another, His finger when visible transfers the right, and his King must be submitted to; the change of circumstances necessarily inferring an alteration of duty.[113]

William III was hailed by John Whittel in 1693 in a tract entitled *Constantinus Redivivus: or, a full account of the wonderful providences and unparallel'd successes that have attended the glorious enterprises of William the 3d*, and his survival of an assassination attempt produced in 1694 the modestly titled tract *The Triumphs of Providence over Hell, France and Rome*. Others were not so confident about this inevitability. 'The success of the greatest undertakings often depend upon very small accidents', wrote Abraham Campion in 1694, 'meer contingencies; which does shew how little the Watchman has to do in the Case', how much Providence.[114]

Men could often not see this, said the Rev. Thomas Lynford in 1689, only because 'So intricate and obscure are oftentimes the means upon which the preservation of any Government does depend'. Yet God 'calls Cities and Commonwealths to present judgment'; Providence concerned not just individuals but polities, oscillating between great judgements and great mercies: 'God's dealings with us have been all along variously chequered with good and evil.'[115] Inflexible Fate and uncertain Fortune were alike refuted by the operation of Providence, argued John Moore, a royal chaplain, in 1690. Providence explained the sudden catastrophic changes in men's political fortunes, including the sudden disintegration of long-established kingdoms or empires, which no other explanations could do.[116] God acted in politics 'according to the ordinary Methods of

Providence, which is wont to entertain the world with Vicissitudes and Changes', argued the Whig divine John Edwards at Cambridge in 1710.[117] However theologically orthodox, change was politically dangerous. Robert D'Oyly, preaching in the chapel of Lady Hastings in 1710 on political providences, 'National Sin', and the forfeiture of divine favour, had to explain (or profess) that his object had been to reconcile divisions at home, not to raise the '*Hopes* of the *Pretender*'.[118]

In the Whig scheme, the Christian drama of man's creation, fall and redemption was reenacted in the secular realm as a series of political deliverances. To John Edwards in 1710, Archbishop William King's theology would undermine this Whig scenario by derogating from the doctrine of predestination (there was nothing inevitable about the victory of the Whigs). King, alleged Edwards, thereby capitulated to the Nonjuror and Jacobite Charles Leslie, who had flatly denied divine foreknowledge and predestination.[119] Politics was an unstable realm, far more so than Newton's cosmos. Just as the Newtonian physical universe required the continual intervention of God, so did the political world. As Joseph Wilcocks, Bishop of Gloucester, argued in 1728: 'Government itself would be impossible without Providence', since men were corrupt, profligate and self-willed; they were, alone, unable to support the state.[120] Bishop Berkeley consciously directed himself against Shaftesbury's *Characteristics* in stirring up in his contemporaries 'a thorough Sense of the Deity inspecting, concurring, and interesting it self in humane Actions and Affairs'.[121]

Appeals to Providence were prominent again after 1745,[122] but non-Christian alternatives could also be invoked. The author of the anonymous *Fortune's Tricks in Forty-Six* prefaced it with a motto from Sallust, *Fortuna in omni Re dominatur*; the author created a dialogue in which Fortune, the classical goddess, took malicious delight in spinning her wheel, raising the undeserving and destroying the great, 'All to shew my Pow'r, and confound that formal Creature, *Reason*.' Such was her power that 'I can convert a Patriot into a Courtier; make a good Subject become a Rebel, and a Rebel a good Subject again.'[123] But the optimists were again in the ascendant when Providence was evoked in the *annus mirabilis* of 1759, and after the accession of George III in 1760.[124]

In some areas, it was acknowledged that providential explanations were indeed being challenged by the *bienpensants*. Thomas Hunter in 1774 lamented how recent historians tended to exclude Providence: Clarendon had written in 1702–4 of general Monck as 'God's instrument' in the Restoration of Charles II, but Voltaire's *Siècle de Louis XIV* in 1751 ascribed that event to 'chance'; an 'honest' *History of England* would

feature Providence as its 'most interesting and instructive part'.[125] Yet this was but one swing of an old pendulum, and even the new historiography had soon to grapple with the cataclysm of the American Revolution. American colonial discourse was saturated with invocations of or reflections on Providence, as was American republican historical writing after independence.[126] It was expressed within a transatlantic idiom, spoken by that new arrival from Scotland, John Witherspoon, now President of the College of New Jersey, in a revolutionary sermon on *The Dominion of Providence over the Passions of Men*, a tract reprinted in Scotland and England.[127] The same year saw the churchman George Horne, at Oxford, preaching on *The Providence of God Manifested in the Rise and Fall of Empires*: Providence was 'the divine oeconomy in the government of the world from the beginning'. Empires too were mortal: 'The Assyrian, the Babylonian, the Persian, the Graecian, the Roman – where are they?'[128]

The rise and fall of empires became a yet wider issue after 1789. The Unitarian Dissenting minister Newcome Cappe's insights, preached as sermons in 1786–7, were published in 1795 and aimed at 'Times so awful as the present': yet he was no determinist, urging that

> we stand in awe of those events, that come to pass but once in a course of ages, and acknowledge them to be divine; we overlook the miracles that God is working in us, and around us, every day. Whatever is common, we say, is natural: often we hardly know what we mean when we say so. We receive the ordinary occurrences of life, with such sentiments, as if they were truly the result of chance, or the effects of an unintelligent fatality, and speak of them in such terms, as sufficiently indicate, that the divine agency and providence enter not into our common notions of them.

Cappe argued for mankind's dependence every moment on God.[129] But Unitarian theology did not offer an unambiguous solution to this problem. Another Unitarian minister, John Disney, accepted in 1803 the general principle of the progressive fulfilment of prophetic Scriptural passages, but warned how 'little precision can be obtained with respect to many inferior occurrences', so that 'much is therefore left open to conjecture'; men should 'hesitate' before they claimed Providence on their side.[130]

Would Providence defend Britain from the cataclysm of revolution? If national survival hung by a thread, the old issues were newly pressing. From Oxford, Thomas Etherington combated Jacobinism in 1799 by defending Providence and illustrating it from Aristotle.[131] In 1806

Vigors M'Culla, a Dissenting minister, saw the hand of God, behind that of the Royal Navy, in Britain's deliverance.[132] Events since 1789 manifestly displayed the hand of God, argued Richard Warner in 1814; they had had the divinely intended effect of 'a revival of the religious spirit throughout Europe'.[133] *National Providence* was the theme of a long tract by the Bishop of Calcutta in 1815. The fall of Napoleon was an event that 'the ordinary operation of natural causes' was wholly insufficient to explain, he urged; the events of the French Revolution his contemporaries had witnessed 'are perhaps as instructive and as awful, as any which the annals of the world record'.[134] For William Thorp, in 1831, Providence was acting through British patriotism 'in spreading the blessings of eternal salvation, through the most distant regions of the world' by missionary endeavour. All earthly kingdoms must fall, but this one was preparing the way for the kingdom of God: a mission only lately thrown in doubt by Catholic Emancipation, passed 'for what reason no mortal can tell'.[135]

The secularization of Providence: the 'Whig interpretation of history'

Throughout these debates, it remained a consistent theme that Providence concerned nations as such, as well as individuals as such. 'National Sins call for national Judgments', argued the Rev. Francis Fox, Whig churchman, in 1705.[136] 'SOVEREIGN PRINCES and STATES are the Chief Instruments which Divine Providence imploys in its Administrations here below', recorded Bishop Atterbury in his *Maxims*, published in 1723 after the failure of the Jacobite conspiracy that took his name, and he went on to reflect on the issue at length: again, the Restoration of 1660 was an undoubted providence.[137] This familiar insight encouraged Christians of whatever denomination to extend it by constructing catalogues of national providences, a scenario that in the nineteenth century was secularized to become the organizing framework known since 1931 as 'the Whig interpretation of history'. The Rev. Thomas Harrison, in 1717, offered a catalogue of providential punishments in England, including the plagues of 1348, 1361, 1407, 1563, 1603 and 1665; the Fire of London in 1666; and a series of violent storms like 1091, 1661 and 1703: these must be set against 'Instances of God's Kindness to us', like the discovery of the Gunpowder Plot in 1604, the Revolution of 1688 and the defeat of the rebellion in 1716.[138] In 1790 an Evangelical, the Rev. C. E. de Coetlogon, celebrated three key instances of Providence in English history: the Reformation, the Restoration and the 1688 Revolution.[139] In 1800 Thomas James, formerly Headmaster of Rugby School, added to these providential deliverances the

Armada, the Gunpowder Plot and now the war that 'has, through the protection of the Almighty, saved us from that revolutionary abyss into which we seemed to be fast approaching'.[140]

This organizing framework yielded a perspective on history that could become progressively more synoptic. Samuel O'Sullivan, Fellow of Trinity College Dublin, wrote in 1816 a historical overview of British history since 1688 that rested on both free will and divine foreknowledge. He quoted William Robertson's *The History of the Reign of the Emperor Charles V* (1769) in favour both of what Robertson had acknowledged as 'miracles and prophecies' and of Robertson's argument that 'the same hand which planted the Christian religion, protected the reformed faith'. Once this long-term pattern in human affairs was revealed, it would be as 'preposterous … to deny, that the whole was contrived by the wisdom, and upheld by the power of Providence, as it would be in the astronomer, now that the order of the heavenly bodies stands revealed in the full blaze of science, to deny the presiding divinity of HIM, who suspended, and set in motion the universe'.[141]

O'Sullivan appropriately looked to Robertson, Presbyterian of the Moderate party and Scotland's leading historian, for reflections on the role of Providence in history. Robertson's volumes embodied a number of vocabularies, and the 'Protestant-providential' was unavoidably one of them: for him as for many Whigs, progress was underwritten by a larger providential scheme. For a predestinarian, even a Calvinist with softened edges, the record of history would be especially declarative of divine purpose.[142] In this, Robertson expressed a familiar position: it was Hume and Gibbon who in their religious scepticism were exceptional in their own day. Only in the century that followed were they rehabilitated, as Providence slowly elided into Progress. Robertson was unusual among historians, it has been suggested, chiefly in the complexity of his thinking about Providence,[143] not in having conceded Providence a place at all.

Does God play dice?

Much in the historiography of the subject that had become conventional by the late twentieth century was at bottom a theory of secularization.[144] Yet this theory was an oversimplification, and sometimes a parody of a culture in which religion, however changing, was subject to no such marginalization as the term 'secularization' now proposes. Changes occurred, and were eventually major ones when the so-called 'holy alliance' between natural science and the Church of England was broken down in the nineteenth century. As natural science and

Anglican theology were then increasingly pictured as alternatives, not allies, the first increasingly profited and the second lost. But the effects of the division were ambiguous: the world could increasingly be explained in terms of secular, rational causes, but those causes could often seem trivial, blind and capricious.

Chance rather than reason could be the beneficiary of nineteenth-century 'secularization'; even a materialist determinism seemed a more attractive option to many in the twentieth century than a merely random model. These options were famously confronted in Darwinian evolution theory, and recurred in their most generalized form in quantum physics; yet even here a final answer proved elusive. In the twentieth century physicists echoed an old issue with the new question: 'does God play dice?' This is, of course, a problem yet unresolved.[145] Physics and cosmology still have the capacity to remake themselves, and the latest destabilizing element in the debate is the hypothesis that the speed of light is not constant: if that hypothesis is correct, historical method, and the theological problems concerning God's relationship to man in history, will also need to be rethought. Herbert Butterfield, who did much in Cambridge to found post-Whig historiography by his stress on complexity and unpredictability, was also drawn back to an earlier terminology of 'vicissitudes' and 'chances and changes'.[146] His argument had a delayed impact: in the humanities and social sciences, the last thirty years have seen the breakdown in area after area of the old overdetermined models and social-structural certainties.[147]

It may indeed have been modernism or positivism in the late nineteenth century that produced the real erosion of providential discourse, rather than any of the changes conventionally appealed to by historians who located an 'Enlightenment' in the eighteenth century or the seventeenth.[148] At the same time, historical explanations of those later polemical projects are eroding their claims to self-evidence. One consequence is that 'the Enlightenment' can no longer be simplistically characterized as a process of awakening to realities, a discovery and implementation of the ordered nature of things. Far fewer scientists are currently willing to describe the natural world in that way, and historians in turn are now obliged to record a continuing doubt. Final victory has eluded the champions of chance and of necessity. Indeed, the element of order that humanity perceives in its affairs expands and contracts over time. Confident systematizing has been repeatedly contradicted by human vicissitude and natural catastrophe. Within a merely secular framework of interpretation, the definitive triumph of order is hard to find.

Notes

1. For comments on this essay I am indebted to David Bergeron, Diana Donald, Richard Eversole, Richard Hardin, Frank O'Gorman and John Walsh. I am grateful to Katherine Clark for guidance on Daniel Defoe.
2. Roy Porter, *Enlightenment: Britain and the Creation of the Modern World* (London: Allen Lane, 2000), p. 13. This essay is intended as a tribute to my late colleague, and an attempt to honour his memory by continuing our debate.
3. '… mainstream [religious] observance became divested of supernatural and spiritual elements … The new hopefulness was often predicated upon claims to lay bare the springs of human nature'; Hume thought he could show by observation 'the constant and universal principles of human nature'; 'Prayers and pieties continued, but in the ubiquitous worldly atmosphere devout habits of trusting to Providence were challenged by a new eagerness to practise self-help and take charge where possible'; 'The sick no longer needed to abandon themselves to their fate: knowledge and skill would save lives'; 'The programmatic shift from Christian Providentialism to more secular, scientific world views': Porter, *Enlightenment*, pp. 128, 161, 177, 206, 211, 229.
4. Keith Michael Baker and Peter Hanns Reill (eds), *What's Left of Enlightenment? A Postmodern Question* (Stanford, CA: Stanford University Press, 2001). For other sorts of qualifications to the use of the term, see, for example, Jeremy Black, *Eighteenth Century Europe*, 2nd edn (London: Macmillan, 1999), pp. 246–62.
5. '… the problem lay in ensuring that private fulfilment did not subvert public orderliness': Porter, *Enlightenment*, p. 18.
6. Porter's argument that 'Probabilistic thinking to some extent replaced Providence' (*Enlightenment*, p. 149 and elsewhere) is evidenced only by reference to modern work on mathematical probability; Porter did not balance it against evidence on Providence. Although historians of mathematics still incline to a 'triumphalist' view, for a more nuanced account see, for example, Barbara J. Shapiro, *Probability and Certainty in Seventeenth-Century England* (Princeton, NJ: Princeton University Press, 1983). Shapiro argues that the empirical and the probable rose together in seventeenth-century England, so strengthening the claims of Providence.
7. Ab[raham] Campion, *A Sermon concerning National Providence* (Oxford, 1694), p. 2.
8. John Case, *The Angelical Guide* (London, 1697), sig. B4v (italics and roman reversed).
9. For a similar and widespread willingness to read social and political meanings into natural phenomena, see Keith Thomas, *Religion and the Decline of Magic* (1971; Harmondsworth: Penguin, 1973), nevertheless treating such ideas as 'primitive survivals' (pp. 105, 125); Dudley Wilson, *Signs and Portents: Monstrous Births from the Middle Ages to the Enlightenment* (London: Routledge, 1993); Lorraine Daston and Katharine Park, *Wonders and the Order of Nature 1150–1750* (New York: Zone Books, 1998); Alexandra Walsham, *Providence in Early Modern England* (Oxford: Oxford University Press, 1999); Vladimir Jankovic, *Reading the Skies: A Cultural History of English Weather* (Manchester: Manchester University Press, 2000) and 'The Politics of Sky Battles in Early Hanoverian Britain', *Journal of British Studies*, 41 (2002), pp. 429–59; William E. Burns, *An Age of Wonders: Prodigies,*

Politics and Providence in England 1657–1727 (Manchester: Manchester University Press, 2002). It will be argued here that although this 'culture of wonders' declined in the early eighteenth century, providential discourse as a whole did not, and is not to be understood (cf. Thomas, *Religion*, p. 129) as a survival, inconsistent with other intellectual disciplines.

10. 'The heavens when they be pleased may turn the wheel/Of Fortune round, when we that are dejected / May be again raised to our former height' (Act 1, Scene 2).
11. Richard Cumberland, *The Wheel of Fortune: A Comedy. Performed at the Theatre-Royal, Drury-Lane* (London, 1795), p. 79.
12. *The Entertainment perform'd at the Theatre-Royal in Dorset-Garden, at Drawing the Lottery call'd the Wheel of Fortune: Being the Speeches addrest to the Spectators, as Prologues and Epilogues* (London, 1698), pp. 1–2. This contrasts with Roy Porter's argument that 'The staging of public lotteries – their philosophy of luck seemingly at odds with Providentialism – symbolizes this more secular bent' associated with the management of risk; 'the taming of chance' was 'the denial or distancing of the transcendental': *Enlightenment*, pp. 208–9.
13. *Prologue Design'd for the new last Farce, call'd, The Fool's Expectation: Or, The Wheel of Fortune* (London, 1698).
14. Daniel Defoe, *The Life and Strange Surprizing Adventures of Robinson Crusoe, of York, Mariner* (London, 1719; Harmondsworth: Penguin, 1985), pp. 38, 80, 121, 125. For much of the twentieth century, this novel was conventionally explained via the themes of realism, adventure narrative or political economy. For a recognition of its providential preoccupations see G. A. Starr, *Defoe & Spiritual Autobiography* (Princeton, NJ: Princeton University Press, 1965) and J. Paul Hunter, *The Reluctant Pilgrim: Defoe's Emblematic Method and Quest for Form in Robinson Crusoe* (Baltimore, MD: Johns Hopkins University Press, 1966). G. A. Starr, *Defoe & Casuistry* (Princeton, NJ: Princeton University Press, 1971) explores another theological aspect.
15. Henry Fielding, *Examples of the Interposition of Providence in the Detection and Punishment of Murder. Containing, Above thirty Cases, in which this dreadful Crime has been brought to Light, in the most extraordinary and miraculous Manner; collected from various authors, antient and modern* (London, 1752); cf. the anonymous *A Warning Piece against the Crime of Murder: or, an Account of many Extraordinary and most Providential Discoveries of Secret Murders. From whence it will appear, That, however secretly they are committed, Providence will interpose, and bring them to Light and Punishment* (London, [1752]).
16. Thomas Beard, *The Theatre of God's Judgements* (London, 1597).
17. *A Compleat History of the Most Remarkable Providences, both of Judgment and Mercy, Which have Happened in this Present Age … being a Work set on Foot Thirty Years Ago, by the Reverend Mr. Pool … Finish'd, by William Turner, MA Vicar of Walberton in Sussex* (London, 1697).
18. Jonathan Dickenson, *God's Protecting Providence, Man's Surest Help and Defence … evidenced in the remarkable deliverance of Robert Barrow … from the devouring waves of the Sea …* (London, 1700; 7th edn, 1790).
19. *French and Indian Cruelty: Exemplified in the Life, And various Vicissitudes of Fortune, of Peter Williamson* (York, 1757; 6th edn, Edinburgh, 1792).
20. James Stanier Clarke, *Naufragia or Historical Memoirs of Shipwrecks and of the Providential Deliverance of Vessels*, 2 vols (London, 1805–6).

21. *Mr. James Janeway's Legacy to his Friends, containing twenty-seven instances of God's providences in sea-dangers, whereunto is added a sermon on the same subject* (London, 1675).
22. It was written up by Steele (without title) in *The Englishman* in 1713, and reported in Edward Cooke's *A Voyage to the South Sea*, 2 vols (London, 1712).
23. [Richard Marks], *The Retrospect, or, Review of Providential Mercies* (London, 1816).
24. Thomas Young, *Monumental Pillars; or, A Collection of Remarkable Instances of the Judgment, Providence, and Grace of God* (London, 1818).
25. Joseph Taylor, *Remarkable Providences; or, the Mercies of God exemplified in many extraordinary Instances of Men, Women and Children being almost miraculously preserved from premature death* (London, 1821).
26. J. C. D. Clark, *English Society 1660–1832: Religion, Ideology and Politics during the Ancien Régime* (Cambridge: Cambridge University Press, 2000), pp. 1–13, 'Keywords' and *passim*.
27. Jonathan Owen, *England's Warning, by Late Frowning Providences: Especially the Immediate Hand of God upon the Straits-Fleet* (London, 1694), sig. A3v, p. 7.
28. [Edward Fowler], *A Discourse of the Great Disingenuity & Unreasonableness Of Repining at Afflicting Providences* (London, 1695), p. 68.
29. William Offley, *The Power and Providence of God Consider'd and Asserted* (London, 1704), p. 11.
30. John Mason, *The right Improvement of alarming Providences* (London, 1750), p. 18.
31. Richard Harrison, *The Wisdom and Righteousness of the Divine Providence Illustrated from the Character of Job. In a Sermon Preached at Honiton, the 25th Day of August, 1765. Being the First Sunday after the late dreadful Fire* (Exeter, [1765]).
32. [John Bowden], *The Explosion: or, An Alarming Providential Check to Immorality* (Chester, 1773).
33. Joseph Allen, *The special Interposition of Divine Providence the ground of National Humiliation for National Sins* (London, 1832).
34. John Ogilvie, *Providence. An Allegorical Poem. In Three Books* (London, 1764), p. viii.
35. Robert Wallace, *Various Prospects of Mankind, Nature and Providence* (London, 1761), p. 168.
36. David Kubrin, 'Newton and the Cyclical Cosmos: Providence and the Mechanical Philosophy', *Journal of the History of Ideas*, 28 (1967), pp. 325–46; I. Bernard Cohen, 'Isaac Newton's Principia, the Scriptures, and the Divine Providence', in Sidney Morgenbesser *et al*. (eds), *Philosophy, Science and Method: Essays in Honor of Ernest Nagel* (New York: St Martin's Press, 1969), pp. 523–48; M. A. Hoskin, 'Newton, Providence, and the Universe of Stars', *Journal for the History of Astronomy*, 8 (1977), pp. 77–101.
37. Quoted in Kubrin, 'Newton', p. 325.
38. Kubrin, 'Newton', pp. 338–9.
39. Cohen, 'Isaac Newton's Principia', points out that Newton's views on God became publicly apparent only with the 'Queries' published in the second (Latin) edition of the *Opticks* (1706) and the 'General Scholium' written in 1712–13 for the second edition of the *Principia* (1713), but that they were present from Newton's earliest drafts.
40. Quoted in Hoskin, 'Newton, Providence', p. 77.
41. Richard Bentley, *The Folly and Unreasonableness of Atheism … In eight sermons* (London, 1693); Henry Guerlac and M. C. Jacob, 'Bentley, Newton and

Providence (The Boyle Lectures Once More)', *Journal of the History of Ideas*, 30 (1969), pp. 307–18; Margaret C. Jacob, *The Newtonians and the English Revolution 1689–1720* (Hassocks: Harvester, 1976), ch. 5, 'The Boyle Lectures and the Social Meaning of Newtonianism'.

42. Quoted in Peter Harrison, 'Newtonian Science, Miracles, and the Laws of Nature', *Journal of the History of Ideas*, 56 (1995), pp. 531–53, at p. 537, an article which documents similar later arguments in William Whiston and Samuel Clarke.
43. Harrison, 'Newtonian Science', p. 544.
44. Ab[raham] Campion, *A Sermon concerning National Providence* (Oxford, 1694), p. 15.
45. Sir Humphry Mackworth, *A Treatise concerning Providence: By Way of Dialogue*, 2nd edn (London, 1704), p. 1.
46. Henry Stebbing, *A Discourse concerning the Providence of God* (London, 1757), pp. 3–4.
47. Joseph Priestley, *The Doctrine of Philosophical Necessity Illustrated: being an appendix to the Disquisitions relating to matter and spirit* (London, 1777).
48. Joseph Fawcett, *An Essay on the Wisdom, the Equity, and the Bounty of Divine Providence* (Ewood Hall, 1797), p. 5.
49. W. Tucker, *Predestination Calmly Considered from Principles of Reason, in consistency with the Nature of Things, and the Scriptures of Truth, in a series of letters to a friend* (London, 1798), p. 5.
50. Thomas Etherington, *The Being and Attributes of God, Deduced from the Works of Creation; and Divine Providence asserted and defended* (London, 1799), p. 14.
51. David Savile, *Dissertations on the Existence, Attributes, Providence, and Moral Government of God* (Edinburgh, 1807), p. 117.
52. Porter, *Enlightenment*, pp. 140–1.
53. Simon Schaffer, 'Newtonianism', in R. C. Olby *et al*. (eds), *Companion to the History of Modern Science* (London: Routledge, 1990), pp. 610–26.
54. Ivo Schneider, 'Christiaan Huygens's Contribution to the Development of a Calculus of Probabilities', *Janus*, 67 (1980), pp. 269–79.
55. Arbuthnot added: 'all the Politicks in the World, are nothing else but a kind of Analysis of the Quantity of Probability in casual Events, and a good Politician signifies no more, but one who is dexterous at such Calculations': [Christiaan Huygens], *Of the Laws of Chance, or, a Method of Calculation of the Hazards of Game* (London, 1692), Preface, non-paginated.
56. Christiaan Huygens, *The Celestial Worlds Discover'd: or, Conjectures Concerning the Inhabitants, Plants and Productions of the Worlds in the Planets* (London, 1698), p. 11.
57. Abraham de Moivre, *The Doctrine of Chances: or, A Method of Calculating the Probability of Events in Play* (London, 1718), sig. A2v, pp. iv, vi.
58. 'God's benevolence resolved the theodicy problem': Porter, *Enlightenment*, p. 17.
59. G. W. Leibniz, *Essais de Théodicée sur la Bonté de Dieu, la Liberté de l'Homme, et l'Origine du Mal* (Amsterdam, 1710).
60. Mackworth, *A Treatise concerning Providence*, pp. 33–4.
61. T. L. Bushell, *The Sage of Salisbury: Thomas Chubb 1679–1747* (London: Vision, 1968), pp. 17, 23, 51–2, 88–9.
62. Joseph Hallett, *The Consistent Christian: being a Confutation of the Errors advanced in Mr Chubb's late Book: intituled, The true Gospel of Jesus Christ asserted … With Remarks on his Dissertation on Providence* (London, 1738), pp. 40–1.

63. R. M. Burns, *The Great Debate on Miracles: From Joseph Glanvill to David Hume* (London: Associated University Presses, 1981).
64. Laws of nature had formerly been chiefly a philosophical construct, understood no longer as immanent principles in nature but by analogy with the commands of an omnipotent Deity. See Francis Oakley, 'Christian Theology and the Newtonian Science: The Rise of the Concept of the Laws of Nature', *Church History*, 30 (1960), pp. 433–57; John R. Milton, 'The Origin and Development of the Concept of the "Laws of Nature" ', *European Journal of Sociology*, 22 (1981), pp. 173–95; Harrison, 'Newtonian Science, Miracles, and the Laws of Nature' (1995).
65. Robert Boyle, *A Free Inquiry into the Vulgarly received notion of Nature*, in *Works*, V, pp. 163–4, quoted in Oakley, 'Christian Theology and the Newtonian Science', p. 448.
66. Richard Westfall, *Science and Religion in Seventeenth Century England* (Hamden, CT: Archon Books, 1970), p. 204. 'Leading scientists of this [Newton's] era, almost without exception, had a dual commitment on the one hand to a science premised upon a mechanical universe governed by immutable laws of nature and on the other to an omnipotent God who intervened in the natural order from time to time, breaching these "laws" of nature': Harrison, 'Newtonian Science', p. 531.
67. Major works in the debate included [Charles Blount], *Miracles no Violation of the Laws of Nature* (London, 1683); John Locke, 'A Discourse of Miracles', in *Posthumous Works* (London, 1706); Anthony Collins, *A Discourse of the Grounds and Reasons of the Christian Religion* (London, 1724); Samuel Chandler, *A Vindication of the Christian Religion* (London, 1725); William Warburton, *A Critical and Philosophical Enquiry into the Causes of Prodigies and Miracles, as Related by Historians* (London, 1727); Thomas Woolston, *Six Discourses on the Miracles of our Saviour* (London, 1727–8); Zachary Pearce, *The Miracles of Jesus Vindicated* (London, 1729); Thomas Sherlock, *The Tryal of the Witnesses of the Resurrection of Jesus* (London, 1729); Conyers Middleton, *A Letter from Rome, shewing an exact conformity between Popery and Paganism* (London, 1729); John Conybeare, *A Defence of Revealed Religion* (London, 1732); Joseph Butler, *The Analogy of Religion* (London, 1736); Caleb Fleming, *An Answer to Mr. Thomas Chubb's Book, entitled, The True Gospel of Jesus Christ* (London, 1738); *idem*, *Remarks on Mr. Thos. Chubb's short Dissertation on Providence* (London, 1738); Thomas Chubb, *A Discourse on Miracles* (London, 1741); Arthur Ashley Sykes, *A Brief Discourse Concerning the Credibility of Miracles and Revelation* (London, 1742); Abraham Lemoine, *A Treatise on Miracles* (London, 1747); Conyers Middleton, *A Free Enquiry into the Miraculous Powers, which are Supposed to have Subsisted in the Christian Church from the Earliest Ages* (1749); William Dodwell, *A Free Answer to Dr. Middleton's Free Inquiry* (London, 1749); [John Wesley], *A Letter to the Reverend Dr. Conyers Middleton* (London, 1749). Hume was also eclipsed by the controversy that followed Conyers Middleton's *An Examination of the Lord Bishop of London's Discourses concerning the Use and Intent of Prophecy* (London, 1750).
68. Early responses to Hume on miracles were few in number by comparison with the contributions to the debate on Providence: [David Hume], *Philosophical Essays Concerning Human Understanding* (London, 1748), section 10, 'Of Miracles'; William Adams, *An Essay on Mr. Hume's Essay on Miracles* (London, 1752); John Leland, *A View of the Principal Deistical Writers*, 3 vols (London,

1754–6); David Hume, *Four Dissertations. I. The Natural History of Religion …* (London, 1757); [Richard Hurd], *Remarks on Mr. D. Hume's Essay on the Natural History of Religion; addressed to the Rev. Dr. Warburton* (London, 1757); [S. T.], *Remarks on the Natural History of Religion by Mr. Hume* (London, 1758); George Campbell, *A Dissertation on Miracles; containing an examination of the principles advanced by D. Hume, Esq. In an Essay on Miracles* (London, 1762); Richard Price, *Four Dissertations* (London, 1767). There was little more before the publication of Hume's *Dialogues Concerning Natural Religion* in 1779.

69. Quoted in Oakley, 'Christian Theology', p. 437.
70. Walter Charleton, *The Darkness of Atheism dispelled by the Light of Nature: a physico-theological Treatise* (London, 1652), cited in Oakley, 'Christian Theology', pp. 444–5.
71. Robert Boyle, *Some considerations about the Reconcileableness of Reason and Religion*, in *Works*, IV, p. 159, quoted in Oakley, 'Christian Theology', p. 445.
72. Ted A. Campbell, 'John Wesley and Conyers Middleton on Divine Intervention in History', *Church History*, 55 (1986), pp. 39–49; David Wootton, 'Hume's "Of Miracles": Probability and Irreligion', in M. A. Stewart (ed.), *Studies in the Philosophy of the Scottish Enlightenment* (Oxford: Clarendon Press, 1990), pp. 191–229.
73. Slingsby Bethel, *The Providences of God, observed through several ages, towards this nation, in introducing the true religion* (London, 1691), p. 40; Campion, *Sermon concerning National Providence*, p. 12.
74. Henry Topping, *The Certainty of an Over-ruling Providence. A Sermon Preach'd … at the Cathedral Church of St. Paul. On May 29. 1715. Being the Restoration of King Charles II* (London, 1715), p. 8.
75. [Samuel Roffey Maitland], *Eruvin: or, Miscellaneous Essays on Subjects connected with the Nature, History and Destiny of Man* (London, 1831), pp. 250–2.
76. Jane Fearon, *Absolute Predestination not Scriptural* (London, 1705), pp. 17–18 and *passim*.
77. John Atkinson, *A Discourse of Election* (London, 1708), sig. A2r.
78. William King, *Divine Predestination and Fore-knowledg, consistent with the Freedom of Man's Will. A Sermon Preach'd at Christ-Church, Dublin; May 15. 1709* (London, 1709), pp. 4, 8 and *passim*.
79. [Anthony Collins], *A Vindication of the Divine Attributes. In some Remarks On his Grace the Archbishop of Dublin's Sermon, Intituled, Divine Predestination and Foreknowledge consistent with the Freedom of Man's Will* (London, 1710), pp. 12–13.
80. John Edwards, *The Divine Perfections Vindicated; or, some brief Remarks On his Grace William Lord Arch-Bishop of Dublin's Sermon* (London, 1710).
81. Thomas Chubb, *The True Gospel of Jesus Christ Asserted … To which is added A Short Dissertation on Providence* (London, 1738), pp. 197, 207–10.
82. T. Morgan, *Physico-Theology: or, a Philosophico-Moral Disquisition concerning Human Nature, Free Agency, Moral Government, and Divine Providence* (London, 1741), p. v.
83. [Caleb Fleming], *Remarks on Mr. Tho. Chubb's short Dissertation on Providence. With Animadversions on his True Gospel of Jesus Christ asserted* (London, 1738), pp. ix–x, 16, 93 and *passim*.
84. Caleb Fleming, *Remarks on Mr. Thomas Chubb's Vindication of his True Gospel of Jesus Christ … His Vindication of his Short Dissertation on Providence consider'd* (London, 1739), pp. 65–6.

85. Lawrence Jackson, *An Examination Of a Book intituled The True Gospel of Jesus Christ Asserted, By Thomas Chubb: And also of His Appendix on Providence* (London, 1739), pp. 256, 261–2.
86. *The Works of the late Right Honorable Henry St. John, Lord Viscount Bolingbroke*, ed. David Mallet, 5 vols (London, 1754), 8vo edn, V, p. 85.
87. William Dodwell, *The Doctrine of a Particular Providence stated, confirmed, defended and applied* (Oxford, 1760), pp. 1–3, 6.
88. Thomas Hobbes, *Of Liberty and Necessitie* (London, 1654); John Bramhall, *A Defence of True Liberty from Antecedent and Extrinsecall Necessity, being an answer to a late book of Mr Thomas Hobbs of Malmsbury, intituled, 'A Treatise of Liberty and Necessity'* (London, 1655); Thomas Hobbes, *The Questions Concerning Liberty, Necessity and Chance* (London, 1656); John Bramhall, *Castigations of Mr. Hobbes his last animadversions in the case concerning liberty, and universal necessity* (London, 1658).
89. Leopold Damrosch, Jr, 'Hobbes as Reformation Theologian: Implications of the Free-Will Controversy', *Journal of the History of Ideas*, 40 (1979), pp. 339–52; Vere Chappell (ed.), *Hobbes and Bramhall on Liberty and Necessity* (Cambridge: Cambridge University Press, 1999); Yves Charles Zarka, 'Liberty, Necessity and Chance: Hobbes's General Theory of Events', *British Journal for the History of Philosophy*, 9 (2001), pp. 425–37.
90. 'Luther and Calvin took away freedom so that man's will might be merged in God's; Hobbes takes it away so that events may unwind with an inexorability that Bramhall rightly likens to Stoic fate': Damrosch, 'Hobbes as Reformation Theologian', p. 346. Damrosch shows how the theological setting of the question of free will is made far more explicit in the debate with Bramhall than in Hobbes's *Leviathan* (1651).
91. Hobbes, *The Questions Concerning Liberty, Necessity and Chance*, sigs. A2r–v.
92. For the free will debate see John Locke, *An Essay Concerning Humane Understanding* (London, 1690), Book II, Chapter xxi.
93. Richard Warner, *Divine Providence Evidenced in the Causes, Consequences and Termination of the late War* (Bath, [1814]), pp. 7–8.
94. See, for example, William L. Rowe, 'Causality and Free Will in the Controversy between Collins and Clarke', *Journal of the History of Philosophy*, 25 (1987), pp. 51–67.
95. For which see especially W. Stephen Gunter, *The Limits of 'Love Divine': John Wesley's Response to Antinomianism and Enthusiasm* (Nashville, TN: Kingswood Books, 1989); Herbert Boyd McGonigle, *Sufficient Saving Grace: John Wesley's Evangelical Arminianism* (Carlisle: Paternoster Press, 2001).
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2

'One is All, and All is One': The Great Chain of Being in Berkeley's *Siris*

Costica Bradatan

In this essay I discuss how the topic of the Great Chain of Being, seen as a metaphysical principle making possible the cosmic order, came to be employed by George Berkeley (1685–1753) in his *Siris* (1744). *Siris* is a rather curious philosophical piece, as in it Berkeley proposes a panacea, namely tar-water, which places him in the long (especially alchemical) tradition of the quest for the *elixir vitae*. As I will show, both in *Siris* and in the alchemical works, what makes possible the existence and efficacy of the panacea is the special relationship it bears to the rest of the Creation, that is, its particular place and function within the 'Great Chain of Being'. Apart from any other similarities of language, terminology, or bibliographical authority, Berkeley shares with the alchemists a fundamental belief in the special powers that a certain 'link' within the cosmic chain ('vegetable tar' and *lapis philosophorum* respectively) comes to acquire, condense and manifest. It is essentially the same *principle of order* that operates in both cases. Moreover, what is equally interesting in both cases is that this 'chain' is not only of a cosmic nature, animating, unifying and interrelating objects in the outside world, but it is also *a chain unifying our own minds*, and conferring upon them order, unity and identity. It functions as an 'inner chain' connecting and interrelating our faculties and making them work properly.

The chapter has three parts. The first part is an introduction to *Siris*, and is dedicated to discussing the quest for *elixir vitae* in alchemy and in Berkeley's *Siris*. The second part deals with the theory of the Great Chain of Being as it is present in the alchemical tradition and in *Siris*, and the third part offers some concluding general remarks on the spirit of alchemy and on George Berkeley's late philosophical position.

Siris: a peculiar philosophical writing

In Berkeley's lifetime, the controversial *Siris* became one of his very few 'best-sellers'. Nevertheless, despite its being 'the most immediately influential of all Berkeley's books, with five editions in Dublin and London within the year', *Siris* does not in general interest researchers today, being 'most frequently ignored by modern Berkeley scholars'.[1] Most contemporary presentations of (or introductions to) Berkeley's philosophy simply omit to say anything about *Siris*. In a way, the present essay was born precisely out of a perceived need to do justice to this work. Unlike most modern Berkeley scholars, I believe that *Siris* is an important philosophical work, not only from a historical point of view (as a moment in the development of Berkeley's thought), but also from a purely philosophical standpoint (as a writing that illustrates excellently what might be called 'philosophy as palimpsest').[2]

As a matter of fact, *Siris* brought Berkeley trouble from the very beginning. For all its immediate success, it tended to amuse the sober-minded scholarly circles of Berkeley's day, making many of his learned contemporaries laugh at him.[3] It was seen by many as just another of the Bishop's oddities, something an intellectually serious person should not buy or read in public. Then, with the passing of time, this work has embarrassed many adepts of Berkeley's philosophy, and caused some hot disputes among his commentators.[4] *Siris* is indeed a peculiar piece of writing: it is a fascinating and puzzling book, a book about everything in the world, a text within which medical knowledge is curiously mixed with metaphysical speculations, alchemy is brought dangerously close to some of the findings of modern science, and the so-called 'natural philosophy' is dealt with in often surprising proximity with ancient esoteric doctrines and exotic ways of thinking. As Horace Walpole quipped, the book 'contains every subject from tar-water to the Trinity'.[5] In short, with this work, George Berkeley places himself in a tradition of thought that the modern 'scientific spirit' cannot but reject in the strongest terms. Thinking alchemically or esoterically about nature was at that time a self-indulgent philosophical oddity that, of all the promoters of the modern scientific spirit, only Isaac Newton could afford.

The question is, of course: why did Berkeley choose to write such an odd book? What were his intentions when writing this piece? What, precisely, made Berkeley embark on such a non-modern way of philosophizing and thinking about nature? What triggered, in biographical terms, this intellectual adventure? Very briefly, to use Berkeley's own words, he embarked on *Siris* with the intention

> to communicate to the public the salutary virtues of tar-water; to which I thought myself indispensably obliged by the duty every man owes to mankind. And, as effects are linked with their causes, my thoughts on this low but useful theme led me to farther enquiries, and those on to others, remote perhaps and speculative, but, I hope, not altogether useless or unentertaining.[6]

For Berkeley, these curative virtues are impressive and innumerable. He offers a long and detailed list of individual cases he knew of in which this medicine had been successful, as well as the numerous illnesses that could be cured using the wonder medicine. It proved to work well against all sorts of illnesses, of the most diverse nature: not only against various temporary affections, but also against more serious diseases. It had beneficial effects not only for the health of the body, but also for the well-being of the mind and the powers of the intellect. In a private letter written about the same time, George Berkeley even comes to confess that tar-water is for him nothing other than a *panacea*:[7]

> I freely own that I suspect tar-water is a panacea. I may be mistaken, but it is worth the trial: for the chance of so great and general a benefit, I am willing to stand the ridicule of proposing it … And if God hath given us so great a blessing, and made a medicine so cheap and plenty as tar to be withal so universal in its effects, to ease the miseries of human life, shall men be ridiculed or bantered out of its use, especially when they run no risk in the trial?[8]

As in the case of his 'Bermuda Project' some two decades earlier, Berkeley was again ready to 'stand the ridicule' of proposing something that, although deemed absurd or crazy by the majority, would, he believed, have tremendously beneficial effects on his neighbours' well-being, either in spiritual terms (the case of the 'Bermuda Project')[9] or simply in bodily terms (the case of tar-water). When such a major thing as easing the 'miseries of human life' was at stake, Berkeley thought, ridicule was indeed a very low price to pay. For someone whose 'sole end of all his projects, and the business of his life' was the 'charity to men's souls and bodies',[10] ridicule through proposing a panacea must have been relatively unimportant. However, apart from his touching readiness to stand the ridicule, what makes his enterprise even more remarkable is the fact that few modern academic, mainstream philosophers are prepared to deal with such a magic medicine, or panacea, as that proposed by Bishop Berkeley. There is, of course, the above-mentioned

exception of Isaac Newton, who also became very interested in the alchemic tradition, but he did not go as far as to propose panaceas. Hence the numerous misunderstandings to which Berkeley's proposal has given rise over the centuries.

To put it very briefly, the story in *Siris* goes like this: against the background of the terrible famine in Ireland in the early 1740s, of the subsequent epidemic and, more importantly, of the lack of professional physicians in his diocese, Berkeley (at that time Bishop of Cloyne) felt that he had to do something about the situation and to 'ease the miseries' of his neighbours' lives. During his stay in America in the late 1720s and early 1730s he had learned that tar-water was successfully used there as a medicine. He later received further confirmations that tar-water was used as a medicine in other parts of the world, too. Berkeley decided to recommend tar-water as a cure for the sick in his diocese. In order to make his case, he talked extensively of the various cases in which tar-water had worked well, explained its mode of preparation (by mixing pine tar with water, then allowing the mixture to settle, and finally draining off the clear fluid that resulted), and gave details about the best dosage to be used for the various kinds of maladies. The largest portion of the book, however, is dedicated to explaining why tar-water had these curative qualities. For this purpose, Berkeley employed the ancient topic of the 'Great Chain of Being': tar-water has amazing medicinal effects precisely because it is located towards the end of a cosmic chain, connecting one of the lowest forms of organic existence to the highest, God. Based on some botanical observations about the role of sunlight in plant physiology, Berkeley concluded that tar is nothing other than 'condensed light'. Then he significantly enlarged the discussion by placing it within a sophisticated Platonic framework of thought, in which the sun is a visible symbol of God, thus pointing to tar as a gift that God himself generously sent us. On this basis, Berkeley embarked on an extensive historical journey in search of those esoteric (theosophical, alchemic, hermetic) doctrines and authors who endorsed his own views on tar-water, the Great Chain of Being, and the cosmos as a divine epiphany. The book ends in this theological and speculative vein.

To today's readers it is the content of some of the 'scientific' information given in Berkeley's *Siris*, and the modalities of producing, exposing and testing it, that seem particularly outdated. Although 'he studied the best chemistry and physics of his day',[11] Berkeley did no more, from our retrospective point of view, than summarize and (re)deliver the markedly deductive and speculative statements of ancient, medieval or early modern science.[12] As one modern editor of Berkeley's *Siris* rightly

noticed, to 'read Berkeley's scientific sections is humiliating, for here one of our ablest and most learned minds is writing things which the most mediocre student of to-day knows to be wrong'.[13] In short, as a 'scientific approach', in the modern, generally received sense of the word, Berkeley's *Siris* is to be considered, wholly or in part, a failure.

Nevertheless, there is, I think, another, deeper aspect of this work that requires more particular attention and a more appropriate contextualization than it receives today. For, in some ways, considered in its *spirit* and within the broader context of the history of ideas, Berkeley's belief in tar-water as a panacea, as well as the whole historical and metaphysical argument he quite impressively employed to support that belief, could prove to be more significant and more fascinating as theory than many of the sober and more rigorous medical writings of the eighteenth century. Of course, his approach to tar-water will not satisfy the modern scientific mind. But his being 'right' or 'wrong' is of little import in this context. I believe that George Berkeley's considerations in *Siris*, if we are to make some deeper sense of them, and not simply reject them as backward-looking, are not to be judged by standards imposed by the subsequent developments in physics, chemistry and biology. If judged in that way, a sense of archaism is all that we gain from reading *Siris*.

It is one of the ideas underlying my approach in this essay that, in proposing his panacea, Berkeley was in fact placing himself in a long (especially alchemic) tradition of the quest for the *elixir vitae*, for some 'magic tincture' or medicine curing all illnesses, and supplying the patient with a number of outstanding attributes: perfect health, well-being, moral and intellectual betterment, and so forth. From the standpoint of the alchemic way of thinking, George Berkeley's puzzling approach was not a 'novelty', or an oddity at all; rather, it could be regarded as a late, even if somehow 'alienated', version of a powerful and widespread tradition. This explains many of the misunderstandings related to the reception of Berkeley's *Siris*. Even if it failed as a scientific or medical work (in today's sense of the word), it succeeded as a comprehensive and bold intellectual attempt at improving the 'human condition' and proposing, or dreaming of, a 'better life' for his fellow men. Berkeley's curious proposal of his panacea betrays a marked idealistic or utopian propensity in this regard. As far as today's reception of *Siris* is concerned, it is one thing to dismiss Berkeley's tar-water panacea as ancient medicine, but quite another thing – and a presumptuous one – to dismiss the whole alchemic cast of thought to which Berkeley's proposals belong. Berkeley openly placed his philosophizing in *Siris* within an alchemic framework of thinking, and in order to understand what this work was about we certainly

have to leave it there. Taking it out of this framework, and judging it by other standards, would be a recipe for misunderstanding. Within the alchemical traditions, one of the most important functions of the 'philosophers' stone' was to stand for a universal medicine (*elixir vitae*) capable of healing all illnesses, and bringing about a healthy, prolonged life. As E. J. Holmyard has put it, the 'Stone was also sometimes known as the Elixir or Tincture, and was credited not only with the power of transmuting but with that of prolonging human life indefinitely'.[14] For example, in one of his alchemical tracts, Paracelsus says:

> Having first invocated the name of the Lord Jesus Christ our Saviour, we will enterprize this Work; wherein we shall not only teach to change any inferiour Metal into better, as Iron into Copper, this into Silver, and that into Gold, & c., but also to help all infirmities, whose cure to the opinionated and presumptuous Physicians, doth seem impossible: But that which is greater, to preserve, and keep mortal men to a long, sound, and Perfect Age.[15]

As a matter of fact, within the Latin alchemical literature the equivalence between the Stone as a transmuting substance and as a panacea (*Lapis philosophorum seu medicina universalis*) is almost a commonplace, and this probably explains why alchemy has enjoyed such success over the centuries.[16] Despite the hardly intelligible terminology, one fact is relatively unambiguous and constantly endorsed by bibliographical evidence:[17] the special role played in the alchemical literature by the *lapis* as a medicine, as *elixir vitae*, whatever the differing names under which this is known: Red Tincture, *pharmakon athanasias*, *pharmakon zoes*, *aurum potabile* and the like. For example, in *Theatrum Chemicum Britannicum* (1652), a mention is made of

> … the Golden Oyle called *Aurum potabile*,
> A medicine most mervelous to preserve Mans health,
> And of Transmutation the greatest can bee …[18]

The Great Chain of Being

The possibility that Berkeley's speculations in *Siris* could be placed within the alchemic tradition of thinking is supported not only by the equation between *lapis philosophorum* and tar-water, but also by other arguments. That there might be an alchemic 'reading' of Berkeley's *Siris* has been noticed, even if with some embarrassment and regret, by some

of Berkeley's modern commentators,[19] and in 1954 A. D. Ritchie even gave a lecture at the British Academy on Berkeley's *Siris* announcing the possibility[20]. Unfortunately, Ritchie barely did more in his lecture than point to a possible alchemic reading of Berkeley's *Siris,* without going deeply into the argument, and without developing fully the consequences of his insight.

I would like to deal in this section with another important argument supporting the notion of the presence of alchemic ways of thinking in Berkeley's *Siris*. This argument is based upon the idea of the 'Great Chain of Being', resorted to by both Berkeley and the alchemists. Both in *Siris* and in the alchemic works, what actually makes possible the existence, power and efficacy of the panacea is the special relationship it bears to the rest of Creation, or, in other words, its particular place and function within the Great Chain of Being. George Berkeley shares with the alchemists a fundamental belief in the special virtues that certain links ('vegetable tar' and 'the philosophers' stone') within the chain come to acquire, condense and manifest.

The topic of the Great Chain of Being is one of the oldest and most prestigious metaphysical and cosmological notions employed throughout the history of European philosophy. As Arthur Lovejoy has put it, the Great Chain of Being is a 'conception of the plan and structure of the world' which, from remote antiquity down to the eighteenth century, 'many philosophers, most men of science, and, indeed, most educated men' accepted 'without question'. Structurally speaking, the universe is, according to this theory of the Great Chain of Being,

> composed of an immense, or … of an infinite, number of links ranging in hierarchical order from the meagerest kind of existents, which barely escape non-existence, through 'every possible' grade up to the *ens perfectissimum* – or … to the highest possible kind of creature, between which and the Absolute Being the disparity was assumed to be infinite – every one of them differing from that immediately above and that immediately below it by the 'least possible' degree of difference.[21]

Based, originally, on a set of religious and mythical suppositions, the notion that everything existing 'in Heaven and on Earth' is in some way unified, linked together and interconnected fitted perfectly into man's primordial need for *understanding* the world he lives in and its workings. According to this principle, there is nothing chaotic or arbitrary in the universe; everything is orderly and in its appointed place; everything has a role to play within the whole, and the whole could not exist (or,

anyway, could not work properly) if even the smallest part was incapacitated. As an epistemological consequence of the theory of the Great Chain of Being, the world becomes essentially *comprehensible*. This does not mean that we are enabled, in a mysterious way, to know instantly everything about the world, but we can know *how* to gain our knowledge of the world. One of the major merits of this theory is that it offers an explanation of how it is that our knowledge of the world *is possible*, and how precisely this knowledge is structured, produced and increased. From an acquaintance with those links which are immediately accessible, we can safely infer knowledge about the remoter links: based on what we are given in our immediate encounter with the world, we can make statements and predictions, and propose hypotheses about things which are, in virtue of their own nature, far away from us, if not out of our reach. The result is that, according to the theory of the Great Chain of Being, there is orderliness, hierarchy, interconnection, harmony, meaning and beauty in the world, and – what is equally important – our mind has the capacity of grasping them.

It is precisely this notion of the Great Chain of Being that the alchemists made use of, and that formed the basis of cosmological speculations. The idea of 'the harmony and unity of the universe, "One is All, and All is One", led to the belief that the universal spirit could somehow be pressed into service … by concentrating it, so to speak, in a particular piece of matter – the philosophers' stone'.[22] In fact, this fundamental principle postulating the unity of the world, in the particular form of an unseen cosmic chain penetrating and interconnecting everything, as well as conferring upon it a certain identity, homogeneity and continuity, could be recognized even in what is believed to be the very first and most important alchemic writing, namely *Tabula Smaragdina* (probably of the first or second century AC), a short Hermetic text attributed to the mythical founder of alchemy, Hermes Trismegistus:

> True it is, without falsehood, certain and most true. That which is above is like to that which is below, and that which is below is like to that which is above, to accomplish the miracles of one thing. And as all things were by the contemplation of one, so all things arose from one thing by a single act of adaptation.[23]

However sophisticated the speculations and refinements of the alchemic theories throughout the centuries became, they all echoed this original principle. Any modern definition of alchemy must take seriously into account the theory of the Great Chain of Being as one of its

fundamental components. Claudia Kren, for example, when trying to offer a synthetic description of alchemy, says:

> By almost universal agreement, alchemy in Western Europe was one of the products of a Hellenistic culture – Hermetic and neoplatonic – where the universe was a unified cosmos with all parts interrelated in a web of hierarchical correspondences and with all aspects in some way animate and active. This complex of semi-religious notions was joined by an influential theory which held that the elemental forms of matter were convertible one into another.[24]

This notion of a chain unifying everything in alchemy was not only a matter of historical coincidence, a theoretical device that just happened to be employed by the alchemic authors in their discourse, and without which the alchemy would have remained more or less the same. The notion of the 'unity of the world' belongs structurally and functionally to the alchemic way of thinking. As has been noted, the 'unity of matter' was one of the two '*a priori* postulates upon which the deductive reasoning of alchemy was mainly based', the other one being the existence of the transmuting agent. In the absence of a theory firmly postulating the unity and homogeneity of the world, the alchemists would have lost one of the main metaphysical and cosmological premises enabling them to believe in the very possibility of transmutation and, by way of consequence, in the existence and efficacy of their panacea. Moreover, from the notion of the unity of matter they derived another assumption, namely that of the 'philosophers' stone',

> the medicine of the base metals, would act also as a medicine of man; hence, in the form of the Elixir Vitae or Red Tincture, the stone was depicted as an agent for curing all human ills and conferring longevity. Herein may perhaps be perceived a Greek influence, emanating from the Platonic conception that nothing exists that is not good and from Aristotle's dictum that nature strives always towards perfection.[25]

In a strikingly similar manner Berkeley sought to explain in *Siris* how it is that such a thing as his panacea is possible.[26] This is one of the most remarkable aspects of *Siris* and, certainly, one of the most important arguments for its placement within the alchemic tradition. As a philosopher, Berkeley did not find it sufficient simply to propose his 'medicine' and list its magic virtues and qualities, without looking into what was behind it. He felt he had to look for, and offer, a serious philosophical explanation of how his panacea was *ontologically possible*. A panacea is not a thing like

any other; if it exists (and Berkeley thought it did), then there must be some deeper reasons accounting for its existence and for its magic powers. After describing in detail the mode in which tar-water is to be prepared, after listing the various forms of illness and medical case histories in which this medicine proved to be successful, and after inquiring into the chemical properties of the vegetable tar, Berkeley proceeds in *Siris* to propose the theory of the Great Chain of Being as making ontologically possible his panacea.[27] In perfect consistency with a long tradition, Berkeley sees the Great Chain of Being as the theory that there 'runs a chain throughout the whole system of beings. In this chain one link drags another. The meanest things are connected with the highest.'[28]

In pursuing his theory, Berkeley undertakes a detailed historical 'journey' in search of those ancient or modern 'past masters' (philosophers, poets, scientists, alchemists, physicians and so forth) supporting, in some way or other, his own ideas regarding the Great Chain of Being. Berkeley's approach in *Siris* is deeply interdisciplinary, highly speculative, and of an impressive theoretical openness and generosity. *Siris* (this title is based on the Greek word for 'chain') thus becomes the mirror-book of the Great Chain of Being. In its effort to reflect the scale of nature, the book turns itself into a chain of complex speculations pertaining to different academic fields which are progressively born out of one another: biology, chemistry, physics and so on. In other words, there is also a 'great chain of knowledge' charged with explaining how the Great Chain of Being works. As has been remarked, medicine 'leads Berkeley to botany, botany to chemistry, chemistry to metaphysics, and *Siris* finally comes to rest on the nature of God'.[29] Berkeley does this by tracing back his topic to the most ancient of its sources and promoters, to the mythical and theosophical views professed in ancient Egypt, or to the cosmological and metaphysical speculations of the early Greek (pre-Socratic) philosophers. He also makes repeated appeals to Plato, Aristotle, Plotinus and the Renaissance Platonists. He sympathetically summarizes the ancient doctrines, at the same time frequently alluding to the need for his own beliefs to be strengthened and supported by the dictums of the celebrated figures of the past. In a way, *Siris* has a distinct character of 'intertextuality': Berkeley's own words are constantly echoed by those of the others, just as the other authors' words are mirrored in his own wording. Their voices are mixed in a most harmonious way, and the result is a body of knowledge of a symphonic nature:

> If we may trust the Hermaic writings, the Egyptians thought all things did partake of life … [F]rom all the various tones, actions, and

> passions of the universe, they supposed one symphony, one animal act and life to result … It is a doctrine among other speculations contained in the Hermaic writings that all things are One. And it is not improbable that Orpheus, Parmenides, and others among the Greeks, might have derived their notion of *to hen*, THE ONE, from Egypt. Though that subtle metaphysician Parmenides, in his doctrine of *hen hestos*, seems to have added something of his own … one and the same Mind is the universal principle of order and harmony throughout the world, containing and connecting all its parts, and giving unity to the system.[30]

This train of thought, with its notion of succession, is reminiscent of a process of alchemic transformation, within which primary elements are successively combined with one another, resulting in more and more complicated substances. Furthermore, some of the notions that Berkeley borrows in this work from the ancient philosophers (the world as a symphony, the fundamental metaphysical unity behind the multiplicity of visible things, and so on) are closely related to a theme he had already touched on in his earlier philosophical works: namely, the world as a coherent system of signs and the cosmos as a divine epiphany. Once again, in *Siris* Berkeley seems to have pushed to the ultimate ideas which in his earlier writings he had only vaguely alluded to.

Berkeley openly uses the phrase 'Chain or Scale of beings' in its proper, traditional sense. He quotes Jamblichus's fragment asserting the 'world to be one animal', an animal whose parts

> however distant each from other, are nevertheless related and connected by one common nature … there is no chasm in nature, but a Chain or Scale of beings rising by gentle uninterrupted gradations from the lowest to the highest, each nature being informed and perfected by the participation of a higher. As air becomes igneous, so the purest fire becomes animal, and the animal soul becomes intellectual … each lower nature being, according to those philosophers, as it were a receptacle or subject for the next above it to reside and act in.[31]

It is interesting to notice at this point that, for Berkeley, this chain is not only of a cosmic nature, animating, unifying and interrelating the outside world, but it is also *a chain unifying our own minds*, and conferring upon them orderliness, unity and identity. It thus functions as an 'inner chain', connecting and interrelating our mental faculties and making them work properly. As a faithful mirror of the cosmos, the

human mind *reproduces* for itself, on a much smaller scale, the Great Chain of Being. The human mind is of such a nature that it *reflects* the hidden, complex architecture of the universe:

> By experiments of sense we become acquainted with the lower faculties of the soul; and from them, whether by a gradual evolution or ascent, we arrive at the highest. Sense supplies images to memory. These become subjects for fancy to work upon. Reason considers and judges of the imaginations. And these acts of reason become new objects to the understanding. In this scale, each lower faculty is a step that leads to one above it.[32]

And it is precisely through this inner chain that, in Berkeley's view, we have access to divinity. He believes, in an Augustinian manner, that the divine is precisely what we discover at the end of the 'inner ascension': 'the uppermost naturally leads to the Deity, which is … the object of intellectual knowledge'.[33] Consequently, this 'dual chain', manifesting itself both in the cosmic realm and in ourselves, points to the ancient analogy between macrocosm and microcosm, an analogy which plays a fundamental role within any alchemic tradition:

> As the Platonists held the intellect to be lodged in soul, and soul in aether; so it passeth for a doctrine of Trismegistus … that mind is clothed by soul, and soul by spirit. Therefore, as the animal spirit of man, being subtle and luminous, is the immediate tegument of the human soul, or that wherein and whereby she acts; even so the spirit of the world, that active fiery ethereal substance of light, that permeates and animates the whole system, is supposed to clothe the soul, which clothes the mind of the universe.[34]

Then, keeping in mind that 'luminous spirit lodged and detained in the native balsam of pines and firs',[35] tar emerges as a secretion of the vegetal realm coming to play a special role within the cosmic chain. Just as the *lapis philosophorum* condenses the noblest qualities of the cosmic chain, and carries within, in a concentrated form, its magic powers, so tar encapsulates, and makes manifest, the most powerful medicine that nature could offer. A. D. Ritchie says that the choice of tar is, in itself, another alchemic 'trace' in *Siris*: 'It was one of the alchemic doctrines that the "essence" of plants is to be found in aromatic or sweet-smelling constituents, especially when these are volatile and can be concentrated by distillation.'[36] Nevertheless, there are authors who believe that Berkeley's choice of the 'vegetable tar' is quite fortuitous.[37]

But how is it that tar proves to be so important a link within the cosmic chain? What precisely makes tar play such an important role? What are the inner workings of nature that make tar such a special substance?

At some point in his historical (as well as cosmological) 'journey', Berkeley comes to talk about 'a certain pure heat or fire, which had something divine in it, by the participation whereof men became allied to the gods'. This fire is not at all what we commonly designate by the word, it is not any ordinary, 'worldly' fire, but it has a definite metaphysical significance as something that had been the object of philosophical speculations from the ancient Greeks to the Renaissance Platonists. This fire is, in Berkeley's own words, the

> purest and most excellent fire, that is heaven, saith Ficinus. And again, the hidden fire that everyone exerts itself, he calls celestial. He represents fire as most powerful and active, dividing all things, abhorring all composition or mixture with other bodies … This is the general source of life, spirit, and strength, and therefore of health to all animals … The same spirit, imprisoned in food and medicines, is conveyed into the stomach, the bowels, the lacteals, circulated and secreted by the several ducts, and distributed throughout the system.[38]

And it is precisely such tar that, in Berkeley's opinion, best serves as 'a vehicle to this spirit'.[39] In a manner clearly reminding us of the alchemic speculations on *lapis philosophorum*, and of its complex religious symbolism (for example, the powerful symbolic relationship between gold and the sun), Berkeley sees the vegetable tar as having a special 'affinity' with the solar light, that is to say, it draws on 'the general source of life', as it grasps and concentrates light, disseminating and conveying to the animal body its regenerating powers: 'light attracted, secreted, and detained in tar … is not a violent and sudden medicine … but a safe and mild alterative, which penetrates the whole system, opens, heals, and strengthens, the remote vessels, alters and propels their contents, and enters the minutest capillaries'.[40] As a result, in virtue of the special relationship it bears with the metaphysical substratum of the world (that is, the celestial fire), tar, once properly prepared and consumed in appropriate doses, necessarily brings in us a fundamental 'restoration'. Due to this specific characteristic of the tar, our bodies are healthily and harmoniously reunited to the whole of the cosmic chain. Consistent with a long tradition of medical thinking, Berkeley saw health as a restoration of a lost equilibrium between bodily components, and as an appropriate insertion of the human body into the workings of nature. Tar does not

add anything new, or extraneous, to what already exists in the body, but simply helps it to find its lost equilibrium. Tar does not redress some fundamental ontological lack, but removes an accidental disfunctionality, for example, an unnatural change of rhythm or the preeminence of one humour over others. Health is not the absence of an illness (illness does not have a positive existence), but the state of well-being of the body. In the light of Berkeley's speculations about the tar-water and its working in the human body, it could be safely said that, for him, health is not so much a physiological state as an ontological one. Through an appropriate infusion of tar-water, we become who we really are, or more precisely what we ontologically should be, in terms of bodily integrity, the ideal balance between the humours and, especially, our appropriate situation in the cosmos. As in the case of traditional alchemy, where the philosophers' stone worked to assist the base materials fulfil their inner potentialities, in Berkeley's *Siris* tar-water helps our bodies better pursue their natural drives towards a state of well-being.

Most importantly, for Berkeley, tar functions as a special link within the cosmic chain due particularly to its peculiar capacity to retain, store and transform light: 'This balsam … abides the action of the sun, and, attracting the sunbeams, is thereby exalted and enriched, so as to become a most noble medicine: such is the last product of a tree, perfectly maturated by time and sun.'[41] In other words, to put it in an alchemical terminology, tar has the wonderful capacity to successfully 'transmute' light into life. I consider the passage where Berkeley talks about tar as 'a vehicle' for the spirit of life as the climax of the entire book. It is in this passage that we see how the divine wisdom, so generously cast upon the things of this world, undergoes some dramatic cosmic metamorphosis, and acquires the capacity to restore what in this world has become unwise, ugly or ill. With tar, the cosmic circle is closed, the world is reunited with God, and God manifests his infinite generosity and wisdom. It is this symbolism of light and fire, the dream of our 'restoration' and of a redeeming 'renewal' of our bodies, the notion of a smooth and harmonious reintegration of the human within the cosmic realm, that, once again, strengthens the relationship between Berkeley and the alchemic tradition.

Berkeley and alchemy revisited

Even though the alchemists strongly believed that what they were doing was 'science'[42] – that is, a determined, honest attempt at understanding nature as it is in itself – alchemy appears today as dramatically 'outdated';

it belongs to the history of science, rather than to science proper. Nevertheless, however outdated alchemy might seem to some, it is about a need for transcendence, about a drive towards human perfection and moral improvement, which certainly confers upon it a noble mark of authenticity. As Jung has put it, there are 'very modern problems in alchemy, though they lie outside the province of chemistry'.[43] Alchemy is of course 'wrong' in factual terms, but this does not make it less interesting as a cultural, historical and philosophical phenomenon.

I hope that it has become clear by now that, in *Siris*, Berkeley uses extensively alchemic notions and ideas.[44] Even without going too deeply into the archeology of the notions and arguments he uses, Berkeley's alchemic allegiances are evident at the textual and terminological levels, as he abundantly quotes not only such late alchemists (or early chemists) as Paracelsus, Homberg, van Helmont and others, but also celebrated figures of the alchemic tradition such as Hermes Trismegistus and the Renaissance Platonists, who openly placed themselves within the alchemic tradition. It is amazing that Berkeley seems to have literally believed in the possibility of 'alchemic transmutation', of transforming base metals into gold. Interestingly, he maintained this belief by placing the transmutation within the proper theoretical and historical framework that the alchemists themselves used. Thus, at a given point in his demonstration in *Siris*, Berkeley brought forward in support of his idea that 'bodies attract and fix the light', the results of what was obviously a transmuting experiment performed by a French alchemist, Homberg:

> Of this there cannot be a better proof than the experiment of Monsieur Homberg, who made gold of mercury by introducing light into its pores … By this junction of light and mercury both bodies became fixed, and produced a third different from either, to wit, real gold … This seems to have been not altogether unknown to former philosophers; Marsilius Ficinus … and others likewise before him, regarding mercury as the mother, and sulphur as the father of metals; and Plato himself, in his *Timaeus*, describing gold to be a dense fluid with a shining yellow light, which well suits a composition of light and mercury.[45]

However puzzling Berkeley's belief in the possibility of making gold out of base metals might appear to today's reader, it has nevertheless the merit of pointing to Berkeley's commitment to a world view, the fundamental tenets and metaphysical suppositions of which functioned also as the theoretical justification for what the alchemists were doing.

Yet, alchemy was not primarily about making gold. Some modern scholars of alchemy are even inclined to believe that the gold-making side of alchemy was actually a form of disguise, behind which alchemists pursued their real interests, which were philosophical and spiritual in essence.[46] Indeed, what Berkeley took from alchemy was the medical, cosmological and metaphysical components, primarily a belief in the existence of an ontologically privileged substance through which our bodies can be 'healed' and restored to a state of perfect health. More than that, there is a sense in which Berkeley went beyond strict medical technicalities, and shared with the alchemists some important spiritual affinities: the belief in a supreme principle of order (the Great Chain of Being), in virtue of which everything 'in Heaven and on Earth' is secretly united and interconnected; the belief in the possibility of a cosmic restoration, either at a macro or micro level; the conception of the world as a symphony, in which every single detail is meaningful and has its own role to play; the felt need for transcendence, moral betterment and intellectual growth; and, more generally, the notion of a divine–cosmic story in which humans are characters with a significant role to play. Berkeley also took from alchemy the 'ecological' dimension: as he says in *Alciphron*, throughout our earthly journey we should always endeavour to 'live reasonably', to take care not to harm the surrounding world in any way, 'proportioning our esteem to the value of things, and so using this world as not to abuse it'.[47] Berkeley took from the alchemical tradition his emphasis on the necessity for the tenderness and care that we should always display in our dealings with God's world. For Berkeley's conviction that God is permanently speaking to us has now acquired a higher degree of specificity. The message that *Siris* sends might read: we will learn more than simply how to deal *in general* with this world, we will learn specific arts and techniques through which this world will be kept in order, and our passage through it made smoother and healthier.

On the other hand, Berkeley's case, a case in which 'medical science' in the traditional, Hermetic sense coexisted with a number of features of modern philosophical discourse, demonstrates how difficult it is to establish some radical difference or unbridgeable gap between traditional (medieval) and modern science. After a life dedicated primarily to promoting such fundamental ideals of European philosophical modernity as the constant appeal to experience, common sense and critical, rational argumentation, we see in *Siris* a Berkeley who is 'quitting science for venerable metaphysics, where he all but blends his own original philosophy with the theosophical theories of ancient Greece and the yet

more ancient Middle East'.[48] In *Siris* Berkeley openly gives up all the anti-authoritative and anti-scholastic rhetoric of his early years (a rhetoric characterizing, in fact, the whole school of *nouvelle philosophie*), and embarks on an intellectual enterprise at the heart of which lie authorial humility, philosophical modesty and a method of thinking based on repeated appeals to past authorities. This is undoubtedly a most significant step on Berkeley's part, and should be considered in the historical context, and on its own merit, rather than with embarrassment, regret or retrospective apologies. Berkeley took this step at a time when he had reached his full intellectual and existential maturity, after a life full of scholarly, literary and public accomplishments, at a time when he had become rich in experience, in knowledge and wisdom. That is why, I believe, such a step was a deeply symbolic gesture on the part of the philosopher, betraying a fundamental shift in his conception of philosophy: a shift from philosophy considered as an 'individualist', tradition-breaking approach towards a more traditional conception of philosophy, towards philosophy as a spiritual technique and a way of recovering an immemorial wisdom. *Siris*, as a 'chain' of cosmological, physical, chemical and medical speculations, is undoubtedly about things or facts of the external world, but behind all these concerns, as behind alchemy, there is a need for overcoming, or reconciling, the fragile, limited 'human condition' with a cosmic – divine narrative. Berkeley's philosophy in *Siris* is a philosophy that is not longer 'pure', but seriously overlaps with such other fields as religion, mysticism, theology, poetry and alchemy.

Notes

1. P. Walmsley, *The Rhetoric of Berkeley's Philosophy* (Cambridge: Cambridge University Press, 1990), p. 142.
2. For a detailed discussion of *Siris* in light of the *philosophia perrenis* tradition and as a distinct moment in the development of the 'philosophy as palimpsest' (or 'archetypal knowledge'), see my articles 'Philosophy as Palimpsest: In Search for an Immemorial Wisdom', in *Existentia: An International Journal of Philosophy*, vol. XIV (3–4), pp. 337–44, and 'In the (Redeeming) Shadow of the Past: Archetypal Knowledge in Berkeley's *Siris*', forthcoming in Tyrus Miller and Sorin Antohi (*eds*), *Given World and Time: Temporalities in Context* (New York and Budapest: Central European University Press, 2005).
3. 'Tar is a black and sticky substance with none too good a name in letters, and the very idea of a bishop discarding his white lawn sleeves and handling it and extracting a nasty medicine from it is too much for our sense of gravity, and Berkeley's tar-water has become a jest' (A. A. Luce, *The Life of George Berkeley Bishop of Cloyne* (London: Thomas Nelson & Sons, 1949), p. 197).

4. Nevertheless, besides the Bermuda Project, *Siris* was of the main sources of Berkeley's popularity during his lifetime, and even after his death: 'Berkeley's philosophical writings have suffered a curious fate. In his own day the earlier works, such as his *Principles of Human Knowledge*, were little read and had even less influence, but his *Siris* enjoyed great popularity; if not for the philosophy, at least for the tar-water' (A. Ritchie, 'George Berkeley's *Siris*: The Philosophy of the Great Chain of Being and the Alchemic Theory', *Proceedings of the British Academy*, XL [1954], p. 41).
5. Quoted by Walmsley, *The Rhetoric of Berkeley's Philosophy*, p. 144.
6. G. Berkeley, *The Works of George Berkeley Bishop of Cloyne*, ed. A. A. Luce and T. E. Jessop, 9 vols 1948–1957, Volume V ('Siris') (London: Thomas Nelson & Sons, 1953), p. 31.
7. Tar-water is, for Berkeley, a panacea in the same sense that the 'philosophers's stone' is a panacea for the alchemists. Unlike its present-day meaning, 'panacea' had in both Berkeley and the alchemists a very strong philosophical sense, a sense derived – as I will show later on in this essay – from specific cosmological and metaphysical suppositions.
8. *Ibid.*, p. 175.
9. For more about Berkeley's 'Bermuda Project', see my article 'Waiting for the *Eschaton*: Berkeley's 'Bermuda Project' between Earthly Paradise and Educational Utopia', *Journal of Utopian Studies*, vol. 14, issue 1 (2003), pp. 36–50.
10. The fragment is from a letter written by Berkeley's widow. Luce quotes it in his *The Life of George Berkeley Bishop of Cloyne*, p. 182.
11. *Ibid.,* p. 205.
12. 'In his last work *Siris*, he reverted to earlier modes of thought, to those of the seventeenth century, so far as it had not yet come under the influence of Descartes, Hobbes and Locke' (Ritchie, 'George Berkeley's *Siris*', p. 41).
13. T. E. Jessop, 'Editor's Introduction' to *Siris*, in *Works of George Berkeley*, Vol. V, p. 7.
14. E. J. Holmyard, *Alchemy* (New York: Dover Publications, Inc., 1990), p. 15.
15. Paracelsus, *The Archidoxes of Magic*, translated into English by R. Turner [first edition 1656] (London: Askin Publishers and New York: Samuel Weiser, 1975), p. B.
16. 'One alchemist complained that, falling under this suspicion [that he had discovered the secret of the *Elixir Vitae*] because he had happened to effect some rather spectacular cures during an epidemic, he had to disguise himself, shave off his beard, and put on a wig before he was able to escape, under a false name, from a mob howling for his elixir' (Holmyard, *Alchemy*, p. 16).
17. One of Paracelsus' most important alchemic works is even entitled *De vita longa*.
18. E. Ashmole, *Theatrum Chemicum Britannicum*, with a Preface by C. H. Josten (Hildesheim: Georg Olms Verlagsbuchhandlung, 1968), p. 422.
19. For example, Jessop, *Siris*'s editor, says in his 'Preface': 'In claiming that it was probably a panacea … he belonged to his age: in his time even physicians of standing had their "catholicons", and there was very little science against them, and the old alchemistic faith behind them' (T. E. Jessop, 'Editor's Introduction' to *Siris*, in *Works of George Berkeley*, Vol. V, pp. vi–vii.
20. Ritchie, 'George Berkeley's *Siris*', pp. 41–55.

21. A. Lovejoy, *The Great Chain of Being: A Study of the History of an Idea* (Cambridge: Harvard University Press, 1964), p. 59.
22. Holmyard, *Alchemy*, p. 23.
23. *Ibid.*, p. 97.
24. C. Kren, *Alchemy in Europe: A Guide to Research* (New York and London: Garland Publishing, Inc., 1990) p. viii.
25. J. Read, *The Alchemist in Life, Literature and Art* (Edinburgh and London: Thomas Nelson & Sons Ltd, 1947), p. 4. Read also quotes (p. 6) an unknown alchemic writer who says that: 'I must tel you, that nature alwaies intendeth and striveth to the perfection of Gold.'
26. A. D. Ritchie makes the same point: 'One of the most ancient and widespread types of cosmological system is the theory of the Great Chain of Being. The central doctrine, in the form in which it is the basis of alchemy. It is summarized in a sentence quoted by Berkeley from one of the *Hermetic* works: "All parts of the world vegetate by a fine subtle aether which acts as an engine or instrument subject to the will of the supreme God." ' (Ritchie, 'George Berkeley's *Siris*', pp. 46–7). Once again, what is regrettable about Ritchie's article is that he did not develop the idea as much as he could, just as he did not follow sufficiently its consequences.
27. As A. D. Ritchie suggests, Berkeley possibly had some sort of personal affinities with this particular theory: 'The fundamental tenet of the Great Chain Theory is that all things in heaven and earth are interconnected. Whatever else Berkeley may or may not have believed, that he believed with all his heart. His favourite text was "In God we live and move and have our being" ' (*ibid.*, p. 41).
28. *Works of George Berkeley*, Volume V ('Siris'), p. 140.
29. Walmsley, *The Rhetoric of Berkeley's Philosophy*, p. 144.
30. *Works of George Berkeley*, Volume V ('Siris'), pp. 128–34.
31. *Ibid.*, p. 129.
32. *Ibid*, p. 140.
33. *Ibid.*
34. *Ibid*, p. 91.
35. *Ibid*, p. 105.
36. Ritchie, 'George Berkeley's *Siris*', p. 50.
37. It is the case of T. E. Jessop, who, in his 'Introduction' to *Siris* says: 'The lowest link could have been anything in the sensible world, but at the time of writing Berkeley was thinking much of vegetable tar, and it is from this that he follows the chain to the Trinity – starting with empiric medicine, seeking a theory for it in vegetable and animal physiology old and new, finding the physical Aether as the quickening force in all things' (T. E. Jessop, 'Editor's Introduction' to *Siris*, in *The Works of George Berkeley*, Vol. V, pp. 6–7).
38. *Works of George Berkeley*, Volume V ('Siris'), p. 104.
39. *Ibid.*, p. 106.
40. *Ibid.*, p. 68.
41. *Ibid.*, p. 44.
42. 'Judged in the light of the then prevailing concepts the alchemists were engaged in an exact science, basing as they did their assumptions on the teaching of Aristotle. According to him all substances are but differing forms of one and the same prime matter, and it was thus theoretically possible to

change one substance into another. This possibility seemed close at hand, as was the splitting of the atom in the early decades of our century, for Aristotle's teachings were as axiomatic in those days as is the theory of relativity today … This is one of the main reasons alchemy enjoyed such long life' (R. Federman, *The Royal Art of Alchemy*, translated from German by R. H. Weber (Philadelphia: Chilton Book Company, 1969), p. 4).

43. C. G. Jung, *Psychology and Alchemy* (*The Complete Works of C. G. Jung*, 20 vols, vol. 12, Editors: H. Read, M. Fordham and G. Adler), translated by R. F. C. Hull (London: Routledge & Kegan Paul, 1953), p. 267.
44. Let us take only an example: 'Mr. Homberg, the famous modern chemist, who brought that art to so great perfection, holds the substance of light or fire to be the true chemic principle sulphur, and to extend itself throughout the whole universe. It is his opinion that this is the only active principle; that mixed with various things it formeth several sorts of natural productions; with salt making oil, with earth bitumen, with mercury metal; that this principle, fire, or substance of light, is in itself imperceptible, and only becomes sensible as it is joined with some other principle.' *Works of George Berkeley*, vol. V ('Siris'), p. 95.
45. *Ibid.*, pp. 97–8.
46. C. G. Jung, for example, advocates this view.
47. *Works of George Berkeley*, Volume III ('Alcipron'), p. 178 [*Crito speaks*].
48. T. E. Jessop, 'Editor's Introduction' to *Siris*, in *Works of George Berkeley*, Vol. V, p. 7.

3

Ordering the Political World: The Pattern of Politics in Eighteenth-Century Britain (1660–1832)

Frank O'Gorman

Introduction

This essay is a contribution to the current debate about the political order in Britain in the long eighteenth century. It raises some fundamental issues. What was the nature of the political regime? How secure was the political order? What was the politics of the eighteenth century about? The essay seeks to suggest some answers to such questions. In doing so, it will presume that there is a need for an over-arching model of the political order in eighteenth-century Britain. More contentiously, it will seek to provide one. Inevitably, there are serious dangers in attempting to impose such a model 'from outside', not least that of anachronism. Clearly it would be unhistorical to present the political order in the long eighteenth century as an anticipation either of the reformed political order of the nineteenth century or of the democratic order of the twentieth. It must be presented in its own terms. Contemporaries, indeed, did not regard their political arrangements as anticipations of anything in the future. To them, political events often appeared disconcerting and sometimes even dangerously uncontrollable. A further danger in constructing such a model is that academic specialization has deterred all but the most valiant historians from attempting to impose any sort of general pattern upon the politics of differing phases of the century. In particular, the difficulties of embracing Scotland and Ireland within a single interpretation have done nothing to encourage the emergence of a credible over-arching model.[1]

However, perhaps the most serious difficulty that has beset analyses of the political order in the long eighteenth century is the near-universal – but, in my opinion, misleading – assumption that Britain was blessed

with a stable and solid political order, built upon the secure foundations of economic prosperity and social pluralism. This assumption matches the conviction of many *non-British* contemporaries, that the British political system was in some way unique in Europe. 'It was, supposedly, the very symbol of rights and liberty in a continent riddled with autocracy and servitude, and showed the way to reform and democracy.'[2] However, many of the carefully crafted European expressions of admiration for Britain's political arrangements which are to be found in the period were little more than Enlightenment propaganda directed against an assortment of examples of local autocracy and despotism in other countries. Few of these apologists purported to have any understanding of the British political system. Most German commentators, for example, had an absurdly idealistic version of English political life. Such observers severely underestimated both the seriousness and the frequency of political, religious and dynastic divisions within British society. Moreover, their discussions of British rule in Scotland and, especially, Ireland were few and far between. Yet historians, as well as contemporaries, have not been slow to use such far-fetched judgements as accurate *descriptions* of the eighteenth-century political system.

Later interpretations of the political order were naturally much more sophisticated, but they still assumed that the political order in eighteenth-century Britain was a stable and enduring one. The Whig Interpretation of the nineteenth and twentieth centuries emphasized both the constitutional legitimacy and historical continuity of the political system. These writers believed that the British political order was progressive, and thus unique in Europe. They argued that the monarchy was of limited and declining account, depicted the Anglican Church as an irrelevance and asserted that the aristocracy gave way to the middle classes.[3] None of these propositions can now be defended without severe modification. However, it is one thing to repudiate the legacy of the Whigs, quite another to construct an alternative to it. Since the 1980s, a number of important interpretations of British history have been advanced which offer alternative perspectives upon the political order of the eighteenth century.

The revisionism of Jonathan Clark and others represents the most comprehensive alternative model on offer. In Clark's writings the British political order is depicted as a powerful, hegemonic system. For him, Britain in the eighteenth century was dominated by the forces of monarchy, Anglicanism and aristocracy. Britain was an *ancien régime*, in many respects comparable to those of the Continental mainland, in which the forces of religion, monarchy and tradition remained supreme until their sudden dislodgement in the 1820s and 1830s.[4] In this

confessional state, hierarchy and deference, rather than individualism and social mobility, defined the nature of society and the characteristics of the state. Whatever its considerable merits, however, there are serious problems with the revisionist version of the political order. Although this interpretation has been unfairly criticized as a static and elitist vision of Britain during the long eighteenth century, and one which ignores the dynamism of the rapidly growing middling orders, there is some truth in the observations that it actually says little about the workings of the political system, day-to-day governance and electoral politics, especially when seen from below and from the localities.[5]

A different – and less comprehensive – perspective is provided by John Brewer in his depiction of *England* as a 'Fiscal–Military State', a view enthusiastically endorsed by several other writers. Brewer emphasizes the formidable roles of warfare and taxation in moulding the development of the institutions of the English state, in contrast to the older picture of a weak central government. An ability to fund successive military interventions in Europe after 1688–9 explained the emergence of Britain on to the European and world stages as a military and naval power of great significance. In some ways, this argument might be seen to complement that of Clark, placing Britain squarely in a European context. However, Brewer acknowledges that Britain depended upon parliamentary supply to finance its wars, and presents a picture of a secular state very different from the confessional state espoused by Clark.[6] Consequently, the bureaucratic, rational and modernizing political order that emerges from Brewer's pages is very different from the model which emerges from Clark's. Nevertheless, both writers, albeit by different routes, never seriously question the underlying stability of the British political order.

A third, 'social', interpretation has in recent years emphasized the prominence of the middling orders in British society in the long eighteenth century. A number of historians, most prominently Peter Borsay and Penelope Corfield, have drawn attention to the role of the middling orders in the towns, and their success in accessing the social worlds of the gentry and the aristocracy.[7] Others, notably Paul Langford, have also acknowledged the burgeoning economic power of the middling orders, which enabled them to enforce their social and political priorities. In Langford's account, the gentry and aristocracy are seen to accommodate the interests and to accept the indispensability of the lower-middling classes of the towns and countryside in running their businesses, in organizing their estates, in tending their finances and in fighting their elections.[8] Clearly, this perspective complements that of the secular society presented by Brewer rather than the confessional and hierarchical

state of Jonathan Clark, but it would be fair to say that it by no means negates the latter. It suggests that within the structures of an aristocratic society individual talents were able to prosper and it implies a broad rather than an exclusive political order.

A fourth interpretation which has acquired popularity in recent years is that of Linda Colley, who has charted the emergence of a Protestant-based patriotism which helped to weld together the constituent elements of the British state in the eighteenth century.[9] This interpretation complements that of Brewer, confirming, indeed, that a British national consciousness was created through the pressures of war and the acquisition of an empire. In this process, the emergence of royal, military and naval heroes, and the resultant celebrations and festivities, did much to override local loyalties and to mould a vibrant patriotism, especially powerful when directed against a significant 'other', in this case, the national enemy, the French. However, it is vital that we do not accept without critical analysis the patriotic rhetoric of the time, which demanded the defence of a Protestant nation. Indeed, a number of objections may be levelled at Colley's interpretation. It may be argued that she generalizes excessively and underestimates the varied and complex nature of people's experiences. British attachment to Protestantism was by no means as unvarying and as thoroughgoing as she depicts. Moreover, there were significant 'others' apart from the French: the Spanish, the Scotch, the Irish. Nevertheless, Colley's depiction of an increasingly powerful Protestant, patriotic and imperialistic political order strikingly confirms the impression of a powerful and stable political order in eighteenth-century Britain.

Excellent and enlightening though all of these recent interpretations of British society and politics may be, their political implications are limited. They do not provide, and were not intended to provide, detailed accounts of the British political order. Common elements may be found between many of them, but even taken together they fail to clarify any of the issues raised in the first paragraph of this essay. Moreover, all four are now several decades old. There is little sign of the emergence of an overarching interpretation of the political order in which they can be located. There appears to be a common assumption of the inherent *stability* of the British political order, a stability which ensured political continuity no matter how serious the challenge to its institutions or how intense the social, religious and political divisions that they faced. Yet that stability has been more commonly assumed than demonstrated. We must now confront directly the issue of political stability in the eighteenth century.

The stability thesis

In the seventeenth century Britain had been afflicted by the realities of civil war, regicide and rebellion and by the threats of royalist autocracy and foreign invasion. Political instability and uncertainty were the manifestations of profound problems to which no viable solutions could be found: relations between England and France, between the monarch and parliament, between Anglicans and Dissenters, between central and local government, between England and Scotland and between England and Ireland. Although some historians have claimed to see in all this a political order that was 'slowly but steadily growing collectively more peaceful, individually less violent, more efficiently under the rule of law' and under 'the greater rationality of modern, monarchical absolutism',[10] it is doubtful if the experience of the 1680s bears this out. As Geoffrey Holmes concedes, down to 1688 'the constitution had remained in or close to a crisis state for decades and, together with a febrile religious atmosphere, offered little hope of bringing down the political temperature'. Indeed, as he rather sadly concludes, even in 1714 'political instability still seemed in many respects an endemic condition'.[11]

In the 1960s Professor Jack Plumb, in a series of lectures which were to have a profound effect upon historical studies, argued that England, note *England*, at last achieved political stability in the mid-1720s. This was the outcome of a number of developments: the victory of the Whigs over the Tories, the court over the country, the executive over the legislature, the narrowing of the electoral franchises, the curtailment of the independence of London and the pacification of Scotland and Ireland.[12] For many years it was generally supposed that Plumb was broadly right and that Britain had acquired a stable political order which guaranteed both her political system and her national independence. As Jim Sharpe wrote:

> This thesis can, perhaps, be criticized in detail: yet its basic validity seems irreproachable. Such strife as there was in the period 1689–1760, *Jacobite invasions apart*, was essentially the strife of faction or party, containable within the existing political system, and offering no challenge to it.[13] (My emphasis)

Furthermore, following the assumptions of a generation of historians, Clayton Roberts argued that political stability prevailed in the eighteenth century because the old issues between crown and parliament had been once and for all settled in favour of parliament.[14]

There are, however, a number of problems with the stability thesis. There is analytical confusion as to which of the factors contributing to stability triggered the others and in exactly what chronological process. As one historian remarked, 'Why the growth of oligarchy and the expansion of the executive should create instability in the reigns of William and Anne and stability in the reigns of George I and George II is a bit of a puzzle.'[15] Moreover, it is central to Plumb's argument that electoral patrons were able to subdue their constituencies, thus putting an end to the rage of party. But there was in fact little change in electoral behaviour after 1725. There was no sudden increase in the number of uncontested seats after 1725 and little increase in the power of patrons. Indeed, the size of the electorate continued to increase.[16] Furthermore, as Linda Colley has shown, there were more contested elections in borough constituencies in the six general elections *after* 1715 than in the six before.[17] Furthermore, one must wonder how astonished Sir Robert Walpole would have been, to be told that he was the architect of stability in the 1720s. In fact, he spent most of his period in office nervous and jumpy about the threat to his ministry from opposition Whigs, from Jacobites and from France, a threat that finally became a reality with the '45 just three years after his political demise.

The deficiencies of the stability thesis, however, run somewhat deeper. They include serious structural weaknesses. Plumb may have been unwise to rest his thesis about political stability on social and economic foundations, not least Habbakuk's theory of the growth of great estates, by which aristocratic families used their great wealth to dominate elections. However, his research has long since been subjected to serious questioning. Several scholars have demonstrated that – except in some few of the midlands counties – there was little sign of the growth of the landed power of the aristocracy at the expense of the gentry. Indeed, the latter continued to prosper in the eighteenth as they had in the seventeenth century.[18]

Moreover, there are structural weaknesses of a political kind in Plumb's depiction of a stable political order. He argued that the emergence of political stability owed much to the 'one-party government' of the Whigs in the Hanoverian period, but he gravely underestimated the persisting seriousness of the challenge from the Tory party. Recent work on the history of the Tory party has demonstrated that extensive portions of its membership embraced Jacobite loyalties and were prepared to repudiate the Hanoverian succession and to plot subversion and rebellion with its international enemies.[19] So long as the Jacobite option remained open to powerful sections of the British political elite, political stability could not be complete. Indeed, it may even be argued that political instability

was built into the very structures of the Hanoverian governing system. For example, as has been shown recently, it was the very nature of the political structures that Walpole used to govern Hanoverian Scotland that was the breeding ground for Jacobitism there.[20] How could a country which witnessed as many state trials and attainders as England and Scotland did between 1715 and 1746 be reasonably described as politically stable? It must be admitted that, in general, Church–State relations in Scotland and Ireland were far from contributing any sense of structural stability to the body politic.

There are structural difficulties with Plumb's thesis at the local level, too. Plumb's stability appeared to emerge from an examination only of the world of parliament and elections to it, as Halliday remarks, 'rather than a fuller analysis of politics in countless local jurisdictions'. In fact, the alleged 'instability' of the late seventeenth and early eighteenth centuries had not prevented 'the continuous operation throughout these crises of hundreds of local governments that affected many more lives much more powerfully' than the actions of party politicians. In other words, the great mass of the people in the parishes, villages and even many of the towns of Britain would have noticed very little difference in the nature of government after the 1720s.[21]

Furthermore, for how long does this presumed political stability last? Is it ever seriously threatened? Astonishingly, I do not believe that Professor Plumb ever confronted this issue. And it is when we exchange the historical microscope for a wider-ranging historical instrument that we acquire an alarming, and, in some ways, a subversive, perspective on this major issue. For it seems to me that the thesis of the achievement of political stability in the 1720s cannot be sustained. Applying the expectations of stability to the British political order in the long eighteenth century, what we actually find is a persisting cycle of rebellion, whether dynastic (1688–9, 1715, 1744–6), imperial (1775–83) or religious (1798), arising out of crippling internal political and other difficulties. In just the same way that historians of the Restoration period are now unpicking the earlier assumption that the post-1660 period was a settled era and recognizing 'the astonishing sequence of crises, plots, rebellions, reactions, constitutional confrontations, and experiments in government that marked the reigns of Charles II and James II',[22] we find that in some respects the eighteenth century was not altogether dissimilar.[23] What we find in the years between 1688 and 1832 is a society which demonstrates chronic tendencies to fall into deadly serious internal crises, and often extremely threatening external difficulties, on average about every 20–25 years (in 1688–9, 1714–16, 1744–6, 1779–84, 1797–1801 and in 1828–32).

Of course it may be argued that political stability does not necessarily preclude divisive constitutional disputes. But several of the great crises of the eighteenth century are so serious as to be crises not *within* but *about* the political order. Political stability does occur in the long eighteenth century, but when it does it is usually a short-term achievement, certainly contingent, and liable to disruption within two or three decades. However, the political order in the long eighteenth century may have been vulnerable in yet other ways. In addition to these great crises of instability, usually lasting several years, there are a number of what I may crudely term 'mini-crises' which certainly unsettle the body politic but which do not quite embarrass it to the same extent. I am thinking of events like the Popish Plot of 1678–9, the Sacheverell Crisis (1710), the Excise Crisis of 1733–4, the Middlesex Election crisis of 1768–70, the Regency Crisis of 1788–9 and so on. (Their traditional historical terminology – 'Plot' and 'Crisis' – is surely significant.) Although such lower-level political contentions may have been less threatening than the major collapses of stability which we have already identified, they nevertheless reinforce the overall impression of a political order which is far from stable and far from secure.

It is also worth noticing even at this stage that Britain down to 1789 is perhaps exceptional, certainly among the great nations of Europe, in behaving in this manner. We do not, I think, find France, Prussia or Austria descending into such internal crises with anything like the regularity which is exhibited in Britain. Before the French Revolution, at least, the political orders of Continental societies appeared to be markedly more stable. In France, Germany and Switzerland, for example, increasingly effective social control exercised by urban oligarchies meant that there was nothing comparable to the great church and king riots of 1710–14, nor to the Gordon riots of 1780. Even the French riots in the name of the Paris Parlement of 1753, 1763, 1771, 1776, and especially of 1787 and 1788, cannot compare to the London riots of the same period. On the whole, Denmark, Spain, Prussia and most of the German and Italian states survived the pre-revolutionary period without having to endure significant crises of instability. Russia had to endure the Pugachev rebellion in 1773–4, but even here no terminal clash between the government and the ruling class was involved. Before the reforms of Joseph II raised a storm in the Habsburg lands Austria had known little of crippling internal crisis. It is true that the politics of the United Provinces was a continuous contest between republican and Orangeist factions, which on some occasions almost rivalled the chronic instability of Britain, but it amounted to little more than an uneasy oscillation in tenures of power between them.

Only the chronic disputes of 1787 came close to plunging the country into civil war. Similarly, the Swedish revolution of 1772, while a resounding crisis, remained a singular event. Only the unhappy history of Poland in any sense manifestly exceeds that of Britain in the vulnerability and persistent instability it reveals. Significantly, it was the attenuation of the power of the monarchy which was at the root of Poland's political plight.

Definitions

One of the difficulties with this type of enquiry lies in the absence of a technical vocabulary. Consequently, terms like 'stability', 'instability' and 'crisis' lack precise definitions. Plumb's own definition of stability, 'the acceptance by society of its political institutions, and of those classes of men or officials who control them', is impossibly wide as well as incomplete, lacking, for example, any reference to religion.[24] The truth is that there has never been an agreed concept of 'stability'. In the Middle Ages political stability was obtained by subjecting disruptive powers to a single power, that of the monarch. In the seventeenth century Locke believed that stability was to be found through a system of checks and balances to which individuals, office-holders and social and political groups alike had to submit.[25] Such definitions of stability seem inadequate for present purposes. We may suggest that a stable political system is one which permits discussion, protest and change within a continuing and agreed structure of institutional arrangements and constitutional and moral principles to which all or most sections of the political world subscribe. Consequently, the legitimacy of a particular political regime rests upon its acceptability *not* simply because people believe it to be legitimate, but because it can be justified as legitimate in terms of broader contemporary beliefs and because, therefore, both its governors and its governed continue to assent to its authority. It follows, then, that political instability occurs when people feel alienated from the political order, its governing elite and its institutions, and the principles upon which they rest, and when their resentment leads them to demand its replacement, if necessary by violent means.[26] Thus, the collapse of political stability signifies a collapse of the legitimacy of that order. Such crises of legitimation occur for various contingent reasons: for example, when there are crippling divisions within the ruling order, when there is no agreement as to the essentials of the personnel and institutions of government, when the moral authority of the ruling order is at issue and when there exists a reasonable alternative to the existing political order. The argument of this essay is that crises of legitimation were not uncommon

in eighteenth-century Britain and, on a number of occasions, led to the collapse of political stability.

The pattern of instability

Let us apply these ideas to the successive or cyclical crises of stability and legitimation which afflicted Britain during the long eighteenth century. The first great crisis occurs between 1688 and 1692. It includes that resounding affirmation of Protestantism, known to British history as the Glorious Revolution, in effect the abdication of James II and the replacement of the Stuart line by the House of Orange. The Glorious Revolution is an instructive example of how the collapse of stability could occur. It owed more to the diminishing legitimacy of the existing political order and the availability of an acceptable replacement than to a determined and deliberate attempt to bring down an established system of government by violent means. The toppling of a monarch and the transformation of notions of royal legitimacy from divine right to government by consent, at least the consent of the propertied elite, was not an objective from the outset. However, the choice for many contemporaries soon became a stark one: 'Should Englishmen be faithful to the dynasty claiming title by indefeasible hereditary right or loyal to a new king and queen promising protection against popery and arbitrary government and also claiming an hereditary title?'[27] Although modern historians like to emphasize the moderation of the Glorious Revolution, we should certainly not underestimate the alienation from the regime of James II which was felt by many members of the ruling order and the bitter antipathy to absolutism which was increasingly displayed in 1688 and 1689. There was certainly a popular element to the Glorious Revolution. Indeed, in December 1688 London was on the edge of anarchy. After James II fled the capital, the mob started to attack popish buildings and the houses of foreign diplomats, several of which were destroyed. Panic and rumours shook the city as the moral authority of the regime of James II collapsed. Indeed, one of the keys to William's success, and not only in the capital, was that he and he only could guarantee the protection of life and property. As Richard Price concludes, 'The idea of 1688 as a people's revolution sank deep roots into popular radicalism.'[28]

Furthermore, the Glorious Revolution is much more than a landmark in *English* history. It is arguably even more important to note the importance of these events in the history of Scotland and Ireland. It took two years of bitter but critically important warfare to secure the fruits of the Revolution in those countries. The consequences were enormous. The Glorious

Revolution opened the door to an extension of English influence over the Gaelic populations of Ireland and the Scottish Highlands, a step towards imperial expansion and political unification. In Scotland, the reaction was powerful. Indeed, one of the consequences of the Glorious Revolution was to unleash the power of Scottish nationalism, backed by Presbyterian religious sentiment, which, by the early years of the next century, came to threaten the security of the entire island. To prevent a Jacobite invasion and occupation of Scotland, the Whig government in 1707 agreed to its political and economic incorporation into England. But the unpopularity of that incorporation was to destabilize the political order for almost half a century and to fuel two Jacobite rebellions and half a century of plotting and intrigue. As for Ireland, the settlement reached after the reconquest of 1689–90 and the Treaty of Limerick (1691) lasted for nearly a century and with ultimately destabilizing consequences. English rule in eighteenth-century Ireland rested principally on a policy of forcible repression, the reaffirmation of Protestantism, the imposition of the Penal Laws, a series of land confiscations and a reduction in the power of Irish Catholics. In general, by 1692 it was clear that British political order was geopolitically and constitutionally different from its predecessor. Indeed the British political order was in a highly experimental stage of its development. It was by no means clear whether it would succeed or fail in addressing its many problems. With the benefit of hindsight, however, the need to defend the post-Revolution settlements in Scotland and Ireland, as well as in England, from Jacobite rebellions and Continental interference dragged Britain into a series of foreign alliances and entanglements and into a series of major wars.

The second great crisis in the history of this composite state, as we should term the British body politic of the early eighteenth century, occurred between 1714 and 1716. The Treaty of Utrecht thankfully ended the War of the Spanish Succession in 1713, but it brought with it the usual problems of postwar recession and demoralization. The Hanoverian succession of 1714 paved the way for the Whig Supremacy and, with the benefit of hindsight, the transition to the new dynasty may appear to have been a relatively smooth transition. But in England the new monarch was greeted with a most unpleasant wave of rioting, to a large extent prompted by economic problems, but also stimulated by widespread anti-Hanoverian feeling. This unrest lasted for several months, throughout the spring and summer in London, but then spreading to the Welsh borders. It took three Proclamations (issued during November and December 1715) for the suppression of riots, for enforcing the laws against Papists and for banning clergy from preaching political sermons,

before order was restored. These problems were only temporarily resolved by the Whig victory at the general election of 1715, which was itself achieved only after a veritable purge of local Tory officials.

However, it was the Jacobite rising of 1715 in Scotland and then the rash, heroic and ultimately unsuccessful invasion of England which represented the real danger to the new dynasty. The Hanoverian dynasty was too new to have established an *a priori* moral legitimacy and the Act of Union of 1707 had alienated rather than incorporated Scottish interests and opinion. There was little affection for the Hanoverian dynasty in either country, but in Scotland there was an armed uprising and an attempt to replace it with the Jacobite alternative.[29] The state of the country's fortifications as it confronted a threatening French invasion fleet was inadequate. Having taken Scotland the Jacobites invaded England and penetrated as far south as Preston before the Jacobite commanders realized that England did not want a Stuart restoration. On 4 February 1716 the Pretender fled to France and the crisis was effectively over.

Even if the eventual outcome was a resounding failure, the '15 was the most serious Jacobite rising of the century, and it shook the very foundations of the Whig oligarchy in Britain. Its scale should not be underestimated. By one estimate 8 per cent of the adult male population of Scotland gave public support to the Jacobites, as opposed to around 2.5 per cent to the Hanoverian dynasty.[30] Even within England there was a fifth column. It has been estimated that Roman Catholics constituted between two-thirds and three-quarters of the English Jacobite army in 1715–16.[31] It is by no means inconceivable that they could have won.[32] The lessons for the future were clear. Since the number of their supporters in England was limited, the Jacobites, although strong in Scotland, could not possibly establish a new political order in Britain as a whole without a French and possibly even a Franco-Spanish army of invasion and occupation: in other words, a Catholic regime imposed by force. It would have been a daunting and ambitious undertaking, but even after 1716 the Jacobites and some of their Tory allies continued to believe in it. The continued availability of a Jacobite option and continuing resentment against the new dynasty would continue to threaten the British political order: a striking example of the ability of a reasonably small fraction of a ruling class to continue to destabilize a body politic through its refusal to acknowledge the legitimacy of the existing regime.

Indeed, the next great crisis to confront the Hanoverian state came in the 1740s, when the Jacobite option was once more activated. In the opinion of Jeremy Black, 'The 1740s saw the most serious crisis faced by the eighteenth-century British state.'[33] The crisis had its origin in the *ending*

of the longest period of peace between England and France during the eighteenth century (1713 to 1741) and coincided with one of the most serious ministerial crises to afflict the regime for many years. Even Holmes, one of the great exponents of Plumb's 'stability thesis', admits that, with the fall of Walpole in 1742, 'For the next four years much of the Walpole legacy to Hanoverian Britain was at risk … the constitutional and political system he had painstakingly and artfully constructed' was in danger.[34]

The crisis occurred in the middle of the War of the Austrian Succession and represented a repetition of the pattern evident in 1714–16: the deployment of the Jacobite option and the intervention of a foreign power as a consequence of a continuing period of Scottish resentment and Jacobite intrigue. The rapid occupation of Scotland by the Jacobites and the subsequent invasion of England in 1745 while British armies were engaged abroad 'was a masterpiece of improvisation and boldness'.[35] And it might just have succeeded if internal rebellion had been coordinated with external invasion.[36] As it was, the further south the Jacobite armies moved, the more England was afflicted with a great anti-Catholic panic.[37] The absence of English support for the Jacobite armies drained their morale, and they began to retreat to Scotland. In April 1746 the Jacobite army was destroyed at Culloden.

Once again, the English Jacobites, unlike their Scottish counterparts, had failed to take the military option and the rebellion had collapsed. After 1746 the Jacobites were finished as a military and political force. The Jacobite wing of the Tory party dwindled away and Jacobitism lost its destabilizing role as a dynastic alternative. But it had proved a durable and compelling alternative. Indeed, the Jacobites had fought not only for their dynasty but also for the objective of an independent Scottish state and parliament. Unsuccessful they may have been, but they had at least been persistent. They had actually attempted invasion in 1708, 1715 and 1745, but they had also been responsible for the invasion scares of 1717, 1719, 1720–1, 1743–6 and, by then little more than a gesture, as late as 1759. No wonder that in 1746 the Duke of Cumberland noted after Culloden that it would still be necessary to build a string of forts in the Highlands.[38]

However, the removal of the Jacobite option did not lead to the emergence of a more stable political order in Britain. After all, the hostility of France and Spain was founded upon important economic and imperial differences, rather than any thoroughgoing sympathy for Jacobitism itself. Furthermore, the passing away of the old Whig–Tory polarity of the first half of the century, far from composing political differences, gave rise to a fragmented political structure which made it more difficult to construct broad-based and durable administrations. Indeed, a new period of

acute political instability was inaugurated when British armies in North America proved incapable of subduing the colonists in the American War of Independence. Even if there was, on this occasion, no alternative to the existing political order, the demand for its reform in the wake of the American disaster, the pressures of war, the persistence of ministerial instability, the alienation of considerable sections of public opinion and the problem of relations with Ireland together brought the political order in Britain almost to its knees.

The lengthy war (1775–83) had damaging economic consequences which affected every region of the country. Furthermore, towards the end of the war, the morale of the nation was shaken to its foundations by the defeat of British arms at Yorktown (1781) and the subsequent recognition of American Independence (1783). These years were characterized by a backcloth of public agitation for the reform of a system of government which had apparently brought the nation to its current crisis. The formation of powerful county associations led by Christopher Wyvill in 1779–80 provided a threat to the administration of Lord North less from its numbers, though these were considerable, than from the coming together of propertied and respectable elements of opinion throughout the country demanding reform and the removal of corruption in government. Furthermore, the Gordon Riots of the summer of 1780, when London was in the hands of an anti-Catholic mob, represented the worst example of uncontrolled popular frenzy since the Civil War of the middle of the seventeenth century. It was an unpromising context in which to resolve some of the most acute imperial and political problems that Britain had ever faced during the long eighteenth century.

Jonathan Clark sees the American *rebellion* in a familiar context of law and constitutional precedent, linked by denominational discourse to earlier instances of rebellion.[39] More likely, this recurrence of rebellion, if now in an imperial context, was symptomatic of the structural crises to which composite states were vulnerable in the second half of the eighteenth century. If the independence of the American colonies were to be permitted, then, it was reasoned, not only the British empire but the political order within Britain itself might be threatened and the loyalty of Ireland, in particular, might be tested. In the case of Great Britain, the precise relationships between the central government and parliament, on the one hand, and administrations in the North American colonies and in Ireland, on the other, had never been defined in any detail. The decision of the British Parliament to pass the Declaratory Act of 1766, asserting its rights over the American colonists and their legislatures, like the Declaratory Act of 1720 in relation to Ireland, raised profound issues of

subjection and loyalty. Compromises on such matters had never been tolerated and, indeed, appeared to endanger the survival of the state itself.[40] These Acts, after 1775, provoked rebellion in America and, after 1778, national demonstrations and associations in Ireland. As if this were not enough, the threatened invasion of Great Britain by the combined fleets of France and Spain in the summer of 1779, although somewhat underplayed by British historians, was real enough. For some weeks the English Channel was in their hands, with the British fleet out in the Atlantic.

The intensity and bitterness of the parliamentary and political fall-out from the failure of British arms in America can scarcely be exaggerated, and shook the British political system to its foundations. Problems of imperial government occasioned crises of loyalty and commitment not only in North America and Ireland but also in Britain. Between 1782 and 1784 there were no fewer than five governments. The fall of Lord North's ministry in March 1782 precipitated two years of chronic ministerial and political instability that was only ultimately composed by the contentious general election of the summer of 1784 and the success of the Younger Pitt. This two-year crisis included threats by George III to abdicate, the savage and almost unrestrained public and party conflict between the Younger Pitt and Charles James Fox, continued crises within the royal family and, to top it all, the paralysis of the political system in 1783, when Britain went for over six weeks without a government. All of this marked something approaching the breakdown of Britain's normal political arrangements. Amidst a climate of popular anger and resentment against successive governments and even, in some quarters, against the king, of political radicalism and rioting, serious fissures within the political elite disabled the country for some years from effective political action. This 'all led to a sense of acute crisis which threatened the basis of civil society'.[41] Finally, all this gave rise to a widespread popular demand for reformed government, less from the lower than from the middling orders, on whom the regime could normally depend.

The administration of Pitt the Younger restored political stability in the middle of the 1780s but a decade and a half later Britain was subjected to a crisis that was, if anything, even more threatening to the stability of the regime. It combined the strains and stresses of a major European and world war; the threat of invasion from France; the dangers of internal, naval mutiny; the reality of insurrection in Ireland – the traditional structural weaknesses of a composite state of multiple, unincorporated kingdoms – together with successive subsistence crises in 1797 and 1800–1 and the menacing aggression of reform movements now not only from the middling orders but from a wider public constituency. By the turn of the

century the crisis had passed and for the rest of the war the British political order was secure. But it had been a severe test of its resources and an illustration of the fragility of the prevailing political structures.

The first of these components concerned the security of Britain. In 1797 Britain was the only power left to confront the armies and navies of the French Revolution. From April to June 1797, Britain experienced cripplingly dangerous naval mutinies at Spithead and the Nore, which imperilled the nation and which marked perhaps the lowest ebb in British military fortunes since the American War of Independence. The settlement of the mutinies coincided with the beginnings of a rebellion in Ireland. Earlier demands for reform had now given way, in the era of the French Revolution, to nothing less than the repudiation of the set of constitutional arrangements made in the early 1690s: a repudiation which struck at the very heart of the British political order. As with earlier assertions of Scottish independence, its only prospect of success lay in an uprising assisted by a French invasion. Napoleon's plans to invade Britain were simply the latest in a long cycle of invasion projects lasting now for a century.[42] In December 1796 a French fleet with 14,000 troops had reached Bantry Bay, but was unable to effect a landing. There were few English troops defending Ireland and, had the French landed, nothing could have stopped them gaining a foothold: the road to Dublin would have been open. Failure of the French to land at Bantry Bay gave the English precious time to prepare themselves for a further French attempt at landing and for dealing with the rebellion. When the invasion came in May 1798, the prospective leaders of the rebellion had been imprisoned or disarmed and, shorn of its leadership, there was little support among the peasantry for the rising. However, the failure of the Irish rebellion does not mean that the threat was insignificant.[43] It demonstrated that the political structures of Britain were dangerously inadequate to cope with the unusual pressures of Irish politics during wartime. It was this recognition that led to the incorporation of Ireland into England in 1800–1 with the Act of Union.

The Irish rebellion coincided with rather exaggerated plans for a political rising in England, and to some extent in Scotland, plans which have been taken rather too seriously by some recent writers. The French Revolution had provoked in England the proliferation of reform societies, most notably the London Corresponding Society, which boasted a popular yet ordered body of support. By the middle of the 1790s reformers had mastered techniques of mass agitation, a worrying development that persuaded Pitt to pass the Two Acts of 1795. The Seditious Meetings Bill closely regulated the holding of public meetings, and the Treasonable Practices Bill extended the definition of treason to include any criticism

of the king or government. Thereafter the reform movement went underground and, in some places, especially in the capital, prospered. As the old reform societies declined, new quasi-revolutionary groups formed and proliferated, especially in the north of England. An unlikely conspiracy to foment simultaneous revolution in Ireland and England worried the government, leading to the ban of political organizations in the Combination Acts of 1799–1800. These years were a bitter time for the lower orders. In addition to political repression, interruptions to trade, economic recession and the evils of early industrialization entailed widespread suffering, poverty and desperation. Not surprisingly, there were still about twenty branches of the London Corresponding Society active in London alone engaged in shadowy conspiratorial activity. The failure of the harvest in 1800 created real hardship and thoroughly alarmed the government. A handful of arrests was sufficient to break the back of the revolutionary movement in 1801. Colonel Despard's plot in the following year to seize key points in London with the assistance of disaffected elements of the army was thus hopelessly unrealistic. Its failure did not entirely put an end to such conspiratorial plotting but it continued without much confidence or coordination.

The final collapse of stability to which we shall draw attention is that associated with the reform crisis of 1828–32. On this occasion, the dangers of further insurrection in Ireland were exacerbated by an unprecedented wave of popular demand for reform involving both the working and the middling classes, to a considerable extent prompted by adverse economic circumstances. By this time, demands for reform both in Ireland and in England were so specific as to constitute a demand for a new or, at least, a thoroughly reconstituted political order by a public opinion which was now organized with unprecedented professionalism, a massive challenge to the political elite.

Although the customary structural weaknesses of a composite state had, in theory, at least, been corrected by the Act of Union with Ireland, the remaining inequalities in relations between England and Ireland, particularly those concerning religion, continued to bedevil the prospects of harmony between the two. It was proving impossible to maintain political unity in Ireland. The Act of Union had not brought peace and stability to Ireland since the detested Protestant Ascendancy remained in power, the Catholic religion was still discriminated against, and serious famine was experienced in 1817 and again in 1821–2. In 1823 Daniel O'Connell launched the Catholic Association which was committed to Irish independence. O'Connell won a by-election in County Clare early in 1828 but was unable to take his seat in Parliament owing to a clause in the Act of

Union. If he were not allowed to do so, Ireland might descend into disorder and anarchy. In 1828 Parliament had recognized the rights of Protestant Dissenters and had admitted them to offices in the state. There was now no practical nor theoretical reason to resist the passage of Catholic Emancipation in 1829, which enabled Catholics to hold offices and to stand for Parliament. Such a drastic breach with the past could scarcely have been imagined even a few years earlier. A political system whose very *raison d'être* had traditionally been the defence of Protestantism had, within a couple of years, dismantled the pillars of the Confessional State.

This was by no means the end of the crisis. The subsequent collapse of Wellington's government, its replacement by the Whigs of Lord Grey and the dramatically turbulent explosion of public opinion demanding the reform of Parliament could only be assuaged by the passage of the Reform Act of 1832, a reform which was so extensive as to have been almost unimaginable a few years earlier. In many respects the public agitation of these years, which destroyed the administration of the Duke of Wellington, shattered the Tory party of Lord Liverpool, and played an indispensable part in forcing the passage of both Catholic Emancipation and the 1832 Reform Act, was a sign that, with the support of the prosperous middle classes, public opinion was well nigh irresistible. On several occasions the reform agitation even plunged into riotous disorder, with at least twelve killed, up to one hundred injured, fifty charged with capital offences and almost two hundred committed for breaches of the peace during the crisis. At some points the government actually lost control and the Political Unions took it upon themselves to secure and defend public and private property. This was something less than popular revolution, but it was a critically serious challenge to the authorities. In the opinion of one writer, indeed, the Welsh rising of 1831, when Merthyr fell into the hands of the mob and needed 450 soldiers with fixed bayonets to be recovered, was the moment 'when riot passed into insurrection'.[44] There is, furthermore, an old tradition that Francis Place tried to precipitate a revolutionary situation by organizing a run on the banks, but by then (May 1832) the peak of popular support had passed. Nevertheless, by 1832 the combination of structural political weakness, economic crisis and sophisticated demands for reform had not only shaken the system to its foundations but had prompted its comprehensive reform.

The nature of instability

While each one of these six collapses of stability and legitimation is, of course, a product of its own time and circumstances, they do have a

number of common features. First, each one is a set of multiple crises. Each one of them comprises issues of the most fundamental importance. In many cases they involve the identity of the dynasty which is to govern Britain. They challenge the leadership and personnel of the regime, whether king or minister. They all concern the unity and integrity of Britain and the loyalty of Scotland (diminishingly) and Ireland (increasingly). They usually profess pronounced constitutional concerns, often to do with parliament and its powers. They involve rights, liberties and identities and, later on, political and religious reform of the state, its structure and its electoral and popular foundations. In all of these collapses of stability the stakes could not have been higher.

Second, these crises involve an immense amount of popular involvement and participation. In all of them the actions, opinions and ambitions of tens and hundreds of thousands of people are involved.[45] Whether influenced by considerations of hierarchy or not, these are not exercises in high politics alone. In many of them mass demonstrations are a product of national sentiment, religious enthusiasm, political involvement and, of course, of poverty and want. It is possibly the case that the extent of popular involvement becomes more considerable with the passing of time and with the extension of the printed and other media to a greater proportion of the population. But even in the first half of the eighteenth century, when religion remained a potent catalyst of political action, that extent should not be underestimated. These are occasions when popular mobilization was an essential ingredient in the political narrative. None of these situations can be comprehended except in popular terms.

Third, these great crises concern the survival, the integrity and the future of Great Britain. They almost always include either the prospect or the reality of external intervention in British affairs and both the present and future roles of Britain in Europe are called into question. The first five of these great crises can all be linked to warfare in one way or another: civil war, foreign war and, not least, the dangers of civil war and foreign invasion. Even in the last one the mythology of external involvement finds some echoes. Is it not the case that some historians have scratched their heads about the relevance of the French Revolution of 1830 to the story of the passage of the 1832 Reform Act? Is there not, even here, some evidence of popular mobilization against the authorities?

Causes of instability

What we are considering, then, are clearly political crises of the most serious character in which the survival, the nature and the government

of the state are at issue. What were the weaknesses in the British political order that caused these regular breakdowns of political stability in Britain? At one level, the state lacked the centralized armed strength to control the kingdom. Distance was a critical factor, together with difficulties of communication. How could something like Jacobitism be observed and controlled, still less rooted out, in far northern Scotland? How could the government know what was happening in northern cities in the late eighteenth century when reformers began to mobilize? In this period, governments simply did not have the powers of communication and information that they acquired later. On certain occasions, it is true, the state leaned heavily on its opponents, as in 1745–6 in Scotland and in 1797–8 in Ireland. However, the state did not feel inclined to behave in such a manner in anything resembling normal times. A further factor is warfare. It is no accident that this period is one of the most belligerent periods in British history, including no fewer than six wars against the French, several of them of particularly long duration, such as those of 1689–97, 1702–13, 1739–48, 1792–1803 and 1804–15. The point about these long and costly wars against the French was that the British government was incapable of controlling their diplomatic and political consequences, especially when she was isolated against several enemies. And periods of war are not always a unifying experience, as the events of 1710, 1742, 1781–2 and the mid-1790s illustrate. It is thus no accident that so many of these crises occur either during or shortly after the conclusion of a major war.

More directly, in the long eighteenth century Britain was a composite state striving to govern two substantial, powerful sub-kingdoms, Scotland and Ireland, with their own political traditions and denominational loyalties. To do so successfully would have been a major undertaking at any time. Lengthy periods of quiet and efficient administration might have transformed these ancient kingdoms into modern parliamentary states. But to have attempted this project during a period of prolonged, if intermittent, warfare and while the dynastic issue remained unsettled rendered it particularly hazardous. Indeed, the issue of an unsettled monarchy was one of the commonest causes of instability in early modern Europe. These included: 'The problems of the prince's residence, of the distribution of offices, of rival constitutional systems for holding the whole together, of division of religion, of foreign affairs and the cost of wars.'[46] Furthermore, it remains true that in a dynastic society political legitimation stemmed from royal power and favour, rather than from the competition of political groups. Indeed, it was not until the 'successful' accession of George III in 1760 that the dynastic issue was, in effect, finally resolved, although the Jacobite movement had never recovered from the '45. Some Catholics

remained loyal to Charles Edward but the papacy abandoned him and his cause in 1766. However, the elimination of the dynastic issue, however important in reducing the risk of foreign interference, only opened the door for issues of imperial government, religion and reform, which proved to be no less contentious and no less divisive.

Such questions might have been politically manageable had there existed a commitment to 'loyal opposition', the idea that opposition to the ministers of the crown and their policy carried with it no imputation of disloyalty to the state. That doctrine, while slowly developing during the century, did not come to its full realization until the 1820s.[47] Consequently, the operation of the British political system did not encourage either the idea of legitimate alternative policies or the legitimate expectation of a future alternative government. To some extent this explains the peculiar *pattern* of eighteenth-century ministerial politics, the tendency for the king to form a settled administration which, once in place, enjoyed a reasonably long and settled existence (for example, 1721–42, 1746–54, 1770–82, 1783–1801, 1812–27) before its collapse, which was almost always followed by several years of frantic political instability while a new ministerial consensus was patched together. Public opinion was not seen as a kind of impartial umpire to which conflicting claims could be submitted for resolution. Nor until quite late in the nineteenth century was the conflict of parties anything other than a one-sided contest between, on the one hand, long-lasting governments and, on the other hand, bored and ultimately rather ruthless oppositions.

Consequently, it is not at all surprising to find that one of the more alarming characteristics of this political system was the willingness of certain opposition groups to take their disagreement over the edge of what we now would recognize as legitimate political competition. What I have in mind is the readiness of both Whigs and Tories quite ruthlessly to whip up popular pressure against their opponents, the willingness of Jacobites and their supporters to plot quite happily for years with the French (I have in mind here the Hanoverian Tories as well as the real Jacobites) and, not least, the readiness of the Irish in the 1790s to call in the French. Did they not know that what they were doing could, and probably would, if they played their cards right, result in a French invasion, a French occupation and, quite conceivably, Britain becoming a client state? If we take a less extreme case, that of Charles James Fox's crusade against the monarchy of George III, we may still be impressed by the absence of tolerable limits to the behaviour of those in political opposition to the court. Professor Ian Christie has suggested that neither Fox nor George III was willing to recognize the legitimacy of the other's position: Fox thought

the king corrupt, authoritarian and evil; in turn, the king thought Fox an unprincipled power-seeker and rabble-rouser.[48] Such attitudes bred a harshness and an intolerance and a readiness to go to extremes which meant that members of the political class were not deterred from periodically pushing Britain towards the edge of revolution and rebellion.

The argument is not that Britain was a congenitally weak state but that its composite structure, its internal political divisions, its religious pluralism and its international pretensions were, on occasion, liable to collapse under the weight of its weighty internal and external difficulties. The experimental nature of its politics, the undefined areas of power between the king and his advisers, between king and parliament and between the centre and the separate parts of the kingdom and the inflammatory state of public opinion ensured that the government of Britain in the eighteenth century could be a Herculean and thankless task.

The consequences of instability

Nevertheless, in spite of these arguments, I believe that in the last analysis the outcome of these crises was not to weaken the state – although they certainly exposed its weaknesses. Rather they strengthened its cohesion, at least in the short term. Indeed, these crises were not merely alarming instances of potential or actual rebellion, but also opportunities for the state to identify its friends and its supporters and to renew allegiances and loyalties. In this sense, then, the Hanoverian regime was better established in 1716 than it had been in 1714, and better in 1746 than in 1744.[49] And was not George III in a much more powerful position in 1784 than he had been four or five years earlier? Were not the institutions of the country in a healthier condition after the 1832 Reform Act than they had been before? These collapses of stability are occasions for the re-legitimation of power at both local and national levels. The authorities learned how to react to these sorts of situations and, when the occasion demanded, they could do so with some marked degree of success. This is not to suggest that the civil and military authorities had a plan for every conceivable situation, but that, when there was a need for it, they could respond ruthlessly and effectively.

The political and social elite in the towns and parishes of the country were no less competent in their reaction to many of these crisis situations. Most notably in the early 1790s, they rushed to organize themselves and their dependants in a national network of Loyal Associations, dedicated to the security and independence of the country, the hunting down of opponents who might be dangerous to the realm, the distribution of

propaganda and the allocation of charity and largesse to the needy. However, this tradition of Loyal Association was well-established long before the long eighteenth century. Indeed, it goes back to the sixteenth century. In rallying their counties, towns and parishes, local landowners were simply doing what had traditionally been done. Going back to the age of Elizabeth and Burleigh, and in particular to the Bond of Association of 1584, Loyal Associations to defend the Protestant body politic had revived in the 1580s and thereafter at several periods of crisis in the seventeenth century, not least in the 1640s and the 1680s. In December 1663 the precedents of the reign of Queen Elizabeth were being cited.[50] Moreover, during the assassination plot against William III in 1696, ministers consciously modelled the Loyal Associations on those of these earlier periods,[51] sometimes with a conscious attempt to repeat earlier endeavours. As Jonathan Scott remarks of Loyalism, it served 'both to connect with public memory and to make the point that experience must serve as a warning'.[52] Indeed it did. Furthermore, oaths of allegiance continued to be a common method of ensuring political allegiance long into the eighteenth century.[53]

This tradition of Loyalism was not, of course, the only source of strength which enabled the Hanoverian regime to survive, despite intermittent plunges into political instability. The middling orders had long been wedded to the regime through their wealth and their property. They had little wish to see their livelihoods endangered. While they might complain and protest on particular issues, particularly on issues of taxation and on the later issue of parliamentary reform, their reluctance in general to sacrifice themselves and their property on the altar of rebellion, religious or political, is most significant. Their reluctance is one of the principal reasons why there was a disappointing level of support for the Jacobites. The middling sort had little relish for the establishment of a discredited system of government and, to some extent, discredited economics. Although many of them later became involved in reform movements, they largely remained socially deferential and emulative of the landed orders. As we have seen, Paul Langford has shown that aristocratic government rested upon roots which reached quite far down into the social structure. Indeed, what we know about educational, philanthropic and many types of economic and political association suggests a vibrant civic culture in which the middling orders were heavily involved.[54] The growth of a huge, voluntary civic and public sphere during the eighteenth century established an arena where all might prosper, serve and conform.[55] Indeed, the lower orders expected their social superiors to live up to their responsibilities in this respect. The expectations of paternalism played a vital role

in encouraging social cohesion. To maintain political control by delivering social or economic services was a time-honoured tactic. It has even been argued that electoral patrons stabilized the Hanoverian ship of state by providing to their dependants a satisfying level of political and social services.[56]

Furthermore, all classes could rally round the throne at times of crisis. There was nothing new about the state using its own resources to preserve itself and to re-legitimate itself. In the eighteenth century, however, patriotism acquired more consistent, more popular and more institutionalized forms. As never before, patriotism was yoked to the health and survival of the establishment. Monarchy becomes the inspiration and source of national loyalty, the royal family the focus of calendrical, ceremonial and personal example. Meanwhile, the anglicization of the Welsh, Scottish and Irish elites was being forged through the social example of English schools and through service in the *British* armed services.[57] Nor was this just mindless flag-waving. Patriotism could range from a highly complicated set of emotions identifying the individual with traditions of Protestant patriotism, for example during the great invasion scares of 1797 and 1803, to practical sacrifice, volunteering and military service. Indeed, in some places in the early nineteenth century up to 50 per cent of adult males volunteered to defend their country.[58] In these ways, the collapses of political stability which marked the long eighteenth century were met by a complex set of political and social responses which ensured that each of them were ultimately met and managed, allowing time for a fresh version of political stability to be constructed.

Conclusion

This reading of the nature and experiences of the political order in the long eighteenth century carries with it some clear advantages. It establishes an interpretive context in which earlier versions of eighteenth-century Britain may be located. In the last few pages, indeed, we have acknowledged the relevance of Colley's work on patriotism as well as that of a number of historians on the middling classes. Clark's 'Confessional State' is obviously relevant to the issue of dynastic conflict, while Brewer's 'Fiscal–Military State' explains the ability of the governing classes to deploy its power when called upon in time of war. I would argue, then, that a broad and flexible treatment of the long eighteenth century that gives adequate recognition to the susceptibility of the British state to endure successive collapses of political stability provides a relevant and illuminating context into which existing treatments may be related.

Such an interpretation carries with it certain other advantages. It allows us to relate popular history to elite history, political history to social history, while encouraging us to seek a broad and viable context for specialized narratives. It seeks at a general level to identify the pattern of Hanoverian politics. That pattern was a succession of collapses of stability at regular intervals, which were followed, equally regularly, by the strengthening and re-legitimation of the regime. The political history of Britain during the long eighteenth century thus concerned the uneven experiences and achievements of a poorly integrated, composite state which possessed serious structural weaknesses. It comprised the endeavours of contemporary politicians to make their ramshackle political system work and to attempt to achieve some sort of political stability.

When and why did the cycle of instability cease turning? By the end of the eighteenth century the dynasty was already secure, but it was only in the middle of the nineteenth century that a number of long-term developments began significantly to benefit the political order to the extent that periodic collapses of stability became a thing of the past. The conquest of distance, to be seen in the improvement of roads and canals and the building of the railways, opened up the far corners of the land, improving the government's political and military surveillance, and thus making the rebellions of the past less likely. The inauguration of great national parties in the 1830s and the establishment of broader electoral systems in 1832 and 1867 made politics more responsive and more inclusive. The enfranchisement and mobilization of the masses within the political nation contributed greatly to its strength. The establishment of elective municipal governments in and after the 1830s began to civilize the new industrial towns and enabled the middle classes to claim extensive executive power. This brought them into an even more direct, more responsible, more consistent and more institutionalized executive relationship with the traditional ruling orders and marked a decisive shift in power. Furthermore, the so called 'age of reform' in the decades following the Reform Act of 1832 began a comprehensive reform of the nation's institutions and the removal of many of its worst abuses. Perhaps most significant of all came the realization among the political nation that general elections could act as a political arbiter, officiating and deciding between the conflicting claims of political parties, and thus making it possible for governments to be changed without recourse to violence. The outcome of the general election of 1841, in which Peel's Tories quietly ousted Melbourne's Whigs, was a sign of what could be done with the new force of electoral opinion. Of course, as the history of Ireland shows in the nineteenth century, such developments could be

utilized for sectional as much as national objectives. But by the later decades of the nineteenth century we can be sure that the age of political stability had at last arrived in the rest of Britain.

Notes

1. On this see Jeremy Black, *The Politics of Britain, 1688–1800* (Manchester University Press, 1993), pp. 1–4. I hope on a future occasion to write more extensively on the general process of transition from Renaissance monarchy to the modern state.
2. On this, see J. Canning and H. Wellenreuther (eds), *Britain and Germany Compared* (Göttingen, 2001), pp. 23 ff. Germans 'could only maintain their image of an enlightened Britain because they could not distinguish between real life in England and their stereotypes of it'. (ibid., p. 90).
3. For an interesting defence of some of the Whig historians, see D. Cannadine, 'British History as a New Subject: Politics, Perspectives and Prospects', in A. Grant and K. Stringer (eds), *Uniting the Kingdom: The Making of British History* (Routledge, 1995), pp. 16–17.
4. The classic statements remain J. C. D. Clark, *English Society, 1688–1832*: *Ideology, Social Structure and Political Practice during the Ancien Régime* (Cambridge, 1985); *Revolution and Rebellion: State and Society in England in the Seventeenth and Eighteenth Centuries* (Cambridge, 1986).
5. However, it is not, I think, essential to the revisionist case to argue that it presumes political stability, as Jeremy Black appears to argue in *British Politics and Society from Walpole to Pitt, 1742–89,* ed. J. Black (1990), p. 3.
6. See J. Brewer, *The Sinews of Power: War, Money and the British State* (1989). Patrick O'Brien has related the role of the state to its economic context. See his *Power with Profit: The State and the Economy, 1688–1815* (1991). Charles Tilly has also been impressed with the role of warfare in moulding the eighteenth-century state. See his *Coercion, Capital and European States, 990–1990* (Oxford, 1992).
7. P. Borsay, *The English Urban Renaissance: Culture and Society in the Provincial Town, 1660–1800* (1989); P. Corfield, *The Impact of English Towns, 1700–1800* (1982); *idem*, *Rise of the New Urban Society* (1995).
8. P. Langford, *A Polite and Commercial People: England, 1727–1783* (Oxford, 1989) and especially *Public Life and the Propertied Englishman, 1689–1798* (Oxford, 1991).
9. L. Colley, *Britons: Forging the Nation, 1707–1837* (Yale University Press, 1992). It is difficult to know how far to project Linda Colley's conclusions since she does not deal with Ireland in her study.
10. J. C. D. Clark, *Revolution and Rebellion*, p. 90.
11. G. Holmes, *The Making of a Great Power: Late Stuart and Early Georgian Britain* (1993), pp. 384, 385.
12. J. H. Plumb, *The Growth of Political Stability in England, 1675–1725* (1967).
13. J. Sharpe, *Early Modern England: A Social History, 1550–1760* (1987), p. 350.
14. Clayton Roberts, 'The Growth of Political Stability Reconsidered', *Albion*, 25:2, Summer 1993, pp. 253–54.
15. Indeed, most of the increase in the executive came in the reigns of William and Anne, a period of alleged instability. Brewer shows that between 1690

and 1726 the size of the revenue departments increased by 146 per cent and the administrative departments by 57 per cent, almost all of the increase coming *before* 1714. See J. Brewer, *The Sinews of Power*, pp. 64–9, 85–6, Roberts, 'The Growth of Political Stability Reconsidered', pp. 245, 276.

16. See my own *Voters, Patrons and Parties* (1989), esp. pp. 11–26, 27–60, 178–99.
17. L. Colley, *In Defiance of Oligarchy* (1982), pp. 119–21. Using different figures, Nicholas Rogers shows that in the large towns *more* rather than fewer contests were recorded in the Hanoverian era than in the Augustan: *Whigs and Cities: Popular Politics in the Age of Walpole and Pitt* (Oxford, 1989), pp. 229–32, 256.
18. There is a massive literature on this topic. It is conveniently summarized in G. Holmes and D. Szechi, *The Age of Oligarchy: Pre-Industrial Britain, 1722–83*, 1993, pp. 135–40; J. Rule, *The Vital Century: England's Developing Economy, 1714–1815*, 1992, pp. 40–5. Jonathan Clark remarks that in resting his argument about politics upon a socio-economic foundation, Plumb was repeating the errors made by Hill and Stone in relating seventeenth-century political crises to economic divisions. Clark noted that Plumb's political stability was the product of the ending of socio-economic divisions, a closing which produced 'a complacent oligarchy': *Revolution and Rebellion*, p. 27.
19. E. Cruickshanks, *Political Untouchables: The Tories and the '45* (1979); R. R. Sedgwick (ed.), *The House of Commons, 1715–54*, 2 vols (1970); J. C. D. Clark, 'The Politics of the Excluded: Tories, Jacobites and Whig Patriots, 1715–60', *Parliamentary History,* II, (1983) pp. 209–22; I. R. Christie, 'The Tory Party, Jacobitism and the '45', *Historical Journal*, 30:4 (1987), pp. 921–31.
20. B. Lenman, 'Scotland and Ireland, 1742–1789', in J. Black (ed.), *British Politics and Society from Walpole to Pitt, 1742–1789* (1990), pp. 87–90.
21. Paul D. Halliday, *Dismembering the Body Politic: Partisan Politics in England's Towns, 1650–1730* (Cambridge University Press, 1998), pp. 21, 23–4. 'When we look closely, when we move beyond Westminster and probe beneath a political narrative largely from elite correspondence, we find the new "stable" world was one with a surprising amount of conflict. In the corporations, partisan conflict continued undiminished' (ibid., p. 339). But local government went on with little interruption. 'In all but the worst cases of local conflict, governance continued: lands were leased, courts settled commercial disputes and convicted petty criminals, and charities and other public services were maintained' (ibid., p. 28). See also the rather similar argument by Norma Landau, 'Country Matters: The Growth of Political Stability: A Quarter Century On', *Albion,* 25:2 Summer 1993, pp. 268–70.
22. Gary S. de Krey, 'Party Lines: A Reply', *Albion*, 25:4, Winter 1993, p. 639.
23. Whether denominational discourse is the thread that links successive rebellions in the long eighteenth century as Jonathan Clark claims (*The Language of Liberty*, Cambridge University Press, 1994, p. 292) is a matter of opinion. What cannot be denied is their occurrence.
24. J. H. Plumb, *The Growth of Political Stability*, p. xvi.
25. F. E. Dessauer, *Stability* (New York, 1949), pp. 17–18. The Lockean system of checks and balances was rather similar to ideas common in Ancient Sparta: *Stability*, p. 13.
26. Which may take decades. There was stability in eighteenth-century Ireland. After 1691 there was no more fighting, no more rebellion, for almost a century. That stability, however, was founded upon an unequal land settlement,

religious discrimination in the shape of the penal laws and colonial occupation as well as commercial laws which excluded Ireland from trade with the colonies. But it was only in the 1790s that stability was disrupted by an intense resentment that led to violent rebellion. On this see also G. M. Trevelyan, *The English Revolution* (Oxford University Press, 1938), pp. 237–8.

27. L. Steffen, *Defining a British State: Treason and National Identity, 1608–1820* (2001), p. 48.
28. R. Price, *British Society, 1680–1880: Dynamism, Containment and Change* (1999), p. 258.
29. On this see F. J. McLynn, *France and the Jacobite Rising of 1745* (Edinburgh University Press, 1981), pp. 75–119; E. Cruickshanks, *Political Untouchables: The Tories and the '45* (1979), pp. 36–51.
30. D. Szechi, *The Jacobites: Britain and Europe, 1688–1788* (1994), pp. 73, 77.
31. P. Monod, *Jacobitism and the English People, 1688–1788* (1989), p. 322; C. Haydon, *Anti-Catholicism in Eighteenth Century England: A Political and Social Study* (Manchester University Press, 1993), p. 83.
32. J. Black, 'A Different West: Counterfactualism and the Rise of Britain to Great Power Status', *Francia*, 28:2 (2001), pp. 137–41.
33. J. Black, *British Politics and Society from Walpole to the Younger Pitt*, (1984), p. 18.
34. G. Holmes and D. Szechi, *The Age of Oligarchy: Pre-industrial Britain, 1722–83* (1993), p. 13.
35. Ibid., p. 98.
36. For the case in favour of a successful rising in 1744–46 see McLynn, *France and the Jacobite Rising*, pp. 2–4.
37. Haydon, *Anti-Catholicism in Eighteenth Century England*, pp. 141–2.
38. J. Black, *Politics of Britain*, p. 49.
39. Clark, *The Language of Liberty*, p. 292.
40. On this see H. G. Koenigsberger, 'Composite States, Representative Institutions and the American Revolution', in *Historical Research*, 62 (1989), pp. 135–53.
41. A. Murdoch, *British History, 1660–1832: National Identity and Local Culture* (1998), p. 113.
42. Indeed, his plans to invade in 1803–5 were themselves based on a detailed analysis of earlier such plans (A. Temple-Patterson, *The Other Armada: The Franco-Spanish Attempt to Invade Britain in 1779* (Manchester University Press, 1960), p. 2).
43. On the seriousness of the threat see E. Royle, *Revolutionary Britannia: Reflections on the Threat of Revolution, 1789–1848* (Manchester University Press, 2000), pp. 26–35. Jonathan Clark calls it 'the most sanguinary example of insurrection in the British Isles since the war of 1689–91 and the one which came closest to overthrowing the English, Anglican hegemony': *The Language of Liberty*, p. 287.
44. E. Royle, *Revolutionary Britannia*, p. 79.
45. There is, of course, little argument that the process of state formation must be related to wider trends in the history of culture. This theme, however, has only been worked for a somewhat earlier period. See S. Hindle, *The State and Social Change in Early Modern England, 1550–1640* (Basingstoke, 2002); M. J. Braddick, *State Formation in Early Modern England, c.1550–1700* (Cambridge, 2000); *idem*, 'State Formation and Social Change in Early Modern England: A Problem and Approaches Suggested', *Social History*, 16 (1991), pp. 1–17.

46. Conrad Russell, 'Composite Monarchies in Early Modern Europe: The British and Irish Example', in A. Grant and K. Stringer (eds), *Uniting the Kingdom*, (1995), p. 134.
47. Jonathan Clark (*Revolution and Rebellion,* pp. 134–5) strongly disputes the thesis of A. S. Foord of a steadily evolving doctrine of opposition during the century. A. S. Foord, *His Majesty's Opposition, 1714–1830* (Oxford, 1964).
48. I. R. Christie, *Stress and Stability in Late Eighteenth Century Britain* (Oxford, 1984).
49. The crisis of 1745 occasioned the rallying of Loyalist Hanoverian sentiment throughout the country. See the map of Loyalist support in the '45 in L. Colley, *Britons*, p. 377. Her discussion of Loyalism in these years includes an economic assessment: 'Large numbers of men from commercial as well as landed backgrounds took an active part in raising money and in taking up arms on behalf of the existing order' (pp. 84–5).
50. Sir Thomas Dolman to (?) Henry Coventry, MP, December 1663, Longleat MSS. I am indebted to Dr Paul Seaward for this reference.
51. C. Haydon, *Anti-Catholicism in Eighteenth Century England*, pp. 56–8.
52. J. Scott, *England's Troubles; Seventeenth Century English Political Instability in European Context*, (2000), p. 437.
53. E. Vallance, 'State Oaths and Political Casuistry in England, 1640–1702', unpublished PhD dissertation, Oxford, 2000, pp. 25–51, 277–8.
54. P. Clark, *British Clubs and Societies, 1580–1800: The Origins of an Associational World* (Oxford, 2000).
55. See R. Price, *British Society, 1680–1880*, pp. 192–204.
56. H. Wellenreuther, 'The Political Role of the Nobility in Eighteenth Century England', in Canning and Wellenreuther (eds), *Britain and Germany Compared*, pp. 101–39.
57. For the integration of the Celtic elite see Murdoch, *British History*, p. 87.
58. Grant and Stringer, *Uniting the Kingdom*, pp. 224–9.

4

The Ordering of Family and Gender in the Age of the Enlightenment

Rosemary Sweet

Introduction

In 1787 the physician William Moss described the unity and harmony that prevailed amongst the swelling population of his native town of Liverpool. They appear, he wrote, 'as component parts of one great, allied family'.[1] Throughout the eighteenth century the idea of the family acted as a metaphor for society as a whole: a stable family unit, a clear distinction of gender roles and limited social mobility were the foundations upon which a well-ordered society was established. Family connections, birth and breeding – as well as wealth – determined one's place in the social hierarchy. Patriarchal theory may have been abandoned in political thought in the wake of the Glorious Revolution, but the values of deference, obedience and subordination with which it was associated were still regarded as part of the essential ordering of society and lived on much longer within the family. The institution of the family and the distinction between man and woman were seen to be God-given and 'natural'; they were the basic determinants of order in eighteenth-century society and, as such, not open to question. A threat to family stability or a blurring of the gender distinctions, therefore, had ideological and cultural ramifications far beyond the demands of everyday life. The family was a bulwark against change – a symbol of continuity and a source of stability – yet it is self-evident that much *did* change during the eighteenth century and that the concept of 'family', for all its centrality, is one that is protean and resistant to the historian's attempts to define, quantify and describe.

In comparison to earlier periods the sheer wealth and accessibility of literature, from novels to conduct books, discussing marriage and the family in one form or another, has made it deceptively easy to posit a

model of change in family relationships over the eighteenth century. Such a model can be made to advance hand in hand with other teleological narratives of progress: the onward march of capitalism, the rise of the middle classes or the emergence of that nebulous concept of modernity. The eighteenth century, it has been argued, saw the separation of spheres and a sharper differentiation of gender roles, together with increased emphasis on motherhood, a 'cult' of childhood, and the displacement of the 'consanguineal' family of kinship networks by the 'conjugal' family in which the married partnership took priority. The most influential exposition of this interpretation has been that offered by Lawrence Stone in *The Family, Sex and Marriage*. Part of the appeal of his thesis derives from the fact that it is a classic expression of a model of rational order and individualism, and one that fits in particularly well with other modernizing narratives that have been imposed upon the eighteenth century.[2] A family system based upon extended kinship networks, patriarchal authority and the celebration of lineage, it is argued, gave way to a more affectionate and egalitarian system of relations within the family and to diminished contacts with relatives beyond the nuclear core. This was accompanied by a stronger sense of individual autonomy and the importance of personal freedom, whilst sexual pleasure lost much of its earlier association with sin and guilt. Cumulatively these changes contributed to a further development: the greater value attached to privacy and the bourgeois sphere of domesticity. Stone never argued that these changes, which he characterized as the four key features of 'modern family life', were comprehensive or instantly transformative. But the entire thrust of his argument was Whiggish and overdetermined. Imagining a plurality of overlapping models of family life should, perhaps, be the way to develop a deeper understanding of the place of the family in eighteenth-century culture. This complex image is more enlightening than seeking to measure the family against an ideal type of bourgeois domesticity.

The nuclear family: fact or fiction?

Historical studies that have probed beyond analysis of contemporary novels and conduct literature reveal widely divergent experiences which bear little relation to the fictional narratives propagated by the circulating libraries. The greater sensitivity of historians to the construction of gender and the interrogation of eighteenth-century assumptions of 'natural' behaviour have yielded research that has not only deepened our understanding of the complex and contested nature of gendered identities in

this period, but has also forced us to become much more sensitive to the blurring of lines between public and private or masculine and feminine spheres. Research of a more rigorously empirical nature has also been suggestive of the diversity of meanings and experiences associated with the family. Chronologies of change that seem well-adapted to the commercial middling sort break down when matched with the experiences of the landed elites or the labouring sort. Simple models of change in familial structures or gender relations have become increasingly problematic.

The most comprehensive assaults on Stone's thesis have been directed at his argument for the emergence of the modern nuclear family during the eighteenth century. It was soon demonstrated that a nuclear family structure was commonplace long before the eighteenth century – a finding that seriously undermines Stone's contention that family structure changed in response to socio-economic transformation.[3] We have also been made increasingly aware of the infinitely fluid and mutable structure of the 'nuclear family', as it grew and shrank according to need. The type of information provided in records such as the census or a will – in which the nuclear family is caught as in a snapshot – is precisely that, the freezing of a moment in time which obscures the fluidity and dynamism of family living arrangements. It is the linguistic turn, however, that has most effectively demonstrated the unstable quality of the concepts of family and household in this period. Naomi Tadmor's analyses of contemporary novels – precisely those that Stone so readily adduced in support of his own argument – and of the diary of the Sussex shopkeeper, Thomas Turner, have convincingly shown up the inconsistent and ambiguous usage of words such as family, sister, brother and other terms associated with the nuclear family, which some historians have taken to be the unproblematic equivalents of modern usage.[4] The family was a flexible framework which expanded or contracted as servants, apprentices and other dependants – as well as children – joined or left the household. Subtle gradations of language, largely lost upon modern ears, enabled men like Turner or the characters of Richardson's novels to distinguish between kin and non-kin and to indicate degrees of kinship. Moreover, even within the supposedly more egalitarian, contractual relationships of a middle-class nuclear family, Tadmor suggests that hierarchical values of lineage and primogeniture were perpetuated. As much as any member of the aristocracy, Turner's construction of his own self and his place in society was framed by an awareness of his family's lineage. Tadmor's demonstration of the survival of a more authoritarian idea of the family also has important implications for our

understanding of broader political and philosophical arguments in this period, in which the family acted as metaphor for the state or social relations at large.[5]

The elasticity of Turner's language of family and household to encompass any servants within the family unit also undermines those arguments that link privacy, domesticity and the nuclear family to a 'modernizing', rational model of the eighteenth century. A central element of Stone's thesis was that modern notions of family privacy emerged during the eighteenth century, with servants being banished to separate quarters of the house. Architectural design was supposedly modified to accommodate this new-found need for withdrawal, whilst greater emphasis was placed on the harmony and well-being of the nuclear family within the home, and on excluding the hostile outside world. Aristocratic and gentry properties may in fact have been designed to render servants invisible in basements or attics, but, as Tim Meldrum has recently pointed out, separate rooms for servants have been identified in records of the seventeenth century and earlier, whilst back stairs were a rare and expensive luxury for all but the wealthiest households until the nineteenth century.[6] Other evidence points to the continued ubiquitous presence of servants within the household, and shows them sleeping with haphazard unpredictability in rooms all over the house. Moreover, conditions of service in the aristocratic household did not represent the experience of the majority, who were placed in middling households. Women, with their more restricted opportunities for employment, would often undergo a period of service before marriage, or were placed with kinsfolk in return for bed and board if marriage failed to materialize.[7] Domestic service was life-cyclical and meshed with ties of kinship and neighbourly obligation in a way that defies reduction to a simple hypothesis of increasingly family-centred notions of privacy.

The persistence of kinship

Turner's interest in lineage (Collins's *Peerage of England* was his reading of choice during April 1758) also invalidates the contrast conventionally drawn between those who prided themselves on their birth and the meritocratic middling sort.[8] We should not underestimate the significance attached to birth and lineage in the eighteenth century at every social level. It is easy, of course, to find satirists who mocked the pretension of those who prided themselves upon their birth, pedigree and ancestry. In 1700 Daniel Defoe challenged the respect conventionally accorded to

birth and breeding:

> What is't to us, what Ancestors we had?
> If Good, what better? Or what worse if Bad?
> …
> For Fame of Families is all a Cheat
> Tis Personal Virtue only makes us great [9]

But, despite Defoe's deliberately provocative comments, we might point to the equally prolific literature that tended to uphold a contrary view of society. 'Relationship of family', wrote Edward Hasted, 'extended by the preservation of pedigrees promotes a chain of society and good will that often affords assistance and support to every chain of it.'[10] Hasted's comments, printed in the preface to the *History and Topographical Antiquities of the County of Kent*, articulate a strong sense of the importance of pedigree, lineage and family and also point to the importance of the family's role in furthering the ends of society, ensuring stability and promoting the welfare of all. It is perhaps not surprising to find the endorsement of kinship and pedigree in a county history: this kind of material was of most interest to the landed elite and country gentlemen who were the intended purchasers of these publications. Hasted's financial affairs were always precarious (the *History* was finished from the debtors' gaol), but we should not jump to the conclusion that the sentiments quoted above were simply an exercise in flattering his potential market.[11] The respect for lineage and pedigree and its importance as the organizing principle of his antiquarian studies were far from unique. They illustrate a deeply felt sentiment which can be replicated across English society throughout the eighteenth century.

The assumption that hereditary virtue was transmitted through the generations sustained the landed elite's belief in its own superiority and fitness to rule. In the words of Sir Robert Atkyns, historian of Gloucestershire, the study of family history 'stimulates and excites the Brave, to imitate the generous Actions of their Ancestors; and it shames the Debauch'd and Reprobate, both in the Eyes of others and in their own Breasts, when they consider how they have degenerated'.[12] The ability to trace one's ancestors was in itself an attribute of genteel status.[13] However, it is easiest to find expressions of the importance of lineage and of preserving pedigrees amongst the antiquaries whose business it was to collect and record such information. For some it was a solipsistic and self-indulgent pursuit, but for others the descent of family and the integrity of the property from which the family's status was

derived were not simply matters of pride but represented the stability of society. The preservation of family history, therefore, whether achieved by writing a county history or recording the epitaphs and monumental inscriptions in a church, were pursuits which had social value, rather than being merely the occupation of an idle hour. John Hutchins, a clergyman, laboured for many years to collect the pedigrees of the families of Dorset, hoping that their publication might inspire his own generation to emulate their ancestors. If nothing else, he concluded, there was considerable satisfaction to be gained from knowing the particular history of one's family and the means by which estates were acquired and transmitted.[14]

The sentiments that were expressed in these antiquarian tomes were also mediated to a much broader readership through cheaper volumes and popular abridgements. The late eighteenth and early nineteenth centuries saw a significant growth in the publication of this kind of topographical and antiquarian literature, much of which was devoted to meeting the needs of the enquiring tourist – and the armchair traveller – who were part of the burgeoning business of domestic tourism. Such volumes, frequently to be found in the book clubs and libraries of provincial towns, invariably described the antiquities and landscapes of Britain in terms of the families who had owned them. Family history frequently took precedence over architectural description, and the history of the locality or the region was structured around the fortunes and vicissitudes of the principal families.[15] The authors of these publications were seldom from the landowning elite themselves. John Britton, the editor of the popular series *Beauties of England and Wales*, was the son of an innkeeper and John Hodgson, one of his contributors and a leading Northumberland antiquary, was the son of a stonemason, but they had both nevertheless internalized the values of lineage.[16] Much of Hodgson's labour in compiling material for the history of Northumberland consisted in amassing the details of pedigrees and establishing family kinships: as he admitted, such records were in many cases the only accounts surviving from certain periods of history. But he also awarded a more contemporary significance to maintaining such family memorials – the 'glory of ancestry' would inspire and sustain the virtue of the modern representatives of those families. So too, for William Hutchinson, a lawyer from Barnard's Castle, the veneration for ancestors that was exemplified in respect for pedigree was an incitement to practical virtue and good works.[17] It was not just Sir Robert Atkyns, then, who believed that a respect for ancestry went hand in hand with political probity and patriotism. Even the histories of a rapidly expanding commercial centre such as Liverpool paid more than lip

service to the importance of preserving memorials of the leading families of the region. A proposal for publishing a new history of Liverpool, advertized in the *Gentleman's Magazine* of 1793, identified an account of the 'antient state, pedigrees, and armorial bearings of the different families in and about Liverpool' as one of the most important subjects to be covered. Those who could boast no such pedigree themselves could still define their own locality through dynastic continuity and family lineage.[18]

The profusion of printed literature – antiquarian, political, theological – as well as the novels upon which Stone built his analysis, allows us to construct readings very different from his, of the significance of lineage, ancestry and kinship in eighteenth-century society.[19] It should, of course, be allowed that the readership and impact of even a comparatively successful publication, with a print run of several thousand, like *Beauties of England and Wales*, was strictly limited in comparison with the cumulative readership of fiction celebrating romantic love or feminine domesticity.[20] Far more people would have been consuming the novels of the circulating libraries, where heroines from *Pamela* onwards fell in love, won their husbands and lived in conjugal bliss, than would have read antiquarian works. The point to be emphasized is that these other publications still commanded considerable appeal. They may have been, in Raymond Williams's phrase, 'cultural residue', that is, they articulated values formed in an earlier period, but they continued to exercise a significant influence over contemporary culture, alongside the more fashionable mores articulated in popular novels.[21]

The ethos of sentiment and affective family relationships to be found in novels has also been identified in the portraiture of the period, with intimate family groups and touching images of mother and child becoming increasingly fashionable in the decades between 1740 and 1760, replacing the stiffer, formal styles of earlier portraiture. But the family portrait, as Kate Retford has recently demonstrated, offers a particularly pertinent instance of the manner in which a sentimental veneer could overlay more traditional modes of thought. The new fashions in portraiture, with their celebration of maternal love, the innocence of childhood and close family relationships, which Stone might have seized upon in confirmation of his thesis, could assume an entirely new meaning in the context of the ancestral home, when hung with other portraits of the family forebears.[22] George Romney's portrait, painted in 1783, of the Hon. John Cust as an infant leaning against the knee of his mother Frances Bankes, Lady Brownlow, was at once a charming, sentimental image of infancy and maternal love, and a direct and deliberate echo of Thomas Hudson's image, painted a generation earlier, of his father,

Brownlow, leaning against the knee of Etheldred Payne, Lady Cust. Contextualized thus, the family portrait displayed 'alternative messages of continuity, the unbroken succession of eldest sons, and the importance of women in securing that succession'.[23] The very public display of such portraits, to be viewed by visitors alongside the collections of Italian art and antique statuary, enabled them to evince a statement of the taste, politeness or sensibility of the sitter or patron, and at the same time to illustrate familial relationships, asserting the continued primacy of lineal descent.

The family and political culture

The importance of the bonds of family and kinship amongst the ruling elite which was celebrated in these portraits was most obviously manifest in the conduct of eighteenth-century politics. To reassert the importance of family interests may seem like a return to the arid analysis of Lewis Namier, but, whilst we now know far more about the richness and vitality of political culture beyond the aristocratic elite, we have still fully to recognize that family interest and family networks provided much of the structural framework for eighteenth-century politics, particularly at the parliamentary level. Recent research that has sought to uncover the nature and extent of women's involvement in the political world has highlighted not only how the neat theoretical distinction between public and private spheres breaks down when tested against the lived experience, but also how important the family was, as both the context and the rationale for political behaviour in this period. Politics was supposed to be a masculine affair: women did not have the franchise, could not sit as MPs and were not bred to take any kind of formal political role. But in the world of informal politics they had an important part to play. Electoral campaigners would target women as well as men, knowing that they could sway their menfolk and that women as well as men could take part in the politics of protest or ritual demonstration.[24] Higher up the social scale the sisters, wives and mothers of the landed elite were expected to help promote the family's political fortunes. At one level this may simply have meant being married off to secure a political alliance. At another level it could mean deep involvement in political affairs. Many women of the landed elite were astute politicians; they followed events in Parliament and reported on news in the constituencies. They were vital conduits of information and also advice, often performing a secretarial role for their male relatives. Through the hospitality of their drawing rooms they facilitated informal meetings,

the exchange of news and delicate negotiations that required feminine tact. Their most visible role was in canvassing, entertaining local dignitaries, visiting potential voters and cultivating local support.

Women's political involvement was pervasive, but it can only be understood and appreciated in the context of a model of politics that acknowledges the importance of family alliances, the priority of familial obligations and the power of kinship networks in mobilizing support and cooperation. Women's active responsibility for controlling the family interest and maintaining these kinship networks through correspondence and conversation became, if anything, more pronounced during the eighteenth century. The peculiar demographics of the landed elite in the first half of the century, arising from a collective failure to produce sufficient male heirs, meant that, of necessity, women often played a crucial part in administering estates and maintaining the family's political interest for heirs who had yet to come of age.[25] Nor were these women simply ciphers: Frances, Lady Irwin inherited amongst other properties the borough of Horsham from her husband in 1764, the political interest of which she assiduously pursued until her death in 1807. This task was undertaken not for a future male heir but for her daughter, and thereby she showed herself not only a capable politician, but also a woman with a strong sense of her own dynastic lineage.[26]

Elaine Chalus has clearly demonstrated the significance of women's contributions to political life in the long eighteenth century.[27] Her study of political papers and family correspondence has revealed the full extent of female participation in election campaigns, in nursing constituencies, or in acting as mentors, advisers or secretaries to their male relatives. None of this, of course, was predicated upon the assumption of any right to political participation on the part of women themselves, but upon a traditional, even 'patriarchal' understanding of their familial duties and responsibilities. Aristocratic women such as the Countess of Spencer found it unpleasant and distasteful, but the calls of family duty, overriding personal disinclination, dictated that they should make every effort to contribute to the political careers of their male relatives – and not just those of the 'nuclear' family. It was the fact that Georgiana, Duchess of Devonshire was campaigning for a man – Charles James Fox – with whom she could claim no family relationship that gave rise to the virulent and scabrous outpourings in the press and popular prints in 1784, lampooning the duchess, who allegedly sold kisses for votes. But, as she herself complained, she did nothing that the other women did not also do, albeit with considerably more success and aplomb than the less charismatic matriarchs of the Pittite party.[28]

Family interest and 'Old Corruption'

Feminine influence was associated with private interests, increasingly identified with those of the family. By the late eighteenth century, in fact, familial interest in politics was regarded as dangerous and counter to the public interest and the greatest good for the greatest number. But part of the antipathy that was turned against the Duchess of Devonshire's attempts to influence the Westminster electorate drew upon the age-old suspicion of the influence of women in politics, and an assumption that there was always more than a whiff of sexual impropriety involved. Given how often the woman concerned was a mistress, feminine influence was regarded by many as both unconstitutional and immoral.[29] The discussions of scandal and corruption in the press in the later eighteenth century showed increasing levels of concern – and fascination – with the nefarious influence of female intervention and sexual liaisons amongst the political elite.[30] By the 1790s Charles Pigott was developing this line of attack into an art form in the pages of the *Jockey Club* and the *Female Jockey Club*. Leaving aside the misogyny that drove these attacks on 'petticoat influence', we should recognize that Pigott, and other radicals like him, highlighted the sexual scandals of elite women as a means of attacking the system of aristocratic privilege and family interest as a whole.

Despite the demise of patriarchal theories of government, the 'political' and the 'family' remained fused in the same language of political debate throughout our period. Thus the middling sort, who saw the family as the locus for virtue and morality, regarded the looser family structure and rather more flexible morality of the ruling elite as manifestations of a deeper corruption. This was even the case in the early eighteenth century, before a broader political critique of aristocracy had emerged.[31] Private vice led to public corruption; Pigott's journalism may be seen as not just prurient, but purgative. Abuses had to be highlighted if reform was to come about.[32] The rise of Evangelicalism, again strongest amongst the middling sort, further diminished the tolerance of lax aristocratic mores, and brought added moral weight to the arguments premised upon the need for constitutional reform. The increasingly febrile reception that greeted stories such as Mary Anne Clarke's sale of army commissions in the early nineteenth century, or even the treatment of Queen Caroline in 1820, was due less to the unprecedented immorality of those implicated than to changing expectations of public conduct and political life and contrasting attitudes to the place of family interests in public life.[33]

The impact of the aristocracy's hereditary power and family connections was seen most visibly in the control exercised over the rotten boroughs of the unreformed system, and it was here that reformers aimed their most scathing critiques.[34] Attacks on aristocratic influence were key aspects of the independence movement that began to gather pace in the last three decades of the eighteenth century and a central theme of political radicalism from the time of John Wilkes, whose *North Briton* linked the alleged relationship between Lord Bute and the Princess Dowager with charges of monarchical tyranny, through to John Wade in the 1820s.[35] The House of Commons, as Thomas Oldfield sought to persuade his readers in 1792, had fallen under the sway of aristocratic family interest.[36] The interference of peers at elections in order to increase family patronage, claimed a pamphlet in Chester in 1807, was contrary to the spirit of the law and dangerous to the liberty of the subject. In Stamford the electorate was informed by the independent candidate that the franchise had been taken out of their hands by the overbearing family interest of the Burghleys.[37] The cancer of private family interest acting on public life was not just in evidence at Westminster: it had spread its infection throughout the body politic. Thus the Commissioners for Municipal Reform, investigating the administration and management of borough corporations across the country in the 1830s, had an eagle eye for evidence of family patronage and familial networks operating to pervert the borough corporation into an organ for furthering their own private good. The new charter at Lancaster was welcomed for putting an end to family interest, while family ties in Nottingham were identified as underpinning the exclusivity of the corporation. Family connections were similarly exposed in Liverpool, whilst in smaller boroughs such as Rye, where a single family had effectively appropriated the mayoralty to itself, the commissioners were particularly incensed. Family interest continued largely unabated, well into the nineteenth century, but from being the stabilizing force within the political system – the glue that held it together – it was being transformed into something much more destabilizing: one of the points where the unreformed system was most vulnerable to attack.[38]

Urbanization: a challenge to the family?

Those who adhered to a more hierarchical view of society saw the critiques to which they were subjected as the product of an urbanizing society. The rapid physical and demographic expansion of towns prompted anxiety as well as celebration; they were looked upon with suspicion, not

least because it was believed that it was here that principles of inherited worth, hierarchy and subordination were most imperilled. Thus we may partly account for the virulence of the antipathy with which individuals such as John Byng, later Viscount Torrington, viewed the growing urban sprawl of manufactures and industrialization as he travelled across Britain in the later decades of the eighteenth century. Tellingly, he was most provoked by the lack of respect for dynastic continuity that he encountered at Coventry in 1789: 'For antiquity look not into great town churches', he expostulated, 'for aldermen are ashamed of seeing painted windows, and old tombs.'[39] The comment of the self-made businessman William Hutton in 1781 that there were no gentlemen in Birmingham – they were made and cast off like buttons – would not have struck Byng as a cause for celebration or complacency.[40] For Byng, towns represented impermanence and instability. On his journeys through Britain he noted the destruction of church monuments and other parts of the medieval urban fabric, in order to make way for modern improvements. With their disappearance he saw a parallel loss of deference and of the bonds of lineage and kinship that he believed had sustained the social order over generations. Conservative moralists such as Byng feared the loss of distinction and privileges due to birth and breeding, and looked upon the growth of urban society with horror. This was not without cause. The story of the gentleman who accidentally invited a well-dressed Abigail to dance at an assembly in Bath may have been an eighteenth-century urban myth, put about in Smollett's *Humphry Clinker* (1771), but advice manuals such as John Trusler's *The Way to be Rich and Respectable* (1775), which advised readers on how to make an income of £200 pass for £400, were preaching precisely the kind of materialist egalitarianism that would enable a lady's maid to assume the persona of her mistress.[41]

There is no denying that the growth of towns was productive of rapid and far-reaching social and economic change, but there is equally little cause to assume that the urbanization of the eighteenth century entailed widespread social dislocation, fragmentation or anomie. Lineage and descent meant little to William Hutton, but the family as the basis for ordering society was as obvious to him as it was to Byng. Hutton may have rejected the hierarchy and deference demanded by aristocratic lineage, but the concept of the family amongst the middling sort should not automatically equate with a simple model of individual autonomy and private domesticity, or the rejection of the obligations due to wider kin. The social dislocation consequent upon population movement and urban growth, it has been suggested, made kinship more, rather than

less, important for urban inhabitants.[42] Studies of merchant communities in London, Leeds or Hull likewise stress the significance of family connections within the business networks.[43] This argument has been most forcefully made by Richard Grassby, who undertook an intensive analysis of 28,000 businessmen between 1580 and 1740. Grassby found that approximately half of business partners came from immediate family or kinsfolk, with no decline towards the latter end of the period.[44] Capitalism was founded upon family units and did nothing to undermine the importance of family and kinship ties. The triumph of individualism, traditionally associated with the rise of capitalism, was, Grassby argues, 'fundamentally a triumph of the individual household within a kinship structure'.[45] It was the perpetuation of family, rather than mere profit accumulation, that proved the motive force behind merchant capitalism. Tradesmen, businessmen and the gentry alike were driven by the same impulse to provide for the family and future generations and to draw upon their relatives for aid and support.[46]

Some studies do indicate, however, that there was a shift towards relying upon friends and neighbours rather than kin. Indeed the higher concentration of people in urban areas provided a larger pool of individuals upon whom one might call for assistance, friendship or support. But this was not necessarily a unidirectional shift. The increasing scale of immigration to towns in the early nineteenth century appears once more to have made kin members more important, particularly with respect to personal affairs or matters of property, whilst improvements in communication greatly facilitated the means of keeping in touch with the more dispersed family and kin members (this was, predictably, a female responsibility).[47] Thus nineteenth-century historians still emphasize the importance of family and kinship networks in underpinning the development of the industrial and manufacturing cities of the Victorian era.[48] The significance of family networks in holding together urban society and facilitating the growth of manufacturing and commercial enterprises, demonstrated in a number of local studies, should not be underestimated. They did, of course, coexist with other networks based upon occupation, politics, religion and neighbourhood, but establishing whether these were more resilient or invested with greater meaning than kinship ties is much harder to establish.[49]

For some contemporaries, however, the increase in personal mobility consequent upon urban growth seemed to create a fragmented and faceless society, in which the reassuring sense of order based upon personal knowledge of one's neighbours was hopelessly attenuated. Moralists feared that the migration of people from countryside to town facilitated

the spread of luxury, hastened a decline of morals and contributed to the corruption of the young and the disintegration of family ties. But, whilst there clearly were instances in which young people lost their way in urban society, with young girls falling into prostitution like Hogarth's Moll Hackabout in *A Harlot's Progress*, the deleterious impact of manufacturing growth and urbanization on family structures is more equivocal.[50] Eighteenth-century fears appear now to have been exaggerated and in this context family structures do appear to have been instrumental in ensuring the continued cohesion of society. As we have seen, high levels of migration were actually instrumental in forging stronger kinship links as people moved from the countryside to the unfamiliar territory of the town. A dispersed network of relatives was crucial in facilitating mobility and integrating individuals into communities.[51] Even in London, amongst those apparently most transient groups of society which gave the moralists most cause for concern – the criminal networks – it would appear that these too were essentially based around connections of family and friends.[52]

Kinship networks, as well as the nuclear family, were clearly vital in sustaining the lives of the poor at a variety of levels in both rural *and* urban society and proved remarkably resistant to the stresses of demographic growth and urbanization. Studies of family networks amongst the labouring sort in urban areas during the eighteenth century are, unfortunately, rare and, even when it is possible to demonstrate the existence of kinship relationships within a community, it is very difficult to demonstrate that these relationships were consciously maintained or preferred over any other kind of social tie. The argument that the system of poor relief, which by 1700 had become well-established and widespread, negated the responsibility of care for one's relatives has been shown to be overly schematic.[53] As more case studies have been conducted, analysing the operation of the Poor Law in the local context, enormous regional diversity in the exercise of poor relief, charity and philanthropy has become apparent, but it has also become clear that the expectation that the family should be the primary point of resource was in no way diminished by the availability of statutory relief. Close analysis of poor relief in Lancashire, for example, shows how kinship networks were integral to its implementation. It would seem that these could be called upon to provide social and fiscal credit, but were also exploited by the parish in the distribution of relief. In the townships of the West Riding, individuals were generally more likely to call upon relatives than to apply to the parish.[54] So too, the increase in assistance provided on behalf of the elderly by the end of the century did not mark a decline in

the sense of moral obligation on the part of children to care for their parents. Rather, it was a consequence of an overall decline in the economic position of the poor that rendered the elderly dependent upon relief, because it left their children unable to provide them with adequate support.[55] David Cressy's comparison of the ties of close and extended kinship to a 'reserve account' – a resource of emotional or financial support that could be called upon in times of need, but which might also be left dormant for years at a time – seems to be as applicable to the eighteenth century as to the seventeenth.[56]

Separate spheres, gender roles and the nuclear family

We should not underestimate, then, the continued significance of kinship, or indeed a sense of lineage, across the social spectrum during the eighteenth century.[57] However, the aristocratic connections of kinship and their claims to privilege based upon lineage, as we have seen, did come under attack, not least because of the contemporary association between the family and feminine influence. Furthermore, knowledge of the complexities of family relationships and networks became, to a large extent, 'feminized' during this period – women occupied an important role as the repositories of family history and family lore. But the 'gendering' of such knowledge perhaps accounts both for the reluctance of contemporaries to acknowledge the significance of familial matters in politics and for the willingness of historians to see politics becoming progressively divorced from family concerns as it became more exclusively masculine.[58] One of the attractions of the putative shift towards closer familial bonds, domestic companionship and a desire for privacy as a historical model was that it seemed to accommodate and corroborate a parallel transformation in gender roles during the same period. This thesis presupposed a 'separation of spheres', as women were confined to the privacy of the nuclear family, while men assumed dominance of a public sphere of politics or the workplace. Thus Judith Lewis, for example, has argued that aristocratic women were forced to withdraw from an active role in politics in the early nineteenth century into the domestic retreat of the family.[59] Stone's thesis has also been sustained by more recent interpretations that have purported to trace a paradigmatic shift in the way that contemporaries conceptualized the differences between men and women in the early eighteenth century, leading to a gradual hardening of gender roles. The transition has conventionally been explained with reference to arguments based upon 'nature': a shift towards a dichotomous mode of thought that was predicated upon binary oppositions, of which the most important was that of

sexual difference. The one-sex paradigm inherited from classical antiquity was replaced by a two-sex model which grounded the difference between male and female upon biological fact rather than positing a hierarchical model, according to which the feminine was simply an inferior version of a male norm.

Thomas Laqueur's influential and persuasive exposition of this model in *Making Sex* has certainly informed most subsequent discussions of the construction of gender identities in the eighteenth century. The implications for women have been considered at greater length than those for men: women, it is argued, were defined in terms of their sexuality and their capacity to bear children. They were prized for their chastity and modesty; they were expected to be sexually passive and above all subordinate to their husbands. Abundant material has been published that would appear to support Laqueur's argument and the emphasis upon the natural and upon a taxonomic mode of thought is one that is neatly accommodated to the Enlightenment idea of order. Furthermore, the rise of the cult of sensibility and the nervous theory propounded by doctors such as George Cheyne, given wider dissemination through novels such as Richardson's *Clarissa*, appeared to be entirely consistent with this kind of polarized sexual distinction. They were clearly fundamental in establishing a normative gender role for women as irrational, emotional and susceptible to nervous complaints.[60] This mode of thought, it has been argued, produced a discourse which was able to 'stabilize and maintain a social order of gender inequality', even as the traditional foundations of patriarchal theory were being undermined.[61] It confirmed their difference from men and their need for male authority, reinforcing belief in the naturalness of male dominance and guidance at a time when the traditional arguments for patriarchal authority, derived from the analogy between divinely ordained kingship and the domestic *paterfamilias*, were arguably losing some of their conceptual hold.

There can be little argument that prescriptive literature increasingly defined male and female qualities in an oppositional manner over the course of the eighteenth century.[62] It is also undeniable that women found themselves excluded from areas where previously participation had been tacitly allowed. Midwives were replaced by obstetricians; female sextons found themselves the subject of legal challenges; male managers replaced the women who had formerly run the dairies; women's appearance at vestry meetings became increasingly rare; and, even amongst the labouring sort, women found themselves excluded from an increasing range of employment on account of their sex.[63] Femininity, according to the moralists and the conduct books, was largely a matter of domesticity. Women's

education was reiteratively debated and prescribed within the narrow bounds of preparation for marriage and motherhood, further ensuring their relegation to the sphere of family and fireside.[64] Girls' literature and conduct books could leave them in no doubt that they should subordinate themselves and their own interests to those of their family and in particular of their male relatives, in whose superior wisdom, judgement and physical strength they should also blindly trust. Whilst some historians have characterized the eighteenth century as a period in which a stronger sense of individualism and personal autonomy emerged, this was a development which was a largely masculine experience. Affective and loving relationships were certainly not predicated upon equal relationships within the family, but demanded heavy doses of self-sacrifice from women.[65] A woman's true happiness lay not in the pursuit of personal freedom, but in managing a household, in the companionship of a husband and above all in motherhood and the nurture of children.

Yet many aspects of this alleged narrowing of gender roles, this imposition of order upon gender difference, begin to break down when particular examples are examined and when a longer-term perspective is adopted. The supposed change from a one-sex to a two-sex model has the attraction of rational simplicity and dovetails neatly with the argument for the rise of the nuclear family, with its emphasis on women's 'natural' childbearing and maternal role. But the tidy transition that is supposed to have taken place in early eighteenth-century thought is considerably less clear-cut than some interpretations have suggested. Two-sex and one-sex models, as Karen Harvey reminds us, could be found in both seventeenth-century medical treatises and nineteenth-century scientific literature.[66] There certainly was a barrage of literature over the course of the eighteenth century written on the subject of motherhood and the maternal role, whilst discussions of wet nursing or obstetric practice directed public and scientific attention towards the experience of childbearing. In this way motherhood and childrearing were invested with renewed importance, as well as being the object of scientific inquiry.[67] Historians such as Lacqueur and Porter have privileged the writings of individuals such as Cheyne, representative of so much that is associated with Enlightenment science. However, they have largely ignored non-medical evidence, particularly that generated for a more popular market such as the cheap medical treatises and pornography, or the testimony of individuals in court depositions.[68] Moreover, for very obvious reasons maternity has always been a defining experience for women, and the practice of childcare has been shown to have undergone little in the way of fundamental change between

1500 and 1900.[69] As numerous historians of the early modern family have eloquently demonstrated, there is abundant evidence for intense and affectionate relationships between parents and children before the eighteenth century.[70]

Marriage: romantic ideals and pragmatic reality

The ideal of romantic love propagated in novels, it has been argued, may have operated as a strategy to compensate for the selfless and subordinate role required of women within marriage. However, to demonstrate that it assumed a greater significance in the marriage choices of the majority of the population is extremely difficult. Amongst the landed elite the evidence does suggest that parents acknowledged the desirability of allowing their daughters some element of choice, but there are plenty of examples of women who were 'kicked or kissed' into marrying someone whom their relatives thought to be suitable.[71] Further down the social scale, the financial and political stakes of marriage were much less high, but romantic notions were also secondary: Hunt's analysis of marriage amongst the middling sort of eighteenth-century London led her to look at their expressions of domestic harmony and uxorial affection with a deeply sceptical eye. To them marriage was primarily an economic partnership, a pooling of resources, and the expectations with which people entered upon the married state are best characterized as a wish for economic and emotional stability, rather than any romantic fulfilment.[72] Wives assessed husbands upon their ability to provide for them; husbands sought wives who could make a contribution to the household economy: separation was often consequent upon the disappointment of such expectations. Other historians, taking a somewhat less jaundiced view, describe the typical married partnership amongst the middling orders as being one of 'co-dependency': one in which there was a shared responsibility within the family, where a wife derived authority from her management of the household economy and childcare, and where men were emotionally and practically dependent upon their wives.[73] Whilst it is clear that the mutual companionship and affection enjoined by the Book of Common Prayer were indeed often a feature of married life during the eighteenth century, it is difficult to detect any qualitative change in the emotional register of marriage or the heightened use of the language of romantic love or sentiment. Indeed 'passion' as a motive for marriage, unaccompanied by any prudential consideration, was looked upon with disapproval in many quarters throughout our period. Novel readers such as Elizabeth Shackleton, whose marital problems were brought to light by Amanda Vickery, might

have sought emotional fulfilment in the married state, but for the majority of the population, prudential economic considerations would appear to have weighed heavier than a romantic gesture.[74]

'To the contract of marriage', declared Samuel Johnson, 'there is a third party – Society.'[75] Johnson's dogmatic assertion was made to rebut Boswell's suggestion that the wife of an adulterous husband had the right similarly to ignore her conjugal obligations. A wife's adultery, unlike her husband's, risked landing a family with illegitimate heirs. This exchange should remind us that many marriages, and not just Elizabeth Shackleton's, failed. Abuse, adultery, desertion and divorce were all features of eighteenth-century marriages, even if this was something that society at the time was unwilling to acknowledge or condone. The vehemence of Johnson's remark betrays the deep anxiety felt at this disturbance of gender roles, but it is also a reminder that, although there was general agreement that adultery was morally wrong, the consensus of earlier generations on extramarital liaisons was breaking down. The eighteenth century witnessed the fragmentation of opinion concerning adultery, as well as a significant increase in divorce cases in the sixty years after 1770.[76] There was no longer the same monolithic disapproval of a sinful act, enforced by the power of Church and State. Adultery was becoming a social problem rather than a religious offence; it was a slight to honour, an affront to codes of civility. This shift has been explained in terms of new patterns of sociability, new forms of civility and sensibility, disseminated by print culture and benefiting from (and producing) legal innovations.[77]

We should then be wary either of assuming stronger affective relationships within eighteenth-century families, or of equating a celebration of motherhood with new trends in political or scientific thought. There is also a danger in attributing too much significance to the evidence of print culture. The capacity of language to shape perception cannot be ignored, but unwarranted emphasis upon a certain kind of rhetoric to be found in medical literature or in conduct books of the period can mask longer-term continuities. Such an approach also deceptively sidesteps the problem of whether gender weighed more heavily than social status or class in determining an individual's identity and experience.[78] The extent to which women from classes below the middling sort can be comprehended within these debates, most of which are reliant upon a type of evidence that largely excludes them, is questionable. At the other end of the scale we have seen that aristocratic women were as aware of their birth and lineage as any man – it was this that underpinned their sense of duty in their political activities. It was also what sustained them

in their pursuit of patronage, whether on behalf of themselves or their family members. In 1762 the sister of Lord Rodney, Maria Constantia Northcott, made her plea for a pension on the basis that 'my Family for many Generations past of both sides have been Servants of the Crown', whilst Lady Charlotte Rich claimed recognition of her status as the last surviving descendant of 'so Ancient a family'.[79]

Aristocratic women were never circumscribed by the prescriptive doctrines of femininity and domesticity to the same extent as women from the middle classes, since class and status transcended gender, but even here amongst the middling sort we should be alert to the yawning chasm between prescription and practice. The concept of separate spheres which has often been associated with the middling sort would suppose the withdrawal of women from an active involvement in trade and business during the eighteenth century. It may have had currency amongst writers of sermons and other purveyors of marital advice, but recent research has cumulatively built up a picture of the widespread participation of women in the urban economy that blurs the clarity of the distinctions that historians have traditionally tried to draw.[80] Major businesses and companies were almost always dominated by men, but the smaller-scale operations to be found in every town were frequently run by women, either on their own or alongside male relatives. Economic necessity or personal inclination, or a combination of both, ensured that the marginalization of women from the urban economy was a phenomenon of the wealthier middling sort alone.

Nor is the theory of change from a one-sex to a two-sex model adequate to accommodate the variant experiences of masculinity. Until comparatively recently historians have been far less attentive to the modulations and variations of masculinity than of femininity. There has been a tendency to regard masculinity as the unproblematic norm from which the feminine deviates, offering us yet another instance of the attenuated persistence of the Aristotelian model of gender. Lately, however, we have been made aware of the fluctuating and contested nature of masculinity.[81] Honour and reputation, for example, remained an essential part of the gentleman's identity throughout the century, but the terms in which they were defined underwent subtle change, not least in response to the dominant cultural idiom of politeness. For women, ideals of politeness ratified their sex as more delicate, more sociable and more genteel, and better equipped to polish the rough edges of male society. From the masculine perspective, one of the principal changes that can be attributed to the code of politeness was a diminished tolerance for violence. The street violence and duelling of the early eighteenth

century gave way to litigation and a code of honour based upon credit and integrity.[82] But the values of politeness were in many senses essentially feminine, and thus for men there was a delicate path to be trod between manly politeness and an excess of *politesse* that would lead to effeminacy and foppery. Significantly, there was far more anxiety in the eighteenth century about effeminate men than about masculine women.[83] Nor was the rise of sensibility in the second half of the century any less problematic. Whilst the man of feeling, who was publicly moved to tears, was temporarily a figure of respect, the dangerously feminine element in such displays of emotion ensured that the qualities of restraint and stoicism soon regained the upper hand, assisted no doubt by renewed interest in the military hero that accompanied periods of warfare.

The importance of family, so central to analyses of womanhood, has likewise been less frequently studied from the perspective of men, not least because contemporary writers were notably reluctant to theorize upon fatherhood, despite their emphasis upon the importance of the patriarchal family unit. Yet the greater rhetorical influence placed upon the family and domestic values, particularly by moral reformers of an Evangelical persuasion in the later eighteenth century, brought a new dimension to ideals of masculinity.[84] The role of father and head of a household had, of course, always been a central part of the construction of masculinity. However, in the second half of the century, the private, domestic virtues of a man began to have an increased bearing upon his public persona, whether he was a statesman or a military hero. When the Duke of Marlborough died in 1722, he was eulogized for his military victories; but when Admiral Vernon died in 1758, it was not just his exploits at Porto Bello that were commemorated: his reputation as an indulgent husband, a kind master and a liberal benefactor of the poor were also commended. In the last two decades of the eighteenth century, aristocrats, politicians and military heroes alike were posthumously praised for their devotion to domestic duties and family affection; heroic feats, public service or ancient lineage were not enough to command public respect: private virtue and uxorial fidelity featured more and more prominently.[85]

Conclusion

Constructions of masculinity and femininity were not static in this period, nor indeed in any other, and tracing the constant modulations of gender identity can be richly illuminating. There is undoubtedly a story to be told of the eighteenth century in which an ideal of close and loving familial relationships with clearly delineated differences of gender

displaced a model of family life which was both looser and more inclusive in its structure. It is clear, after all, that Thomas Turner's family relationships were not the same as those of the middle-class families of the nineteenth century analysed by Davidoff and Hall. The model of emergent bourgeois domesticity offers a framework that can help to order our understanding of an evolving middle-class culture and the constant evolution of gender relations during the eighteenth century. But the importance of models, such as the rise of the nuclear family or the separation of public and private spheres, lies in their influence as prescriptive ideals rather than in their accuracy as descriptions of actual family life or gender relations. Like any ideal type, they are most illuminating in revealing how far and how often the lived experience failed to correspond to the prescriptive norm and the extent to which other factors such as class or social status could override the ideal model.

Similarly, the importance attached to lineage and kinship, birth and tradition, was certainly challenged. Indeed, the challenge was central to the contested nature of political culture for much of the latter part of the eighteenth century and into the nineteenth century. But whilst it is important to document change, a concentration on those features associated with the emergence of modernity inhibits our understanding of the rich texture of eighteenth-century society, in which older patterns of family life, identity and affiliation continued to exercise far-reaching influence. Respect for antiquity, birth and lineage may have been 'cultural residue', but these were values that still operated as an active cultural force, and not just amongst the aristocracy. As such they had the potential to clash with those features that Stone originally highlighted, producing areas of friction, tension and debate, which shaped the political and social culture of the later eighteenth century. The current interest of the government and the media in the decline of the 'traditional' family structure – the rise of single-parent families, a decline in fertility and the emergence of a new kind of extended family consequent upon an increasingly common pattern of divorce and remarriage – reminds us that the model of the nuclear family is historically contingent and never a universal experience. But the family was – and still is – the primary source of social and gendered identity for both men and women at any level of society, and an essential element in the cohesion of the social order.

Notes

1. W. Moss, *A Familiar Medical Survey of Liverpool, Addressed to the Inhabitants at Large* (Liverpool, 1787), p. 61.

2. L. Stone, *The Family Sex and Marriage in England, 1500–1800* (London: Weidenfeld and Nicolson, 1977), pp. 8–9.
3. A. McFarlane, *Marriage and Love in England, 1300–1840* (Oxford: Oxford University Press, 1986).
4. N. Tadmor, 'The Concept of the Household Family in Eighteenth-Century England', *Past and Present*, 151 (1996), pp. 111–40. See also her *Family and Friends in Eighteenth-Century England: Household, Kinship and Patronage* (Cambridge: Cambridge University Press, 2001) and 'Dimensions of Inequality among Siblings in Eighteenth-Century English Novels: The Cases of *Clarissa* and *The History of Miss Betsy Thoughtless*', *Continuity and Change*, 7:3 (1992), pp. 303–33. D. Levine and K. Wrightson, *The Making of an Industrial Society: Whickham, 1560–1765* (Oxford: Oxford University Press, 1991), p. 330, found 'shallow' kinship recognition amongst the eighteenth-century inhabitants of Whickham. Strong ties did exist between households related by blood and marriage, but 'friend' rather than kinship terms were used to refer to the relationship. The flexibility identified by Tadmor is mirrored in a study based on a rather different type of evidence by B. Reay, 'Kinship and the Neighbourhood in Nineteenth-Century Rural England: The Myth of the Autonomous Nuclear Family', *Journal of Family History*, 21 (1996), pp. 87–204.
5. Tadmor argues for change, but only after 1760. The timing and nature of this change have yet to be explored fully in any comparable analysis, although R. Perry, *Novel Relations: The Transformation of Kinship in English Literature and Culture, 1748–1818* (Cambridge: Cambridge University Press, 2004), develops some of the themes that Tadmor addresses. L. Davidoff and C. Hall, *Family Fortunes: Men and Women of the English Middle Class 1780–1860*, 2nd edn (London: Routledge, 2002), p. 216, describe the definitions of kinship and friendship in the period 1780–1850 as 'malleable' and the boundaries as 'fluid'.
6. T. Meldrum, *Domestic Service and Gender, 1660–1750* (Harlow: Longman, 2000), pp. 76–83.
7. Turner's diary offers numerous examples of fellow villagers who married servants, and Turner himself had been briefly in service: D. Vaisey (ed.), *The Diary of Thomas Turner* (Oxford: Oxford University Press, 1985). For women employed by kin as domestic servants, see B. Hill, *Servants: English Domestics in the Eighteenth Century* (Oxford, 1996), pp. 115–27; E. Higgs, 'Women, Occupations and Work in the Nineteenth-Century Censuses', *History Workshop Journal*, 23 (1987), pp. 68–9.
8. Vaisey (ed.), *Diary of Thomas Turner*, pp. 145–7.
9. D. Defoe, *The Trueborn Englishman* (London, 1700), lines 1205–6, 1215–16.
10. E. Hasted, *The History and Topographical Survey of the County of Kent*, 12 vols (Canterbury, 1797–1801), Vol. 1, p. x.
11. The fullest biography of Edward Hasted is S. Burgoyne Black, *A Scholar and a Gentleman* (Otford: Daventh Valley Publications, 2000).
12. R. Atkyns, *The Antient History of Glocestershire* [*sic*](London, 1712), preface.
13. H. R. French, ' "Ingenious & Learned Gentlemen": Social Perceptions and Self-fashioning amongst Parish Elites in Essex, 1680–1740', *Social History*, 25 (2000), pp. 57–8, and 'Social Status, Localism and the "Middle Sort of People" in England, 1620–1750', *Past and Present*, 166 (2000), pp. 96–9.
14. J. Hutchins, *The History and Antiquities of Dorset*, 2 vols (London, 1774), Vol. 1, p. vi.

15. For a fuller discussion of the popularity and reception of this type of antiquarian literature see R. Sweet, *Antiquaries: The Discovery of the Past in Eighteenth-Century Britain* (London: Hambledon and London, 2004), pp. 309–43 and I. Ousby, *The Englishman's England: Taste, Travel and the Rise of Tourism* (Cambridge: Cambridge University Press, 1990).
16. On Hodgson see C. M. Fraser, 'John Hodgson: County Historian', *Archaeologia Aeliana*, 5th ser., Vol. 24 (1996), pp. 171–85.
17. J. Hodgson, 'On the Study of Antiquities', *Archaeologia Aeliana*, 1 (1822), p. xviii (paper delivered 1813). W. Hutchinson, *History of the County of Cumberland*, 2 vols (Carlisle, 1794–7), Vol. 1, p. 55.
18. *Gentleman's Magazine,* 63 (1793), p. 908; see also 'Heraldic Notices of the Principal Families in This Part of Lancashire from the Time of William I to Henry VIII', in T. Troughton, *The History of Liverpool from the Earliest Authenticated Period to the Present Time* (Liverpool, 1810), pp. 15–18.
19. See, for example, J. C. D. Clark's interpretation of the eighteenth century, *English Society, 1660–1832: Religion, Ideology and Politics during the Ancien Régime,* 2nd edn (Cambridge: Cambridge University Press, 2000).
20. According to Britton's autobiography the first five volumes of the series had print runs of 500 royal octavo and 3,000 small octavo. Two thousand additional copies of the volume covering Middlesex were printed to accommodate additional demand from the London area: J. Britton, *The Autobiography of John Britton*, 2 vols (London, 1850), Vol. 2, pp. 53–6.
21. Perry, *Novel Relations*, p. 9, citing R. Williams, *Marxism and Literature* (Oxford: Oxford University Press, 1977), p. 122.
22. K. Retford, 'Sensibility and Genealogy in the Eighteenth-Century Family Portrait: The Collection at Kedleston Hall', *Historical Journal*, 46:3 (2003), pp. 533–60.
23. Ibid., pp. 549–50. The Cust portraits were hung at Belton House in Lincolnshire. Retford shows how the hang of family portraits at Kedleston was designed to demonstrate both the affiliation of the Curzon family to the Stuart dynasty and their successful maintenance of direct dynastic succession.
24. E. P. Thompson, 'The Moral Economy of the English Crowd in the Eighteenth Century', in *Customs in Common* (London: Penguin Books, 1993), pp. 233–4; see also 'The Moral Economy Reviewed', ibid., especially pp. 305–36.
25. M. Daunton, *Progress and Poverty: An Economic and Social History of Britain, 1700–1850* (Oxford: Oxford University Press, 1995), p. 65.
26. E. Chalus, *Elite Women in English Political Life c. 1754–1790* (Oxford: Oxford University Press, 2005).
27. E. Chalus, ' "That Epidemical Madness": Women and Electoral Politics in the Late Eighteenth Century', in H. Barker and E. Chalus (eds), *Gender in Eighteenth-Century England: Roles, Representations and Responsibilities* (Harlow: Longman, 1998), pp. 151–78; ' "My Minerva at My Elbow": The Political Roles of Women in Eighteenth-Century England', in R. Connors, C. Jones and S. Taylor (eds), *Hanoverian Britain and Empire: Essays in Memory of Philip Lawson* (Woodbridge: Boydell Press, 1998), pp. 210–28; 'Elite Women, Social Politics, and the Political World of Late Eighteenth-Century Britain', *Historical Journal*, 43 (2000), pp. 669–98; 'Women, Electoral Privilege and Practice in the Eighteenth Century', in K. Gleadle and S. Richardson (eds), *Women in*

British Politics, 1760–1860: The Power of the Petticoat (Basingstoke: Macmillan, 2000), pp. 19–38; ' "To Serve My Friends": Women and Political Patronage in Eighteenth-Century England', in A. Vickery (ed.), *Women, Privilege and Power: British Politics, 1750 to the Present* (Stanford, CA: Stanford University Press, 2001), pp. 57–88.

28. A. Foreman, *Georgiana: Duchess of Devonshire* (London: Harper Collins, 1998) and 'A Politician's Politician: Georgiana, Duchess of Devonshire and the Whig Party', in Barker and Chalus, *Gender in Eighteenth-Century England*, pp. 179–204.
29. See, for example, the suspicion directed towards the Duchess of Kendal, mistress to George I, during the South Sea Bubble.
30. J. Brewer, *Sentimental Murder: Love and Madness in the Eighteenth Century* (London: Harper Collins, 2004), anatomizes one particularly notorious example of the press's interest in political corruption and moral debauchery: the murder of the Earl of Sandwich's mistress, Martha Ray, in 1779.
31. M. Hunt, *The Middling Sort: Commerce, Gender and the Family in England, 1680–1780* (Berkeley, CA: University of California Press, 1996), pp. 194–8.
32. A. Clark, *Scandal: The Sexual Politics of the British Constitution* (Princeton, NJ and Oxford: Princeton University Press, 2004), pp. 113–25. See also the discussion of the representation of aristocratic women in satirical prints in C. McCreery, *The Satirical Gaze: Prints of Women in Late Eighteenth-Century England* (Oxford: Oxford University Press, 2004), pp. 148–67.
33. Clark, *Scandal*, pp. 148–207.
34. J. Wade, *The Extraordinary Black Book* (London, 1831), pp. 196–224.
35. Brewer, *Sentimental Murder*, pp. 41–4.
36. T. Oldfield, *The History of the Boroughs* (London, 1792). Oldfield's assessment of aristocratic influence is at least partially confirmed by J. A. Cannon, *Aristocratic Century: The Peerage of Eighteenth-Century England* (Cambridge: Cambridge University Press, 1984), pp. 104–15, who demonstrates a quadrupling of the number of seats in the House of Commons controlled by aristocratic influence between 1702 and 1786.
37. *Collection of Papers …* (Chester, 1807), pp. 38–9, cited in F. O'Gorman, *Voters, Patrons and Parties: The Unreformed Electorate of Hanoverian Britain, 1734–1832* (Oxford: Oxford University Press, 1989), p. 262; *Narrative of Proceedings at the Stamford Election* (Stamford, 1809), p. 11.
38. *Report of the Royal Commissioners on the Municipal Corporations* (1835), Parliamentary Papers, xxiv, p. 1031; xxv, pp. 1599–1600, 2005; xxvi, pp. 2710–17.
39. C. Bruyn Andrews (ed.), *The Torrington Diaries*, 4 vols (New York: Barnes & Noble, 1970), Vol. 2, p. 111.
40. W. Hutton, *A History of Birmingham* (Birmingham, 1781), p. 26.
41. T. Smollett, *The Expedition of Humphry Clinker*, ed. A. Ross (London: Penguin Books, 1988), pp. 78, 119; J. Trusler, *The Way to be Rich and Respectable* (London, 1775).
42. R. Vann, 'Wills and the Family in an English Town: Banbury, 1550–1800', *Journal of Family History*, 4 (1979), pp. 363–6.
43. G. Jackson, *Hull in the Eighteenth Century* (Oxford: Oxford University Press, 1972), pp. 95–129; R. G. Wilson, *Gentleman Merchants: The Merchant Community in Leeds, 1700–1830* (Manchester: Manchester University Press, 1971), pp. 207–12;

N. Rogers, 'Money, Marriage, Mobility: The Big Bourgeoisie of Hanoverian London', *Journal of Family History*, 24 (1999), pp. 19–34.

44. R. Grassby, *Kinship and Capitalism: Marriage, Family and Business in the English-Speaking World, 1580–1740* (Cambridge: Cambridge University Press, 2001).
45. Grassby, *Kinship and Capitalism*, p. 395.
46. See also M. Prior's study of family networks in Oxford, *Fisher Row: Fishermen, Bargemen and Canal Boatmen in Oxford, 1500–1900* (Oxford: Oxford University Press, 1982); P. Lane, 'An Industrialising Town: Social and Business Networks in Hinckley, Leicestershire, *c*.1750–1839', in P. Lane and J. Stobart (eds), *Urban and Industrial Change in the Midlands: Trades, Towns and Regions* (Leicester: Centre for Urban History, University of Leicester, 1998), pp. 139–66.
47. J. Stobart, 'Social and Geographical Contexts of Property Transmission in the Eighteenth Century', in J. Stobart and A. Owens (eds), *Urban Fortunes: Property and Inheritance in the Town, 1700–1900* (Aldershot: Ashgate, 2000), pp. 109–30; Davidoff and Hall, *Family Fortunes*.
48. M. Anderson, *Approaches to the History of the Western Family, 1500–1914* (Basingstoke: Macmillan, 1980); R. Dennis and S. Daniels, ' "Community" in the Social Geography of Victorian Cities', *Urban History Yearbook* (1981), pp. 7–23. The importance of family and kinship networks in sustaining the middle classes is central to Davidoff and Hall's interpretation of nineteenth-century middle-class culture, in *Family Fortunes*.
49. See, for example, Jon Stobart's analysis of networks in Chester, 'Personal and Commercial Networks in an English Port: Chester in the Early Eighteenth Century', *Journal of Historical Geography*, 30:2 (2004), pp. 277–93.
50. The most recent study of prostitution, T. Henderson, *Disorderly Women in Eighteenth-Century London: Prostitution and Control in the Metropolis, 1730–1830* (Harlow: Longman, 1999), pp. 14–16, suggests that the scarce job opportunities for young single women, rather than the nature of urban society per se, was the chief factor driving women to prostitution in urban areas.
51. Anderson, *Western Family*; J. Langton, *Geographical Change and Industrial Revolution: Coalmining in South West Lancashire, 1590–1799* (Cambridge: Cambridge University Press, 1979), p. 115; Levine and Wrightson, *Whickham*, pp. 330–8.
52. H. Shore, 'Crime, Criminal Networks and the Survival Strategies of the Poor in Early Eighteenth-Century London', in S. King and A. Tomkins (eds), *The Poor in England, 1700–1850: An Economy of Makeshifts* (Manchester: Manchester University Press, 2003), pp. 137–65.
53. Stone, *Family, Sex and Marriage*, pp. 148–9; see also R. Smith, 'Some Issues Concerning Families and Their Property in Rural England 1250–1800', in R. Smith (ed.), *Land, Kinship and Life-cycle* (Cambridge: Cambridge University Press, 1984), p. 79.
54. M. Hanly, 'The Economy of Makeshifts and the Poor Law: A Game of Chance', in King and Tomkins (eds), *The Poor in England* , pp. 76–99, and S. Barrett, 'Kinship, Poor Relief and the Welfare Process in Early Modern England', ibid., pp. 199–227.
55. S. Ottaway, 'Providing for the Elderly in Eighteenth-Century England', *Continuity and Change*, 13:3 (1998), pp. 391–418.
56. D. Cressy, 'Kinship and Kin Interaction in Early Modern England', *Past and Present*, 113 (1986), p. 69.

57. Lineage and birth were, of course, of most significance amongst the landed elite, but we might note the continued importance attached to inherited 'birthrights' in many freeman boroughs across the country and their importance in the construction of civic identities. See R. Sweet, 'Freemen and Independence in English Borough Politics', *Past and Present*, 161 (1998), pp. 84–115.
58. D. R. Woolf, 'A Feminine Past? Gender, Genre, and Historical Knowledge in England, 1500–1800', *American Historical Review*, 102 (1997), pp. 645–79.
59. Whilst Lewis adduces some cogent case studies to argue the case, the careers of such formidable political operators as Lady Londonderry, or a political hostess such as Emily Palmerston, must cast doubt on her conclusion. The extent to which women were circumscribed by the more restrictive prescriptions for femininity of the later eighteenth and nineteenth centuries would vary widely from family to family, and, obviously, were contingent upon social status, age, religious belief and, above all, the life-cyclical position of the women involved. J. S. Lewis, *Sacred to Female Patriotism: Gender, Class and Politics in Late Georgian Britain* (New York and London: Routledge, 2003). However, K. D. Reynolds in *Aristocratic Women and Political Society in Victorian Britain* (Oxford: Oxford University Press, 1998), pp. 129–87, argues that a significant change in the nature of aristocratic women's political involvement did not take place until *c.*1880.
60. A. Fletcher, *Gender, Sex and Subordination in England, 1500–1800* (New Haven, CT and London: Yale University Press, 1995), pp. 291–2.
61. M. McKeon, 'Historicizing Patriarchy: The Emergence of Gender Difference in England, 1660–1760', *Eighteenth-Century Studies*, 28:3 (1995), pp. 295–322.
62. T. Laqueur, *Making Sex: Body and Gender from the Greeks to Freud* (Cambridge, MA: Harvard University Press, 1990); L. Jordanova, *Nature Displayed: Gender, Science and Medicine, 1760–1820* (London: Longman, 1999), pp. 164–7.
63. A. Wilson, *The Making of Man-Midwifery: Childbirth in England, 1660–1770* (London: UCL Press, 1995); H. L. Smith, 'Women as Sextons and Electors: King's Bench and Precedents for Women's Citizenship', in H. L. Smith (ed.), *Women Writers and the Early Modern British Political Tradition* (Cambridge: Cambridge University Press, 1998), pp. 324–42; D. Valenze, 'The Art of Women and the Business of Men: Women's Work and the Dairy Industry, *c.*1740–1840', *Past and Present*, 130 (1991), pp. 142–69; K. D. M. Snell, *Annals of the Labouring Poor: Social Change and Agrarian England, 1660–1900* (Cambridge: Cambridge University Press, 1995), pp. 15–67.
64. For a typical example of the prescriptive ideals of female education, see Sarah Fielding, *The Little Female Academy* (London, 1749); K. Sutherland, 'Writings on Education and Conduct: Arguments for Female Improvement', in V. Jones (ed.), *Women and Literature in Britain 1700–1800* (Cambridge: Cambridge University Press, 2000), pp. 24–56.
65. A point emphasised by Hunt, *Gender Commerce and the Family*, p. 99.
66. K. Harvey, 'The Century of Sex? Gender, Bodies, and Sexuality in the Long Eighteenth Century', *Historical Journal*, 45:4 (2002), pp. 899–916.
67. Jordanova, *Nature Displayed*, pp. 183–202. See for example, W. Cadogan, *An Essay upon the Nursing and Management of Children from the Birth to Three Years of Age* (London, 1748).
68. Harvey, 'The Century of Sex', points to analyses of court records which show that sixteenth- and seventeenth-century men and women were much more

likely to speak in terms of sexual difference than of similarity. Similarly the printed and oral culture studied by Patricia Crawford reveals pronounced scepticism towards elite theories such as those propounded by Cheyne. 'Sexual Knowledge in England, 1500–1750', in R. Porter and M. Teich (eds), *Sexual Knowledge, Sexual Science: The History of Attitudes to Sexuality* (Cambridge: Cambridge University Press, 1994), pp. 82–106. See also Mary Fissell, 'Gender and Generation: Representing Reproduction in Early Modern England', *Gender and History*, 7 (1995), pp. 433–56.

69. P. Crawford, ' "The Sucking Child": Adult Attitudes to Child Care in the First Year of Life in Seventeenth-Century England', *Continuity and Change*, 1:1 (1986), pp. 23–52; L. Pollock, 'Childbearing and Female Bonding in Early Modern England', *Social History*, 22 (1997), pp. 286–306; see also S. Mendelson and P. Crawford, *Women in Early Modern England, 1550–1720* (Oxford: Oxford University Press, 1998), pp. 148–64.
70. Cressy, 'Kinship and Kin Interaction'; R. Houlbrooke, *The English Family, 1450–1700* (London: Longman, 1984); Alan Macfarlane, *The Family Life of Ralph Josselin: A Seventeenth-Century Clergyman* (Cambridge: Cambridge University Press, 1970).
71. S. Whyman, *Sociability and Power in Late Stuart England: The Cultural World of the Verneys, 1660–1720* (Oxford, 1999), pp. 111–12.
72. Hunt, *Gender, Commerce and the Family*, pp. 149–51.
73. J. Bailey, *Unquiet Lives: Marriage and Marriage Breakdown in England, 1660–1800* (Cambridge: Cambridge University Press, 2003). A similarly pragmatic picture of marriage has been drawn by Wrightson and Levine, *Whickham*, pp. 308–29.
74. A. J. Vickery, *The Gentleman's Daughter: Women's Lives in Georgian England* (New Haven, CT and London: Yale University Press, 1998); Whyman, *Sociability and Power*, pp. 110–46.
75. James Boswell, *The Life of Samuel Johnson, LLD*, 2 vols (London, 1906), vol. 2, p. 19.
76. L. Stone, *The Road to Divorce: England, 1530–1987* (Oxford: Oxford University Press, 1990), p. 247.
77. D. Turner, *Fashioning Adultery: Gender, Sex and Civility in England, 1660–1740* (Cambridge: Cambridge University Press, 2002).
78. This argument is developed in greater detail with reference to the experience of upper-class women by I. Tague, *Women of Quality: Accepting and Contesting Ideals of Femininity in England, 1690–1760* (Woodbridge: Boydell Press, 2002).
79. Cited in Chalus, *Elite Women in English Political Life*. I am most grateful to Elaine Chalus for allowing me to cite this material.
80. A. J. Vickery, 'Golden Age to Separate Spheres? A Review of the Categories and Chronology of English Women's History', *Historical Journal*, 36:1 (1993), pp. 383–414, demonstrated the limited heuristic utility of the concept. H. Barker and K. Harvey, 'Women Entrepreneurs and Urban Expansion, Manchester, 1760–1820' in R. Sweet and P. Lane (eds), *Women and Urban Life in Eighteenth Century England* (Aldershot: Ashgate, 2003), pp. 111–29; N. Pullin, ' "Business is Just Life": Gender, Ideology and Women in Business, 1700–1850', University of London PhD thesis (2000); Lane, 'Women in the Regional Economy'; E. C. Sanderson, *Women and Work in Eighteenth-Century Edinburgh* (Edinburgh: Edinburgh University Press, 1996); C. Wiskin,

'Women, Finance and Credit in England, *c*.1780–1826', University of Warwick PhD thesis (2000), and 'Urban Businesswomen in Eighteenth-Century England', in Sweet and Lane (eds), *Women and Urban Life*, pp. 87–110.

81. See, for example, the essays in T. Hitchcock and M. Cohen (eds), *English Masculinities, 1660–1800* (Harlow: Longman, 1999) and, for an earlier period, A. Shepard, *Meanings of Manhood in Early Modern England* (Oxford: Oxford University Press, 2003).
82. R. Shoemaker, 'Male Honour and the Decline of Public Violence in Eighteenth-Century London', *Social History*, 26 (2001), pp. 190–208, and 'The Taming of the Duel: Masculinity, Honour and Ritual Violence in London, 1660–1800', *Historical Journal,* 45:3 (2002), pp. 525–45.
83. P. Carter, *Men and the Emergence of Polite Society in Britain, 1660–1800* (Harlow: Longman, 2001). See also G. J. Barker Benfield's analysis of the impact of sensibility upon masculinity, *The Culture of Sensibility: Sex and Society in Eighteenth-Century Britain* (Chicago and London: University of Chicago Press, 1992), pp. 37–103.
84. Davidoff and Hall, *Family Fortunes*, pp. 329–35.
85. S. Howard, 'Biography and the Cult of Personality in Eighteenth-Century Britain', University of Oxford DPhil thesis (1998), pp. 137–8, 165, 167, 264–5; P. Ariès, *The Hour of Our Death* (London: Allen Lane, 1981), p. 230. So too Turner argues that gender, sexuality and the family continued to be important influences in political debate throughout the eighteenth century and that adultery could not be seen as a private affair: *Fashioning Adultery* , pp. 6–8.

Part II

The Ordering of Knowledge: Bridging Nature and Culture

5

Félibien and the Circle of Colbert: A Reevaluation of the Hierarchy of Genres

Barbara Anderman

For over a century it has been a largely unquestioned assumption that taste in pictures in later seventeenth- and eighteenth-century France was shaped by a value construct known as the 'hierarchy of genres', a ranking of clearly identified subjects of painting according to their degree of elevation and dignity. The existence of such a hierarchy accords with our understanding of a prevailing order in the aesthetics of the great age of Bourbon France. The hierarchy is said to have been 'quite rigid', to have 'governed French artistic life uncontested', and to have been 'the only scale of values by which to judge a work of art' in the 1700s, according to three commentaries of recent decades.[1]

If this detailed system of ranking exerted an influence to the extent described, it is surely fair to expect the hierarchy to be rooted in a number of French seventeenth-century texts. Surprisingly, though, the full enunciation of a French hierarchy of genres is traced by scholars to just one source, a preface to a compilation of lectures delivered at the French Royal Academy of Painting and Sculpture in Paris during the year 1667. This in itself is odd; however, the locus of this text turns out to be significant. It has led to the belief that the aims of the early Academy were identified with those of subject-ordering. Without doubt French seventeenth-century Academicians were aware of distinctions in subject matter, but it is interesting that for decades they appear to have done little to promote them. Indeed, evidence suggests that the impetus for the enunciation of subject-ordering did not even come from the Academy itself, but from a small group of advisers to the Minister of State and Minister of Finance Jean-Baptiste Colbert. In 1664 Colbert was appointed Superintendent of Buildings, a post which gave him crown-sanctioned admission into the

realm of the arts. In this official capacity he sought to invest the so-called *Compagnie* with credentials commensurate with his idea of its obligations to the French king. His aims in this regard do not appear to have been executed *à la lettre*. The conduct of business and practice of painting at the Academy were somewhat separate and disconnected from the consideration of art theory in the superintendent's circle. Thus, it is possible that the subject matter of art in the later 1600s and early 1700s was less rigidly ordered than has been supposed.

Long-standing critical interest in the hierarchy of genres has made André Félibien particularly familiar to us today. In 1667 Colbert appointed Félibien to collect and publish lectures to be delivered that year at the Academy.[2] Félibien wrote a preface for this compilation, in which he set forth the *doctrine classique*: Aristotelian unities of action, time and place as they applied to painting, and the importance of the selection of appropriate subject matter. In amplification of the latter, he presented an order of subject types. At the highest level, to convey 'the virtues of the greatest men', Félibien enjoined the artist to make allegorical compositions. Short of that, the artist was to achieve 'high perfection in art' by representing 'great actions as do historians, or pleasing subjects as do poets' in multi-figure history pictures. Failing that, the artist should imitate God's work by painting the human figure in portraits, which were superior to pictures of live animals, landscapes and, finally, 'fruits, flowers or shells'. Thus Félibien's scheme, inspired by an anthropocentric, Biblical order of creation, exhorted the artist to seek beyond the inanimate (still lifes), to plant and animal life (landscapes and animal pictures), to man (portraits) and many human figures (history paintings).[3] At the apex of this scheme was allegorical painting, a significant choice in light of the circumstances of Félibien's pronouncement.

Influence of the petite académie

Félibien was not an obvious choice as compiler of the Academy *conférences*. In 1667 he had no formal affiliation with the Academy. The rightful claimant to Colbert's prestigious project was the secretary of the Academy, Henri Testelin. However, Colbert adroitly eased Testelin aside, arguing that the secretary would not have sufficient time to devote to the project and did not possess, or so it was implied, the necessary linguistic skill.[4] Although he was not connected to the Academy, Félibien was certainly known to Colbert. He held the administrative position of Historiographer to the King and, since 1660, had also served as Historiographer of Buildings. His *Description de l'arc de la place Dauphine*, which appeared in

1660, would have offered Colbert evidence of the 'very excellent style' and 'knowledge of painting and sculpture' which the minister of state required of the compiler of the Academy lectures.[5] There were other ties, too, between Félibien and Colbert, which reveal a close network of cultivated individuals surrounding the new Superintendent of Buildings. According to the seventeenth-century Protestant lawyer Jean Rou, who worked on a history of the Academy, the man who introduced Félibien to Colbert was Charles Perrault, the self-educated *littérateur* remembered today for his compilation of folk tales.[6] Another voice in favour of Félibien was probably that of the erudite Jean Chapelain, a founding member of the Académie française, habitué of the Hôtel de Rambouillet and champion of the classical form in literature.[7] In 1663, thus in advance of his appointment as Superintendent of Buildings, Colbert summoned both Perrault and Chapelain to be part of an intimate group whose brief was to aid and advise him in decorative programmes and laudatory verse and prose in celebration of the French crown.[8] Chilled by the long shadow of the Fronde, Colbert was no doubt determined to ensure the unassailable preeminence of the young king Louis XIV.[9] In matters of the arts Colbert was not a learned man: hence his need for a trusted group of respected advisers, who constituted a so-called *petite académie* or little academy.[10]

Colbert's little academy was unofficial but vested with considerable power, and Chapelain's appears to have been its most influential voice.[11] According to Perrault, Colbert was particularly admiring of the great classicist, whom he viewed as 'the most discriminating man in the world'.[12] Indeed it is clear that Chapelain, an acknowledged leader in literary circles, had Colbert's ear in matters of the visual arts. In a letter to the first minister in 1662, Chapelain proposed that, to avoid compromising the outcome of any political manoeuvre, the subjects of contemporary history paintings and tapestries should be veiled in allegory.[13] Colbert took this suggestion to heart, because he proceeded to secure royal approval for it.[14] Whether acting on instructions from Colbert or on his own initiative, Chapelain pursued the matter further. In a letter to Colbert dated 10 June 1664, Chapelain affirmed that the *petite académie* knew of his preference for allegorical painting and that he would act promptly and in concert with the council's members to persuade Le Brun to embrace the same view.[15] Chapelain penned his letter just three weeks before Le Brun was officially appointed First Painter to the King, perhaps a reason for his interest in prompt action.[16] Evidently the prioritizing of allegory, at the summit of Félibien's hierarchy, was not generated by the Academy, but was introduced to that body by the immediate circle of Colbert.

Félibien was not one of the founding members of the *petite académie*, but he would have been familiar with the council's conduct of business, both by report (probably from Perrault) and by personal contact. The clandestine advisory council reviewed not only architectural projects, designs for sculpture and medals, and all aspects of public entertainments, but also all works related, however loosely, to royal propaganda.[17] As a result, Félibien came before the *petite académie* on several occasions, for example to present the first part of his *Entretiens*, his extended biographical compendium of artists, which was published in 1666, a couple of years before his edited compilation of the Academy lectures.[18] The erudite Chapelain was a generation older than Félibien and the weight of his views cannot have been lost on the royal historiographer, who had spent two years in Italy and was himself no stranger to the appeal of classicism. In all likelihood Chapelain's ideas informed Félibien's identification of allegory at the head of his ranking of subject types.

Chapelain was a man of literary rather than artistic bent, but in his intellectual formation he was probably exposed to theories of painting and sculpture. He owned an extensive library, with books on subjects ranging from theology and history to science. His few books related to the fine arts reflect his particular interest in architecture and in medals, promoted by Colbert and the *petite académie* as the best vehicles for glorification of the French crown.[19] He also owned texts by the Italian sixteenth-century art theorists Raffaello Borghini and Giovan Paolo Lomazzo, whose ideas, reverencing historical narratives (*historie*) and the human form in painting, were influential among French thinkers at the time and were certainly known to Félibien.[20] Interestingly enough, Chapelain also owned a less frequently mentioned text, the *Disegno*, a six-part dialogue between Painting and Sculpture by the sixteenth-century Italian polygrapher Anton Francesco Doni, which contains a quite direct reference to subject-ranking.[21] In the second part of the *Disegno*, Doni has Painting and Sculpture debate the relative merits of their arts. The human form, they agree, is central to what they create, but Painting notes that the painter can also produce 'landscapes with … flowers and other plants, and fruit, rivers and fountains'. According to Painting, 'the most revered subject' is 'magnificent and most replete histories', first and foremost among them mythologies, then 'histories of mortal men'. To this, Sculpture replies that 'the simple human figure' is the basis of all painting, while animals are less demanding on the artist's skills. Thus, the line-up of history pictures, portraits, animal pictures, landscapes and still lifes emerges.[22] Chapelain's interest in allegorical painting was probably fed by two significant emblem books in his library, Andrea Alciati's *Emblemata*, widely

consulted for the accurate use of mythological figures as allegory, and Cesare Ripa's *Iconologia*. In his introduction to the 1613 edition of *Iconologia*, which Chapelain possessed, Ripa applauded the use of veiled truths revealed over time, and invoked both a classical and a Christian pedigree for the use of symbols.[23]

Mention should be made of one other volume in Chapelain's library, the *Scholae in liberales artes*, or Lectures on the Liberal Arts (1578), by Pierre la Ramée or Petrus Ramus. Ramist logic must have informed hierarchical subject-ordering in the arts in ways yet to be fully explored. One of the lectures of the *Scholae in liberales artes* contains Ramus's fierce criticism of Aristotle and the introduction to Aristotle's *Organon* by the third-century Neoplatonist Porphyry. Chapelain revered Aristotle and possessed many of his writings. During his intellectual formation, Chapelain no doubt studied Aristotelian commentaries and particularly Porphyry's *Isagoge* or introduction, which was central to the curriculum of the scholar in the sixteenth and seventeenth centuries.[24] In the *Isagoge*, Porphyry established a descending and ascending hierarchy of species and genera that extended from universal being and inanimate matter to animate matter, to animals, and finally to rational animals (man). Porphyry's *Isagoge* was among the holdings of the French royal library, where it was available to both Chapelain and Félibien.[25] Among the small group of well-read men in the *petite académie*, charged with ensuring the proper content and employment of visual images, theories about the appropriate choice and use of subject matter must have been discussed and carefully measured. In all likelihood Félibien, given his official capacities and his contact with the little academy, would have been influenced by such intellectual exchange.

Minimal impact on aesthetics

Although it is considered by modern art historians to be a seminal statement of French art theory, Félibien's ranking system was never again repeated exactly as it appeared in his 1668 preface to the compilation of Academy lectures. Even Félibien himself, when he approached the issue of subject order in his *Entretiens* twenty years later, significantly adjusted his earlier presentation.[26] Allegory, so closely associated with Chapelain's ideas for the representation of the monarch, was not assigned preeminent status in subsequent statements about types of pictures. Around the time of, and in the decades immediately following, Félibien's preface, there appear to have been only three articulations of a hierarchy of genres (apart from those of Félibien himself), each of the three slightly different in content.

What is interesting is that the author of each of the three was a lawyer or man of letters rather than an artist, and was someone who was associated with either Félibien or the *petite académie*.

In 1668, prior to the publication of Félibien's *Conférences*, Perrault published *La Peinture*, a poem in praise of the monarch, the arts and, in particular, Charles Le Brun, whom Perrault much admired. It is not accidental that the appearance of Perrault's verse acclamation of painting coincided with Colbert's concerted effort to establish a programme of lectures at the Academy. Perrault was Colbert's dogged advocate for these public, pedagogical exercises, in the face of grudging compliance by Academicians.[27] Embedded in Perrault's verse paean is an episode of some 42 lines in which Apollo (a thinly veiled Louis XIV) visits the studio of the nymph Painting, and finds there nine sisters, whom Perrault identifies as 'the nine types of painting', namely 'History … Grotesques … Bacchanals … Portraits … Landscapes … Architecture … Perspective … Animals … Flowers.'[28] The list conjures up the kinds of pictures Perrault, a man not well-acquainted with art theory, would have seen in Paris, in service of a Chapelain/Colbert-inspired classical pedigree for the visual arts.[29]

Another version of a hierarchy of genres was penned by Jean Rou, the previously mentioned Protestant lawyer and would-be historian of the Academy, from whom we have an exuberant account of one of the first public exhibitions of the Academy, in 1667. Rou was captivated by the plethora of images and public stir at the Academy show. 'It is impossible adequately to express', he enthused, 'what a pleasant sight it was for me to see all together such an exceedingly large quantity of all sorts of works in all the varied parts of painting.' The 'varied parts of painting' must have struck Rou as less than self-evident, since he added, 'by which I mean *history*, *portraiture*, *landscape*, *seascapes*, *flowers*, *fruits*'.[30] Here was a close equivalent to Félibien's subject list, in descending order of excellence, excluding allegory and animal pictures and inserting seascapes. We can be reasonably sure that Rou wrote his review a good many years after the Academy Salon, perhaps in the later 1680s, during his exile from France after the revocation of the Edict of Nantes.[31] The flamboyant nostalgia of his Salon review results from his reconstruction of the event after a passage of years. His subject list, reintroducing and explaining a notion he associated with Academic theory of the late 1660s, is a suspiciously clumsy intrusion into an otherwise vivid account of a glamorous Academy. Indeed, the mention of seascapes is particularly odd, since it has been pointed out that in 1667, at the time of the exhibition, the Academy owned no more than 41 paintings, none of which was a seascape.[32] In addition, it is doubtful that a viewer, writing spontaneously about what he

saw, would have thought to group pictures according to subject type. Perhaps the inclusion was a reverent nod to the Superintendent of Buildings and his circle. In his memoirs, unpublished at the time of his death in 1711, Rou summoned up the names of Colbert and Perrault with barely disguised awe, describing Félibien as 'famous'.[33]

Félibien's name, which one might have expected to appear frequently in later seventeenth-century commentaries in connection with a seminal art theory, makes just one such appearance in print, in 1699, far from Paris, in a treatise on painting by Bernard Dupuy du Grez, a lawyer from Toulouse. Dupuy du Grez applauded Félibien as a guide to good learning, and in a gesture of most exaggerated flattery put him in the august company of no less than Vitruvius, Dürer, and the sixteenth-century Italian theorist Lomazzo. Dupuy du Grez listed a hierarchy of subject types that more or less echoed – again with the exclusion of allegory and animal pictures and now with the addition of copyists at the lowest end of the hierarchical scale – Félibien's 1668 scheme.[34] The Toulousan had a motive for his reference to Academic ordering: his treatise was a vigorous exhortation for the establishment of an art academy in Toulouse, similar to the Academy in the French capital.[35] He must have considered it wise to endorse the theoretical tenets of the mother church, so to speak. Indeed, he even admitted that he was indebted to Félibien, *inter alia*, for his ideas.[36]

One way to explain the absence of allegory from Dupuy de Grez's list of subject types, and indeed its absence from Rou's list as well, is that the lawyers quite likely turned for their information to the tenth part of Félibien's *Entretiens*, published in 1688, rather than to Félibien's preface to the Academy lectures of 1668. In the *Entretiens*, Félibien broached the issue of subject difference with almost apologetic concern. It is hard to believe that the author of the following passage in the *Entretiens* is the same person who wrote the unequivocal declaration of 1668:

> Although painters who make history pictures and the noblest subjects should be more esteemed than those who only make landscapes or animal pictures, flowers, fruits, or even less notable things, yet it is possible to find among the latter those who have such ability and knowledge of what they do, that the ablest of them are often more admirable than those who work at more elevated projects.[37]

By 1688 Colbert and Chapelain were dead, the membership of the *petite académie* had markedly changed, and Félibien may have been aware of resistance among members of the Academy to the notion of subject-ranking.

When one turns away from the circle of Colbert towards the Academy itself, the trace of Félibien and his subject-ordering becomes quite faint. Although one might expect a seventeenth-century pronouncement with supposedly far-reaching import to be a topic of debate, the surprising fact is that Félibien and his ranking system engendered very limited comment from contemporary Academicians or from art theorists and Salon reviewers of ensuing decades. Roland Fréart, sieur de Chambray, Jacques Restout and Henri Testelin – all were markedly silent about Félibien's scheme. The absence of comment from Testelin, who admittedly had his reasons for failing to mention a theory promulgated by Félibien and the circle of Colbert, is particularly significant; after all, as Academy secretary he had privileged access to what interested his colleagues.[38] In fact, from the criticism of Academicians Abraham Bosse and Roger de Piles we discover that the pedagogical theories of Colbert's circle did not find universal favour within the *Compagnie*. Bosse, a master engraver and sometime Academy member and instructor, took issue with subject hierarchy presented as self-evident truth in Perrault's poem *La Peinture*. In published criticism of Perrault's text in 1668, Bosse questioned Perrault's introduction of a 'new maxim' that painting had nine types, 'of which', Bosse mused, 'I cannot conceive.'[39] Bosse had his own axe to grind, which in part explained this criticism. During his years at the Academy, his trenchant views about the indispensable contribution of perspective to picture-making brought him into conflict with Le Brun and fellow Academicians, occasioning his exclusion from the *Compagnie* in 1661. Nevertheless, Bosse's response to Perrault indicates that the principle of an order of subject types, far from being canonical as Perrault suggests, might instead have taken shape outside the Academy.

In his biographical compendium of painters published in 1699, Roger de Piles was more oblique in his criticism of Félibien's scheme. The well-educated de Piles, like Chapelain, frequented the Hôtel de Rambouillet and was no doubt witness to its literary disputes. A prominent voice in favour of the Venetians, de Piles in 1699 promoted the equality of all kinds of subject matter. In doing so, he did not revisit Félibien's classification of types; nor did he weigh the merits, for example, of landscapes relative to animal pictures or still lifes. It was the notion of the supremacy of history pictures, a different issue, that caught his attention. Under the provocative chapter heading, 'If fidelity to history is the essence of painting', he established that there were any number of fine paintings that did not represent history: 'allegorical pictures, landscapes, animals, seascapes, fruits, flowers and several others which are the result of the artist's imagination'.[40] Whereas Félibien in 1668, in the service of Colbert and the *petite*

académie, placed allegories at the pinnacle of artistic achievement, above the great actions of heroes, de Piles lists them with landscapes and animal pictures. The focus of theoretical discourse in late seventeenth- and eighteenth-century France turns out not to be on a hierarchy of subjects, which was a statement specific to a time and a group of people, but on the enduring divide between that which was noble and that which was 'low' in choice of subject matter.[41] Within this discourse, types of subject matter were juggled quite freely.

Inside the Academy

For its very existence, the Academy owed much to Colbert, but in his role as its guardian, the minister of state was at all times guided by pragmatic rather than aesthetic concerns.[42] Colbert made no secret of the fact that, for him, the Academy was a means to an end, to serve as the source and training ground of artists who would furnish visual evidence of the might, glory and enduring legacy of the French crown.[43] For this purpose he ensured the Academy's autonomy and supremacy over the rival guild or Maîtrise.[44] Just a few days after the first meeting of the *petite académie*, he oversaw the issue of a decree that required artists who worked for the crown to join the Academy or forfeit their right to court employment. For Colbert, in a role similar to that of Richelieu *vis-à-vis* the Académie française some thirty years earlier, the programme of Academy lectures and their theoretical machinery – of which the hierarchy of subjects was part – were a means by which to impose credentials on the *Compagnie* and to give it stature commensurate with its duty to the French king.[45] This was an enterprise in which not all Academicians readily shared. If one looks at the process by which artists gained entry into the Academy, and at the way that process was recorded, there appears to be a disconnection between the classically inspired aims for art pedagogy propounded by the circle of Colbert and the actual conduct of business and practice of painting at the *Compagnie*. The hierarchy of genres, with its careful prioritizing of subject types and artists' choices, was adroitly sidestepped at France's preeminent centre of the visual arts.

First it should be said that allegory, the Chapelain-inspired subject category at the apex of Félibien's ranking scheme, does not appear to have been aggressively championed within the Academy. The lectures on painting delivered by Academicians in 1667, under the watchful eye of Colbert, dealt not with clearly identified allegories, but with religious pictures. Academy applicants were required to present a picture (sometimes two) for provisional and then for full membership, thus furnishing the

Compagnie with a collection of pictures. Who is to say how many of the history pictures presented between 1662 and 1722 had allegorical content?[46] Certainly only a small number overtly made reference to such content and one is struck by the number of portraits.[47] According to the Academy minutes, of all the artists aspiring to full membership between 1662 and 1722, a period of some sixty years, only about a dozen or so entrants were assigned what can clearly be identified as an allegorical picture for their reception piece.[48] Indeed in 1674, thus only a few years after Félibien's announcement of the supremacy of allegories, the *Compagnie* recommended that applicants be assigned Biblical subjects.[49]

A significant percentage of the allegorical pictures offered to the *Compagnie* by aspiring entrants, or assigned to those entrants, between 1662 and 1722 occurred at the time of the establishment of the *petite académie* and Chapelain's endorsement of allegories. According to the Academy minutes, at least six Academy applicants offered to paint, or were assigned, clearly identifiable allegorical pictures at the time of their reception into the Academy in 1663.[50] However, not all of them were successful in this endeavour. One of the entrants, Claude Lefebvre, was assigned 'the Academy painting a picture of the king on a shield, led by Virtue', a subject that signalled Colbert's aims for the activities of Academicians. Two years passed without record of receipt of this picture, at the end of which time Lefebvre requested of the *Compagnie* a portrait in place of his assigned allegorical picture. His rejection of the mantle of history painting was a very rare gesture at the Academy.[51] Another entrant, the little-known Roland Lefebvre, presenting himself for Academy membership after a long career in Italy as a miniaturist and portrait painter, appears never to have satisfied the *Compagnie* as to the completion of his allegorical picture, *Truth Presenting Itself to the Academy*. He was received on the strength of his portraits and resigned his membership very promptly thereafter.[52]

One of the ways in which Academicians could have acknowledged Colbert's aims and the preeminence of allegory would have been to ask students to paint an allegorical picture as the required submission for the coveted Rome prize, the award that financed an extended stay in the Eternal City. In fact allegories were assigned rarely, but some significant shifts in subjects again took place at the time of the early influence of the *petite académie* and of Félibien's preface to the Academy *conférences*. For the first Academy prize, which was announced by Le Brun in February 1663, in the very month of the establishment of Colbert's *petite académie*, contestants were required to prepare a drawing of a religious subject, the Adoration of the Golden Calf.[53] Just three months later, however, for the

second competition, the assigned drawing was a modern history subject, the conquest of the town of Dunkirk, to be presented as the myth of Jupiter and Danae. Considerable weight was given to the content of this composition, which was dictated in minute detail. Dunkirk was to be represented by a female figure reclining on a bed with cupids, one playing the harp, another offering a pomegranate, while above them the king, in the guise of Jupiter holding a thunderbolt, accompanied by more cupids, was to scatter a shower of gold, to be gathered by an old woman with some attribute to identify her as Great Britain. There was also mention of Neptune and tritons in the background.[54] This elaborate assignment met with mixed results. 'An heroic subject of the king' was the only stipulation for the subject of paintings to qualify for the third *grand prix*, proposed in August 1663.[55] Allegories in praise of Louis XIV were assigned for the Rome competitions of 1665, 1667, 1668, 1671, 1672 and 1673.[56] This might appear to be a significant total, until one considers that from 1674 to 1761, for 68 Prix de Rome painting competitions, the assigned subject was religious.[57] Indeed, the Academy recorded a quite unequivocal statement in the minutes for March 1674 regarding the introduction of Old Testament subjects for the Rome prize, by which the *Compagnie* would be 'taking up again a thought it had had since its beginning'.[58] This suggests that 'heroic subjects of the king' were an unwanted imposition. The highlighting of allegory by means of the Rome prize did not outlast Chapelain, who died in 1674.

On a regulatory level, the Academy was constrained to favour artists who made history pictures, singling them out for Academy office and restricting to them the Rome Prize. In practice, these crown-imposed restrictions were manipulated. To accord privileges to the most promising of its members, the *Compagnie* adopted a rather inclusive view of the history painter, assigning a history subject as a reception piece even to artists who showed talent in areas other than the so-called *grandes machines*. Thus, for example, in 1717, the animal painter Jean-Baptiste Oudry was assigned, in name at least, an allegorical picture, *Abundance with Its Attributes*, as his Academy reception piece, although still life and animal painting were his forte. It took Oudry two years to deliver his assignment, but with it he was accepted as a history painter and ultimately attained Academy office.[59] A couple of years earlier, in 1715, Antoine Coypel, director of the Academy, steered the young Jean-Marc Nattier to a history picture as his reception piece, although the applicant already showed a leaning towards portraiture.[60] Another noted portraitist, François de Troy, well understood the particular benefits of being accepted in the history genre. In 1671, at the age of 26, he received provisional Academy

membership by presenting 'diverse little portraits' and was assigned two portraits for his reception piece. Almost three years later he returned to the *Compagnie* to request, instead, a history subject as his *morceau*.[61] Although they clearly recognized his talent in portraiture, members of the Academy did not feel obliged to identify de Troy as a portraitist, with the resulting restrictions. They gave him the chance to make a picture of his own choosing and eight months later granted him full membership as a history painter on the strength of a *Mercury and Argos*. De Troy, one of the most important portraitists of the reign of Louis XIV, rose through the ranks of Academy office, to be appointed director in 1708.

Although Félibien in his preface of 1668 made clear distinctions between different subject areas, for many decades there was no corresponding clarity of identification in the minutes of the Academy's bimonthly meetings.[62] Applicants for provisional and full Academy membership came before the *Compagnie* with a picture or pictures which, in the early decades of the Academy, were entered into the minutes by title, not by subject category. Indeed distinctions between subject categories were not clear. For decades, contrary to what one might expect, the phrase 'history painter' did not appear in the Academy record. At first, 'painter' or 'painter to the king' were almost the only labels used to identify entrants. These terms were quite randomly applied, although entrants who presented history pictures and portraits were less frequently assigned the rubric than were landscapists. In the closing decades of the seventeenth century there were intimations of greater attention to labelling, as earlier rubrics were reassigned to different kinds of painters: two-thirds of the artists presenting history pictures shared with landscapists the rubric 'painter', whereas some of the artists working in other categories received new labels: 'portrait painter' and 'flower painter'. There was no label for an 'allegorical painter', and indeed it was not until the early decades of the eighteenth century that any specific reference to a 'history painter' occasionally appeared in the Academy record.[63] Thus, the idea of artist identification according to subject matter took hold very slowly in the Academy and did not strictly adhere to Félibien's scheme. An artist who made an allegorical picture, a history or even a genre scene was recorded, into the second decade of the eighteenth century, simply as a 'painter'. In this regard, the entry of Antoine Watteau into the Academy is of interest. Watteau's reception piece, the *Pilgrimage to the Island of Cythera*, was recorded in 1717 as a 'feste galante', although the artist was labeled 'painter', as were most history painters at the time. Academicians appear not to have been particularly sensitive to the issue of subject difference, especially when an artist painted the human figure.

What was the impact of Félibien's hierarchy? The evidence suggests that here was an idea born of the *petite académie* for a particular political purpose, but largely neglected by the Academy and by early art commentators.[64] Nevertheless, some seventy years after Félibien's statement, French art commentators were separating painted historical narratives from other kinds of pictures, and all kinds of works were identified in the Academy records. This does not appear to have been a revival of the strict ranking of subjects conceived by the circle of Colbert but, rather, a response to the diminishing appeal of history pictures. As of the eighteenth century, public display of pictures in Paris – both at outdoor exhibitions in the Place Dauphine and regularly at the Academy Salons from 1737 – gave rise to lively printed commentary and disquieting evidence of public preference for non-history subjects.[65] Already at the Salon of 1704, portraits outnumbered historical narratives. At the Salon of 1737, less than half the paintings were histories. By 1740, 1743 and 1745, the overwhelming impression in the Louvre's *grand salon* must have been of pictures that were not histories. By the Salon of 1753, history pictures amounted to less than 18 per cent of the total number of pictures on display. In addition, the boundaries between subject types were increasingly difficult to determine. Portraits and history pictures merged in historiated portraits; genre and historical scenes looked alike.[66] Literary texts, formerly sources for pictures in the *grands genres*, inspired scenes of everyday life.[67]

The responses to these developments – in print, by the state and at the Academy – once again hint at a disconnection between the theory and practice of painting. A defence of history painting did not come primarily from Academicians, but from the authors of theoretical texts, Salon reviews and sale catalogues, who identified painted historical narratives with all that was noble, and vigorously separated the history type from all that it was not. In the words of the notable critic of the mid-eighteenth century, La Font de Saint-Yenne: 'of all the types of painting, the greatest, the most noble, in fact without doubt the first is that of history'.[68] For its part, the French state attempted to revivify interest in the history type: in 1727 the duc d'Antin, Director-General of Buildings, sponsored a competition among history painters, including a public exhibition of the entries in the Louvre's Galerie d'Apollon.[69] As had been the case in the past, an official gesture was made, from outside the Academy, to give priority to history scenes. At the Academy, towards the middle of the century, there was an increasing constriction around the labelling of artists. All new Academy members of the 1740s and 1750s were recorded in terms of the types of pictures they made. However, Félibien's hierarchy was not the guide in this endeavour.

Indeed, subject matter was not necessarily the determinant of difference. Artists were sometimes recognized by different media or kinds of picture: as, for example, pastellists, miniaturists and painters on enamel. Labelling mattered, but only to the extent to which a person was, or was not, a history painter. One recalls that it was the Academicians themselves, many of them received as history painters, who were responsible for the diversification of subject matter, making pictures across subject types for exhibition at the Salons and in a burgeoning art market-place.[70]

Without doubt, by mid-century the mantle of history painter was coveted in a way far from evident in Colbert's day. Jean-Baptiste Greuze, upon being received as a full member of the Academy in 1769, felt himself debased by a newly coined identification attached to his name: 'peintre de genre', genre painter. He had hoped to be received as a maker of histories. Whereas in earlier decades, many types of picture were included by the Academy under the history canopy, now this subject type was distinct. Greuze's reception picture, *Septimius Severus Reproaching Caracalla*, was exhibited at the Salon of 1769, where it prompted lively critical debate over the degree to which Greuze was, or was not, a history painter. Greuze was found guilty of overweening ambition;[71] he was judged to have made the mistake of stepping out of his subject area; history was said to be 'above his ability';[72] he was warned to heed the flight of Icarus.[73] At best, he was consoled with the notion that he could one day distinguish himself in the history subject type, this being only a 'first try' in 'a genre new to him'.[74] Thus, a century after Félibien enunciated his hierarchy, the exacting demands of history painting were established in the public imagination. The particular and relative demands of animal painting or landscapes or still lifes were not the object of similar scrutiny. What is more, Félibien's name, in this context, was never invoked. Indeed, it is quite significant that, in a biography of Félibien published after the middle of the century, the dealer and collector Pierre-Jean Mariette, looking back at the impact and achievements of the historiographer, made no mention of a hierarchy of subject matter in association with Félibien's name.[75]

A word rarely found in art criticism of the eighteenth century is 'hierarchy'. This is probably because the concept at the time had no real meaning. There was noble painting, and then there was everything else. Why were landscapes more or less laudable than animal paintings, or genre paintings more or less commendable than portraits? No one tackled these questions, because for decades the questions themselves held no interest. What we have traditionally labelled a hierarchy and traced to the late seventeenth century should be considered an exaltation of

history painting that reached its zenith almost a century later. Perhaps the later seventeenth and early eighteenth centuries were not as formally ordered as we thought – at least in this regard.

Notes

1. Georges Roque, 'Introduction', in *Majeur ou mineur? Les Hiérarchies en art* (Nîmes: Editions Jacqueline Chambon, 2000), p. 16; Udolpho van de Sandt, '"Grandissima opera del pittore sarà l'historia." Notes sur la hiérarchie des genres sous la Révolution', *Revue de l'art*, 83 (1989), p. 71; Pierre Rosenberg, *The Age of Louis XV: French Painting 1710–1774*, exh. cat. Toledo Museum of Art, Art Institute of Chicago, National Gallery of Canada (Toledo: Toledo Museum of Art, 1975), p. 8.
2. See Alain Mérot (ed.), *Les Conférences de l'Académie royale de peinture et de sculpture au XVIIe siècle* (Paris: Ecole national supérieure des Beaux-Arts, 1996), pp. 43–5; André Fontaine, *Les Doctrines d'art en France* (Paris: H. Laurens, 1909), pp. 46–7.
3. Thomas Kirchner, 'La Nécessité d'une hiérarchie des genres', in *La Naissance de la théorie de l'art en France 1640–1720* (Paris: Editions Jean-Michel Place, 1997), pp. 187–96, refers to an 'order of creation in Genesis' in the hierarchy.
4. See the statement in the minutes of the Academy, 26 March 1667, approved by Jean-Baptiste Colbert: Anatole de Montaiglon (ed.), *Procès-verbaux de l'Académie royale de peinture et de sculpture 1648–1793*, 10 vols (Paris: J. Baur, 1875–92), Vol. 1, pp. 314–17.
5. Montaiglon, *Procès-verbau*x, Vol. 1, pp. 314–17. In 1663, Félibien wrote a description of the *Reines de Perse aux pieds d'Alexandre, peinture du cabinet du Roy* by Le Brun, which would also have been available to Colbert.
6. Francis Waddington (ed.), *Mémoires inédits et opuscules de Jean Rou*, 2 vols (Paris: Agence centrale de la société de l'histoire du protestantisme français, 1857), Vol. 2, p. 31; Perrault's *Contes* were published in 1697. Perrault and Félibien had a mutual acquaintance in Valentin Conrart, secretary of the Académie française, with whom Félibien maintained a lively correspondence during his trip to Italy from 1647 to 1649. Perrault and Félibien might well also have met at Vaux le Vicomte, the magisterial residence of Nicolas Fouquet; see Charles Perrault, *La Peinture*, ed. Jean-Luc Gautier-Gentès (Geneva: Droz, 1992), pp. 2, 152. Perrault, *Mémoires*, ed. Paul Lacroix (Paris: Librairie des bibliophiles, 1878), pp. 17–22, gives an account of Perrault's career prior to his first contact with Colbert.
7. Chapelain, whose epic poem *La Pucelle* was published in part in 1656, heard praise of Félibien as early as 1648, while the latter was in Italy (René Kerviler and Edouard de Barthélemy (eds.), *Valentin Conrart, premier sécretaire perpétuel de l'Académie française: sa vie et sa correspondance* (Geneva: Slatkine, 1971), p. 432). Perrault, by his own account (*Mémoires*, p. 21), was introduced to Colbert by Chapelain.
8. Colbert accumulated broad ministerial responsibilities after the death of Mazarin and the fall of Nicolas Fouquet in 1661.
9. Colbert must have felt the scope and urgency of his responsibility to the crown, inasmuch as he instructed his new advisory council to meet twice a week.

10. According to Pierre Montet in *L'Académie des inscriptions et belles-lettres 1663–1693*, exh. cat. Hotel de Rohan (Paris: Archives nationales, 1963), p. ix, the 'petite académie' was so named by Mme de Montespan. Other members of the little academy were the Abbé Amable de Bourzeis, a theologian and jurist; and the abbé Jacques Cassagnes, a theologian and poet, both members of the Académie française. Whether or not François Charpentier, also of the Académie française and known for his translations of ancient texts, was among the first appointees to the *petite académie* in 1663 has been open to question. Also, whether Perrault, because he was not a member of the Académie française, was an official member of the *petite académie* in 1663 has been questioned. In his *Mémoires*, pp. 22, 27, Perrault claimed to be present at the very first meeting of the little academy, on 3 February 1663, recommended by Chapelain; he noted that Charpentier joined the group 'a little later'. Claude Gros de Boze in his history of the Académie royale des inscriptions et belles-lettres, written eighty years later, listed the earliest members of the *petite académie* as Chapelain, Bourzeis, Charpentier and Cassagnes, adding that 'M. Perrault … fut admis dans les Assemblées, sans être du nombre des Académiciens; il y tenoit même la plume' in order to record the proceedings and report back to Colbert (*Histoire suivie de l'Académie des inscriptions et belles-lettres* (Amsterdam: F. Changuion, 1743), pp. 6–7). Subsequent commentators have followed either Perrault or Boze; see l'abbé A. Fabre, *Chapelain et nos deux premières académies* (Paris: Perrin et Cie, 1890), pp. 394–6; L.-F. Alfred Maury, *L'Ancienne Académie des inscriptions et belles-lettres* (Paris: Didier et Cie, 1864), p. 8.
11. According to Perrault, *Mémoires*, p. 22, Colbert requested that the business of the group be kept secret. The little academy, subsequently named the Académie des inscriptions et belles-lettres, did not receive official statutes until 1713.
12. Perrault, *Mémoires*, p. 21: 'l'homme du monde qui avoit le goût le meilleur'.
13. Pierre Clément (ed.), *Lettres, Instructions et Mémoires de Colbert*, Vol. 5 (Paris: Imprimerie impériale, 1868), p. 588.
14. *Mémoires de Colbert*, Vol. 5, p. 596, letter of 10 June 1664.
15. *Mémoires de Colbert*, Vol. 5, p. 596. In 1661, at the request of Colbert, Le Brun had already executed allegorical representations of the crown in three ceiling paintings for the Petite Galerie of the Louvre, in which Louis appeared as the sun, revered by his people on land and at sea: see Alain Mérot, *French Painting in the Seventeenth Century* (New Haven, CT and London: Yale University Press, 1995), pp. 257–9. Regarding Chapelain's need to persuade Le Brun, see Nicolas Milovanovic, *Du Louvre à Versailles: Lecture des grands décors monarchiques* (Paris: Les Belles Lettres, 2005), pp. 116–19.
16. At this date Le Brun was de facto First Painter to the King. The official title was still held by Nicolas Poussin, who was by this time elderly, ailing and in Rome. Le Brun was named First Painter on 1 July 1664 (*Charles Le Brun 1619–1690: Peintre et dessinateur*, exh. cat. Château de Versailles (Paris: Ministère d'État/Affaires culturelles, 1963), p. LIII).
17. Already in 1660 Félibien had written his account of the royal arch erected in the Place Dauphine, which revealed an elaborate allegorical scheme 'representing royal authority' (*Description de l'art de la place Dauphine* (Paris: P. Le Petit, 1660), p. 17). Chapelain owned a copy of this text.

18. Boze, *Histoire*, pp. 5, 8. Félibien came before the group again in July 1668 for the review of his *Fête de Versailles du 18 juillet 1668* (*Lettres de Jean Chapelain*, 2 vols (Paris, 1880–3; reprint, Paris: Imprimerie nationale, 1968), Vol. 2, p. 583). He was appointed to the *petite académie* in 1683.
19. On architecture: Vitruvius, Alberti, Palladio and Philibert de l'Orme. On medals: S. Erizzo, *Discorse sopra le medaglie antiche* (Venice, 1559); J. B. Le Menestrier, *Livre des médailles* (Dijon, 1627); see Colbert Searles, *Catalogue de tous les livres de feu M. Chapelain* (Stanford, CA: Stanford University, 1912), pp. 43–4.
20. Félibien purchased Borghini's *Il Riposo* during his stay in Italy; see Kerviler and Barthélemy, *Conrart*, p. 370. Lomazzo's *Trattato dell'arte della pittura, scolture, et architettura* (Milan, 1585) was translated into French in 1649 by the Toulousan Hilaire Pader, for which Pader gained provisional acceptance into the Academy in 1659, an indication of the extraordinary importance of this work.
21. Anton Francesco Doni, *Disegno partito in piu ragionamenti, ne quali si tratta della scoltura et pittura; de colori, de getti, de modegli, con molte cose appartenenti a quest'arti …* (Venice: G. Giolito di Ferrarii, 1549). Chapelain also owned *De Pictura veterum* (Amsterdam, 1637) by Franciscus Junius, which was much read in France and would have fed his appreciation of the value of the antique and of *disegno*.
22. Doni's assessment belongs within the tradition of Italian critical thinking of the Quattrocento and Cinquecento, beginning with Leon Battista Alberti's *De pictura* (1435), in which the *historia* or historical narrative scene and the human form are most highly prized in painting. The division of painting according to subject matter can be traced back to Pliny's remarks about Piraeikos, a painter of 'sordid subjects', namely 'barbers' shops and cobblers' stalls, asses, viands and the like' (*Natural History*, trans. H. Rackham, Vol. 9 (Cambridge, MA and London: Harvard University Press and William Heinemann, 1985), book xxxv, lines 111–12). This idea found an influential champion in Michelangelo, revered by the French, who was the putative author of a damning report of the dubious appeal of landscapes and still lifes, notably in Flemish painting (Francisco de Hollanda, *Four Dialogues on Painting*, trans. Aubrey F. G. Bell (London: Oxford University Press, 1928), pp. 15–16).
23. Cesare Ripa, *Iconologia* (Siena: Matteo Florimi, 1613), preface: Christ 'hid a great many divine secrets under the veil of his parables'.
24. See Charles Desmaze, *P. Ramus: sa vie, ses écrits, sa mort (1515–1572)* (Paris: J. Cherbuliez, 1864), pp. 36–7; Paul Oskar Kristeller, *Renaissance Thought: The Classic, Scholastic, and Humanistic Strains* (New York: Harper & Row, 1961), pp. 26–7.
25. Pierre and Jacques Dupuy, *VII. Catalogue bibliothecae regiae* (1645), 'Catalogus librorum manuscriptorum Latinorum, recentiorum Gallicorum, Italicorum et Hispanicorum bibliothecae regiae. Pars secunda', in *Anciens inventaires et catalogues de la Bibliothèque Nationale*, Vol. 3 (Paris: E. Leroux, 1910), p. 38, no. 703; p. 47, no. 864.
26. See René Demoris, 'La Hiérarchie des genres en peinture de Félibien aux Lumières', in *Majeur ou Mineur*, especially pp. 62–4.
27. Already in May 1653 there was a record in the Academy minutes of a requirement of Academy members to give lectures. This was amplified in 1654; see Natalie Heinich, *Du Peintre à l'artiste: artisans et académiciens à l'âge classique* (Paris: Editions du Minuits, 1993), p. 29. As of 1665 Perrault, as

Colbert's representative, was in attendance at the bimonthly meetings of the Academy.

28. Perrault, *Peinture*, pp. 91–4, lines 105–47.
29. Perrault, *Peinture*, p. 25.
30. Quoted by André Fontaine, *Les Collections de l'Académie Royale de Peinture et de Sculpture* (Paris: H. Laurens, 1910), p. 46.
31. In his *Mémoires*, Vol. 2, p. 15, Rou referred to a response he had received in 1690 from the philosopher and editor Pierre Bayle, a fellow Protestant in exile, to a 'collection … in all different forms' that Rou had worked on 'a few years previously' for a history of the Academy.
32. Fontaine, *Collections*, p. 46.
33. Rou, *Mémoires*, Vol. 2, p. 31, where he remarked: 'I even found myself several times [at meetings of the Academy] in the presence of Messieurs Colbert and Perrault, who, in the end, were quite accustomed to seeing me there.'
34. Bernard Dupuy du Grez, *Traité sur la peinture* (Toulouse: chez la veuve de J. Pech & A. Pech, 1699), p. 46: 'ceux qui travaillent d'histoire tiennent le premier rang, les portraitistes suivent aprés [*sic*], les païsagistes, & ceux qui font des fleurs & de fruits, sont les derniers de tout: il y a encore de simple copistes'.
35. Dupuy du Grez died in 1720. An academy at Toulouse was not officially recognized by the crown until 1751.
36. Dupuy du Grez, *Traité*, preface (non-paginated).
37. André Félibien, *Entretiens sur les vies et sur les ouvrages des plus excellens peintres anciens et modernes*, 2nd edn, 2 vols (1685–88), Vol. 2, p. 255.
38. One might, for example, have expected Testelin to highlight the hierarchy of subject matter in his review of the Academy exhibition of 1667.
39. Abraham Bosse, *Lettres écrites au Sr Bosse, graveur, avec ses réponses sur quelques nouveaux traittez concernans la perspective & la peinture* (1668), quoted by Gautier-Gentès in Perrault, *Peinture*, pp. 156–7.
40. [Roger de Piles], *Abrégé de la vie des peintres avec des reflexions sur leurs ouvrages* (Paris: chez François Muguet, premier imprimeur du roy, 1699), pp. 28, 29.
41. See Mark Ledbury, 'Hierarchy or Opposition? Understanding Genre in Eighteenth-Century France', in *Sedaine, Greuze and the Boundaries of Genre* (*Studies on Voltaire and the Eighteenth Century*, 380) (Oxford: Voltaire Foundation, 2000), pp. 15–44.
42. See Jean-Claude Boyer, 'Colbert et les beaux-arts', in *Colbert 1619–1683* (Paris: Hôtel de la Monnaie, 1983), pp. 355–6.
43. Montaiglon, *Procès-verbaux*, Vol. 1, pp. 242–3, 314–17.
44. For an account of the conflict between the Maîtrise and the Academy, see Paul Duro, *The Academy and the Limits of Painting in Seventeenth-Century France* (Cambridge: Cambridge University Press, 1977), pp. 55–60.
45. It is significant that Chapelain idolized Richelieu and might have seen for Colbert a role in the arts similar to that of Richelieu in the world of letters decades earlier.
46. Jennifer Montagu, 'The Painted Enigma and French Seventeenth-Century Art', *Journal of the Warburg and Courtauld Institutes*, 31 (1968), pp. 307–35, distinguishes between 'straightforward allegories' and 'enigmatic allegories', in which a mythological subject, for example, could be read on that level but also on a wholly different, political level. Thus the meaning of pictures might not have been limited to the subjects recorded in the minutes.

47. See M. Duvivier (ed.), 'Sujets des morceaux de réception des membres de l'ancienne Académie de peinture, sculpture et gravure 1648 à 1793', *Archives de l'art français*, 3 (Paris, 1852–3), pp. 353–91.
48. Among these were three pictures for which Guillet de Saint-Georges provided an allegorical explanation in the *Mercure galant*, as part of a series of such explanations he claimed to have been charged to offer by the Academy; see Montagu, 'Painted Enigma', p. 327.
49. Montaiglon, *Procès-verbaux*, Vol. 2, pp. 27–8.
50. Thus also at the time of the decree enjoining all court painters to enter the Academy.
51. Montaiglon, *Procès-verbaux*, Vol. 1, pp. 215, 280. Lefebvre was favoured by Le Brun (see Emmanuel Coquery in *Visages du grand siècle: le portrait français sous le règne de Louis XIV 1660–1715*, exh. cat. Musée des Beaux-Arts de Nantes; Musée des Augustins, Toulouse (Paris: Somogy éditions d'art, 1997), pp. 57, 220–1; Jacques Wilhelm, 'Quelques Portraits peints par Claude Le Febvre (1632–1674)', *Revue du Louvre*, 2 (April 1994), pp. 18–21). No other example of a rejection of the history subject category (including allegorical and Biblical pictures) in favour of portraiture appears in the Academy record at least before 1780.
52. Montaiglon, *Procès-verbaux*, Vol. 1, pp. 205, 274, 279–80; see also Charles Sterling (ed.), *Les Peintres de la realité en France au XVIIe siècle*, exh. cat. Musée de l'Orangerie (Paris: Editions des musées nationaux, 1934), p. 88. The other artists were Nicolas Loir, Jean Baptiste de Champaigne, Pierre Sève and Georges Charmeton.
53. Montaiglon, *Procès-verbaux*, Vol. 1, p. 211. Despite the title 'Rome prize', there was in fact no promise of a trip to Rome until 1664. See Jean-Paul Alaux, *Académie de France à Rome: ses directeurs, ses pensionnaires*, 2 vols (Paris: Editions Duchartre, 1933), Vol. 1, pp. 13–14. The award winners were announced in April 1663.
54. Montaiglon, *Procès-verbaux*, Vol. 1, p. 221. The awards were announced in July 1663.
55. Montaiglon, *Procès-verbaux*, Vol. 1, pp. 234, 265. The awards were announced in September 1664, with the promise of a stay in Rome. By a statute of June 1664, the subject of works eligible for the prize was to be 'les actions héroïques du Roy'.
56. A religious subject was assigned in 1669.
57. Information is taken from A. Duvivier, 'Liste des élèves de l'ancienne école académique et de l'école des beaux-arts qui ont remporté les grands prix de peinture, sculpture … depuis 1663 jusqu'en 1857', *Archives de l'art français* 9 (Paris 1857–8), pp. 273–333, whose descriptions do not exactly match those of the Academy minutes. In 1713 and 1726, no subject was identified.
58. Montaiglon, *Procès-verbaux*, Vol. 2, p. 27.
59. In 1743 he was appointed *professeur*.
60. Nattier had some difficulty completing the assignment. He submitted a sketch for 'Apollo presiding over Painting and Sculpture', but two years later had still not delivered the finished painting. He gained full membership in the Academy in 1718, three years after his provisional acceptance, with a painting of Perseus and Phineus.
61. Montaiglon, *Procès-verbaux*, Vol. 1, p. 360; Vol. 2, p. 23.

62. Nor was there in the *livrets*, or printed lists, from the Academy Salons of 1673, 1699 and 1704, in which paintings were briefly described, but not identified by subject type.
63. The phrase appearing in the minutes was 'peintre sur le talent de l'histoire' (see, for example, Montaiglon, *Procès-verbaux*, Vol. 3, p. 285).
64. Daniel Arasse, 'Sept réflexions sur la préhistoire de la peinture de genre', in *Majeur ou mineur*, p. 43, remarks that in 1669, a year after Félibien published his hierarchy of genres, artists who specialized in 'low' subjects could be better known and paid than those who made 'high' art.
65. Indeed with an eye to the public, both de Piles (*Cours de peinture par principes* (1708; Paris: Gallimard, 1989), pp. 38–9) and the Abbé Jean Baptiste du Bos, author of an influential commentary on poetry and painting (*Réflexions critiques sur le poésie et sur la peinture* (1719; Paris: Ecole nationale supérieure des Beaux-Arts, 1993), p. 30), noted the value of putting inscriptions beneath history pictures, so that there could be no mistake as to the particular episode or figures represented.
66. For a discussion of overlapping of subject types in pictures by François de Troy, see Dominique Brême, *François de Troy 1645–1730* (Paris and Toulouse: Somogy Editions d'Art and Musée Paul-Dupuy, 1997), pp. 90–3, 172.
67. For example, at the Salon of 1738 Nicolas Lancret and Pierre Nicolas Huilliot exhibited genre pictures inspired by the verse fables of La Fontaine.
68. *Reflexions sur quelques causes de l'état présent de la peinture en France* (1747; new ed, Paris, 1752), p. 195; the dealer Edmé François Gersaint addressed the issue of nobility in painting in some detail in an introduction to part one of a two-volume sale catalogue in 1744 (*Catalogue raisonné des diverses curiosités du cabinet de feu M. Quentin de Lorangere*, 2 vols (Paris, 1744), Vol. 1, p. 5); in a Salon brochure of 1747, Lieudé de Sepmanville noted that a history painter had to have a 'lively, noble and sublime imagination' (*Reflexions nouvelles d'un amateur des beaux arts adressées à Me de *** pour servir de suplement à la lettre sur l'exposition des ouvrages de peinture, sculpture etc* (1747), p. 13).
69. Regarding the competition, see Thomas E. Crow, *Painters and Public Life in Eighteenth-Century Paris* (New Haven, CT and London: Yale University Press, 1985), pp. 79–80.
70. For example, at the Salon of 1737, Carle Van Loo, Pierre-Jacques Cazes, Jacques Courtin and Jean François de Troy, all received into the Academy as history painters, painted hunt breakfasts (van Loo and Cazes), sentimentalized heads (Courtin) and boudoir scenes (de Troy).
71. [Godefroy], *Le Chinois au Salon* (1769), pp. 10–11.
72. 'Lettre adressé aux auteurs du Journal Encyclopédique' (1769), non-paginated; B[eaucousin], *Lettre sur le Salon de peinture de 1769* (Paris, 1769), pp. 22–3.
73. B[eaucousin], *Lettre sur le Salon*, p. 25.
74. [Fréron], 'Lettre XIII: exposition de peintures, sculptures & gravûres de messieurs de l'Académie royale', *Année littéraire* (1769), p. 311. Greuze concurred ('Nouvelles Littéraires: Lettre de M. Greuze, à l'auteur de l'Avantcoureur', *L'Avantcoureur* (18 September 1769), p. 408: 'Pourquoi dès mon premier essai, m'attaquer si ouvertement sur un genre nouveau, que je me flate [*sic*] de perfectionner avec le tems?').
75. P.-J. Mariette, 'Abecedario et autre notes inédites sur les arts et les artistes', annotated by Ph. de Chennevières and A. de Montaiglon, *Archives de l'art français* 4 (1853–54), pp. 238–9.

6

The Values of the Mineral Kingdom and the French Republic

Jonathan Simon

> … wealthy people generally preferred the most brilliant specimens, which means that in most of their cabinets one finds more or less the same pieces, because they assumed the choice of their own collections.
>
> But there are in France, and particularly in Paris, a few collections of another type formed by famous amateurs with help from the most highly educated people using all the resources of this type of fortune that ought no longer to be found under the Republican regime.
>
> (… les personnes opulentes préféroient en général les échantillons qui avoient le plus d'éclat de sorte que dans la plus part de leurs cabinets, on trouve à peu près les mêmes morceaux, parce qu'elles avoient chargées du choix de leurs collections.
>
> Mais il existe en France et surtout à Paris quelques collections d'un autre genre que des amateurs célèbres ont formées avec le secours des personnes les plus instruites, avec toutes les ressources d'une fortune telle qu'il ne doit plus s'en trouver sous le régime Républicain.)
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> (Commission temporaire des Arts)[1]

Introduction

There are many different ways to approach the questions of order and hierarchy in the history of science. It is hardly original to claim the centrality of such concerns for the eighteenth century, which is often characterized as the century of classification.[2] In this context, it is customary to remark how the sciences – particularly the life sciences – in the Enlightenment

were consumed by the need to classify and systematize. The great hero of this taxonomic story in the case of natural history is, of course, Linnaeus, who developed an effective and popular classification system for plants that allowed him definitively to name and classify a large number of species as they were gathered from around the world.[3] Evoking the name of Linnaeus already suggests one approach to the history of classification in the sciences, one that traces the development of the great taxonomic systems that preceded (even if they did not directly contribute to) Darwin's theory of evolution. In this view, John Ray, Joseph Pitton de Tournefort, Carl Linnaeus and others struggled for mastery over an ever-increasing mass of material (animal and vegetable in particular, but also mineral) introduced by European exploration and expansion.

Since the 1980s, however, historians, following the lead of sociologists and anthropologists, have persuasively argued the case that science is more than simply a series of theories confirmed or disproved by an experimental confrontation with nature, contending that experimental practice is itself constitutive of scientific knowledge. Following this line of argument, the principal subject of this chapter will be not eighteenth-century taxonomic theory, but rather natural history cabinets, in particular mineral collections within such cabinets. Analysing such collections, I shall argue that ordering is more than just simply a question of rendering a theorized system of classification operational. I want to suggest instead that the acquisition and arrangement of a natural history collection followed its own rules, which were not necessarily elaborated on the basis of taxonomic considerations. Thus, for example, factors such as cost and space could readily undermine the ideal of creating a collection that instantiated a given taxonomic system, if this ideal ever really motivated a collector in the first place. Here I will be focusing my attention on the demands of taste, with the intention of showing how they could easily run counter to the constraints imposed by systems of classification. Beyond this particular argument, however, I emphasize the broader point that scientific collections are precisely physical assemblies of objects in a particular place and time, and not disembodied theoretical constructs. This brings us to another point that concerns not so much historiographical trends in the history of science, but the nature of modern science itself.

The idea that science aims at an ever more 'realistic' depiction of the world through the use of increasingly sophisticated theoretical models is a distinctly modern prejudice, although a little reflection reveals it to be a more or less useful oxymoron. The information revolution has only served to exacerbate this trend, as the ideal has become to recreate (or create) any given object or event in a form that no longer occupies any space at

all and whose duration is both indefinite and infinitely manipulable – the much-vaunted 'virtual reality'. Ever more powerful computers provide ever more 'realistic' models of the world, and so, the argument often goes, science approaches its goal. Rushing to embrace this vision, however, we risk abandoning the physical materials that were traditionally regarded as the primary objects of science and treating our own theoretical models as the primary subjects of analysis. The advantage of keeping the focus on collections, for those of us unsatisfied with the immateriality of virtual reality, is that it avoids a simple abstraction to scientific debates over taxonomy. Indeed, it is with great circumspection that we should consider the effects of taxonomic systems on the practical arrangement of any collection, and conversely we need to be aware of the effect that owning a collection in the first place could have on the taxonomic commitments of its owner. Of course, it would be a caricature of modern science to say that the empirical natural history component has completely disappeared, just as it would be a misrepresentation of eighteenth-century collectors to claim that they operated without any theoretical concerns. It is more a question of hierarchy and balance, with theoretical abstraction and mathematical models having become established as the ideal vision of modern science, an ideal that was not shared by most eighteenth-century scientists.

From a quite different perspective, we are not obliged to consider natural history collections in terms of scientific theories or classification at all, but can understand these cabinets as physical, social and even political spaces. From this point of view, the mineral collection might be considered an extension of the salon (a service it could, of course, perform as a physical site within a house), providing a place for meeting and exchanging ideas.[4] Adopting this socio-political angle quickly leads us to a range of historical questions that are left aside by the 'great men' or 'great systems of classification' approach. What role did such collections play in the construction of the public sphere? How did they contribute to the development of modern scientific culture? The historian of science might complain at this point that this kind of 'soft' historical approach no longer takes the specificity of the scientific field into account, and that there is a danger of evacuating the sciences in question from the story. Whatever the merits of this criticism, however, it remains important to consider these social and political aspects when thinking about natural history cabinets in general, and mineral collections in particular.

In this chapter, I will be occupying a middle ground with respect to these two interpretative poles, but navigating closer to the scientific side

than the purely social one. Nevertheless, to ignore the social and political perspectives is to risk removing these collections from their context, and failing to understand the multiple forces behind change and reform in this area. Thus, for example, as I will be arguing later, the end of the eighteenth century in France saw a shift away from the multiple private collections and towards the dominance of the newly founded Muséum national d'histoire naturelle in Paris. At the same time, the form of mineral collections in general became more 'orderly' and uniform, modelled on these large public museums. While this change had much to do with developments in chemical analysis and mineralogy, the French Revolution played a central role in transforming the place of the natural history collection in Paris, as we shall see in what follows. All these factors need to be taken into account if we are to understand the passage from eighteenth- to nineteenth-century museology. Before looking at this transformation, however, we need to understand something about the nature and functioning of the private mineral collections in *ancien régime* France, starting with the relationship between order and aesthetics.

Collecting in theory and in practice

Although related, the issues of order and aesthetics need to be kept distinct. Of course, both concerns can come into play when a collector considers acquiring a new item for his or her collection. Such collectors might ask whether it will fit into a series that has already been started, whether it will fill a gap in the collection, whether it will cost too much, or simply whether or not it is a good enough specimen. Such questions are considered accessory to the science of mineralogy or crystallography, because the tendency in such sciences is to idealize, to work with abstract models, making reference to real individual specimens only as a last resort. Nevertheless, these questions about physical specimens remain quite relevant for those charged with the upkeep and management of university or museum collections (who are, incidentally, usually academic mineralogists themselves). Thus, the advantage of studying collections, rather than just the systems of classification developed in the relevant science, is that they serve to emphasize the mediation between theory and practice.

Consideration of the central practice of collecting draws our attention to the occupations (amateur and professional) that orbit around it. In eighteenth-century France, these occupations were part of a wider movement that worked to introduce science into a prominent place in the public sphere. Furthermore, as I have already suggested, this movement was linked to the rise in professional science so characteristic of the

nineteenth and early twentieth centuries. Dwelling on the practical side of collecting also serves to reveal a burgeoning and dynamic collection economy in eighteenth-century Paris, with many ramifications such as the creation of teaching opportunities outside the major state scientific institutions.[5]

On the side of theory, we have to consider the question of classification and how it related to the practice of putting specimens – in this case minerals – in order. I will not here attempt to answer the question of why classification became such a preoccupation during this period. I can make the preliminary observation, however, that mineral collections were ostensibly prepared and judged largely according to their systematic order: an unsurprising observation in light of standard images of Enlightenment culture. To illustrate this point, we need only recall Diderot's famous exhortation to put order into the presentation of a natural history cabinet:

> To form a natural history cabinet, it is not enough simply to gather up every object of natural history one comes across and pile them up without order or taste. One needs to know how to distinguish what should be kept from what should be thrown away, and give an appropriate arrangement to each item. The order of a cabinet cannot be that of nature, which everywhere presents a most sublime disorder.[6]

The sublime disorder of nature is to be redeemed through the equally sublime order instituted in the cabinet or botanical garden that aimed at an ideal distribution of living things unknown since the Garden of Eden. In sum, systematic classification assumed a high profile in eighteenth-century natural history. In looking at collections, however, we can ask what the practical impact of the systematic imperative was, and observe that, while it was no doubt influential, it was certainly not irresistible. Indeed, I want to suggest that the craze for classifying did not neatly parallel the craze for collecting. Furthermore, the difference between the two reveals the emergence of an important element of the ideology of nineteenth- and twentieth-century science. The strong temptation to write the history of science exclusively from the point of view of the victors makes it important to bear in mind that modern science is the heir of the classifiers rather than of the collectors. What I want to stress in what follows is that there is a tension between the two elements – classifying and collecting – and that the exigencies of the classifying theory do not automatically match collecting practice. Here we find different values at work in what are coexistent worlds of mineralogy: one clearly has a

place in the history of science, while the other has been marginalized in this discipline.[7] Before expanding on this theme, however, I want first to sketch the world of Parisian mineral collections under the *ancien régime*, emphasizing how they were bound into multiple intersecting economies.

To illustrate some points about the nature of such collections and how they and their owners functioned in eighteenth-century Paris, I will give a relatively detailed presentation of one particular example: that of Madame Dubois-Jourdain's mineral collection. This example is meant to be illustrative rather than typical, as, despite what the member of the commission quoted at the beginning of this chapter might claim, one of the characteristics of such private collections was their wide variety, a feature that I believe distinguishes them from the majority of nineteenth- and twentieth-century mineral collections. One reason to look at this particular collection in some detail is because we can; although the specimens were dispersed upon Madame Dubois-Jourdain's death in 1766, a description of the contents has been preserved in an auction catalogue published by Pierre Rémy. Already, the very existence of this catalogue indicates an interesting economic development of the period. While dealers in items for collections already flourished in the seventeenth century, the business grew dramatically in the eighteenth, reflecting an expanding market for the purchase and resale of natural history specimens. The auction of collections became a regular event in Paris and catalogues proliferated, as these sales became an important vehicle for circulating items among different collections. With the possibility of such resale, particular specimens even came to share the prestige of their former owner, bringing an added advantage for the catalogue's author, who could dispense with a lengthy description of such an item by simply making a reference to a former auction.

Rémy, as I said, took on the task of preparing a catalogue to accompany the sale of Madame Dubois-Jourdain's collection, producing a pocket-sized 162-page volume containing literally thousands of specimens grouped into 1,369 lots. These lots were sold off during the week of 12 May, raising the impressive sum of 41,684 livres (and 11 sous).[8] The published catalogue, which according to its author reflects the order found in the collection, starts with the shells for which it was most famous (and which raised more money than any other part of the collection), and runs through corals, insects and animals (including the preserved head of a child with 'two mouths and three eyes') before arriving at the mineral kingdom. In the section dedicated to minerals, the specimens of metal ores (gold, silver, iron, lead, bismuth, tin, mercury, cobalt and zinc) are

followed by crystals, agates (including 'arborized and figured agates mounted on rings' to which I will return) and carnelians, first plain and then carved, followed by a host of engraved stones and shells, some mounted as jewellery. This section on minerals closes by moving away from jewellery first to '*fossilles et pétrifications*', what we would today term simply fossils, which constituted a popular subject for collection, and finally to marbles, alabasters and amber. After this, the catalogue passes on to sculptures in a variety of materials, and medals. Near the end, and in among the various artworks, stones make another appearance along with shells, but this time it is a question of specimens that have been painted by hand: 'pictures painted on lapis, agate, jasper and others, where the artist has married his subject with the accidental colours found in the stone'.[9] The catalogue's author had been greatly helped in compiling the lots by the fact that each of Madame Dubois-Jourdain's specimens was individually labelled, and so we can assume that the descriptions are largely her own. We will return to the question of the order in the mineral collection in what follows. Here I just want to conclude this brief overview with a few general remarks.

First, Madame Dubois-Jourdain's cabinet is quite diverse in terms of its contents. Although it is largely a natural history cabinet, it also includes a lot of jewellery and paintings. Second, even just considering the natural history specimens, the cabinet abounds in interesting and attractive items, and is clearly not a dry scientific collection of the type we would expect to find in a twentieth-century university faculty of science. I will be exploring some specific aspects of the aesthetic prerogatives of Mme Dubois-Jourdain's selection of minerals later, but first I want to address another set of questions: who was Madame Dubois-Jourdain, and how did she come to have this collection?

Madame Dubois-Jourdain was the widow of a well-known collector and courtier, who, according to Rémy's brief biography, first developed his interest in natural history during his visits to suppliers of historical items:

> His fortune gave him the ability to indulge his tastes: the one to which he would initially commit himself was history, but, little satisfied with knowing historical facts, in particular those from ancient history that were the most familiar to him, he wanted to have them present in the form of anything that could summon them up before his eyes…
>
> While searching at the dealer's premises for those things that had something to do with history he came across natural history items: these pleased him as they also pleased Madame Dubois Jourdain, and in a very short time her taste [for natural history] became very intense.[10]

This development seems perfectly in accord with the spirit of contemporary empiricist philosophy, with a desire for sensorial satisfaction leading M. Dubois-Jourdain from historical facts to historical artefacts and from there to naturalia. Indeed this move within bourgeois collections away from antiquities and towards natural history specimens was a feature of Enlightenment culture that has already been documented by Krzyzstof Pomian.[11] We should note in passing that it was quite possible to combine historical and natural historical interest in the same specimens, as is illustrated by the series of portraits of Roman emperors carved in bas-relief on a dozen white agates that are listed in the catalogue for the Dubois-Jourdain collection. What also seems quite unexceptional in this story is that this newly acquired taste for naturalia was shared by Dubois-Jourdain's wife, and later widow. No doubt less common is the enthusiasm with which she pursued this interest, which led her into the burgeoning world of Enlightenment science. Rémy says of Madame Dubois-Jourdain: 'She wished to form a Cabinet knowledgeably: to this end, she made a serious study of what is generally regarded as simply an amusement. This ardent zeal to learn drove her successively to follow different courses of physics, chemistry and natural history.'[12] Like the notorious Philaminte and Bélise of Molière's *Les Femmes savantes*, Madame Dubois-Jourdain attended courses that were mainly intended for a male audience. Indeed, the presence of women at chemistry and experimental physics lectures was often remarked upon in contemporary descriptions, which shows that the phenomenon, while being relatively widespread, was still not readily accepted. Something else we need to consider is that women like Madame Dubois-Jourdain, who sought scientific knowledge to further their projects of self-improvement, were thereby contributing to a burgeoning eighteenth-century economy of scientific education. Furthermore, by taking a course in mineralogy, for example, she would be indirectly linking her own collection with someone else's, as any such course turned around an exemplary teaching collection.

Collections, teaching and classification

The royal (and later national) collection at the Jardin des plantes (which became the Muséum d'histoire naturelle in 1793) was considered an essential resource for the annual lectures in mineralogy that were offered by the professor of mineralogy (a post held by Daubenton until his death in 1800) as a condition of his appointment. Beyond the walls of the Jardin des plantes, however, others such as Valmont de Bomare and Balthazar Sage made their living teaching mineralogy based on their own private

collections. Indeed, each was to make his fortune (however temporarily) in different ways by means of his collection. In 1788, Valmont de Bomare sold his own collection to the Prince de Condé, who incorporated it into one of the largest natural history cabinets in France. This whole cabinet would be confiscated by the nation a year later, when the prince fled the revolution to lead the Monarchist 'Army of Koblenz' in exile. Subsequently, the cabinet was transported at great expense from the prince's former chateau at Chantilly to Paris, to form part of the collection at the Jardin des plantes. Before selling his own collection, however, Valmont de Bomare had already been working for the prince as an adviser on his cabinet, as well as offering courses in Paris. Sage, who was himself ruined by the revolution, donated his personal cabinet to form the basis of the teaching collection at the new Ecole des Mines in return for a lifetime annuity and his appointment as the school's director.

If a collection, whether private or institutional, was to be used for teaching, its systematic order assumed much more importance, as the teaching was almost invariably structured around a taxonomic system. Valmont de Bomare claimed to have drawn up his 1758 *Catalogue du cabinet d'histoire naturelle* in response to public demand, to make it easier to follow his natural history course, and so here we can see the nature of his course. Reflecting an interest in the economic aspects of natural history, he started his classification of the mineral kingdom with a presentation of the class of water, and its different species (rain, river, lake, well, spring and so on). Water was followed by the more standard mineralogical classes of earths, sands, clays and so forth. It is reasonable to suppose that the collection was arranged according to this order. Nevertheless, while this might be true in terms of its overall pattern, the detailed distribution of items was, as I shall show, likely to have been less systematic.

In principle, although not necessarily in practice, the mineral kingdom, like the vegetable and animal kingdoms, was ordered by collectors according to one of the systematic classifications that proliferated around this time. Nevertheless, despite the relatively large number of mineral classifications elaborated in the course of the eighteenth century, most shared the same general outlines. As in the other two spheres of natural history, botany and zoology, mineral classification focused on the species as a taxonomic unit, and, despite a certain amount of disagreement over whether such species existed in nature or were the creation of the taxonomist, there was a wide consensus over most species. The question of the ontological status of such species (natural and real or artificial and imposed) was compounded in mineralogy by a number of problems specific to the mineral kingdom. First, although certain minerals like

diamonds and rock crystal might assume specific crystalline forms, or exhibit characteristic physical properties (such as colour or friability) this was not always the case. Where the outward appearance or immediately accessible properties of a mineral did not allow unambiguous identification, eighteenth-century mineralogists increasingly resorted to simple, although effective, means of chemical analysis to determine the more 'essential' chemical constitution of the specimen. Second, even if different species were identified, it was quite possible that one could fade seamlessly into another within a single geological formation. Thus, one rock sample, for example, could contain well-characterized neighbouring species and everything in between: a phenomenon that had no parallel in the animal and vegetable kingdoms, where individuals are generally much easier to distinguish from each other, particularly individuals of different species. These kinds of problems led some mineralogists to question the existence of species in the mineral kingdom, even if they believed in their reality in the other kingdoms. Perhaps the most influential of these sceptics was Daubenton, although he denied minerals the status of species on somewhat more technical taxonomic grounds. For him, species could not be characterized on the basis of the properties of a single individual, but required the observation of consistent replication over successive generations of reproduction, a criterion that minerals clearly could not fulfil. Finally, while there was an implicit distinction between what we would now term rocks (heterogeneous, non-crystalline) and what we would call minerals (largely homogeneous with well-defined form), eighteenth-century mineralogical taxonomies aimed at classifying the whole of the mineral kingdom indiscriminately, even including artificial productions from the chemical laboratory, which only added to the difficulty facing mineral taxonomists.

While there was general consensus among taxonomists concerning the status of species as 'natural' groupings of individuals (independently of whether the taxon was natural or not), the issue was considerably more controversial when it came to higher taxa that gathered species together into successively larger groups: genus, order and class. Thus, the taxonomist picked out certain criteria to group species together into genera, genera into orders, and orders into a few classes, but critics could readily launch accusations of artificiality aimed at each successive taxonomic level. The highest taxon that grouped the classes into kingdoms (animal, vegetable and mineral) enjoyed perhaps the widest agreement of all among naturalists, although there were always elements at the frontier, such as coral and to a lesser degree fossils, which could be placed equally plausibly in one or another of the kingdoms. Indeed Buffon's idea that

crystal form was imprinted on non-living matter by contact with living 'molecules' offered a further challenge to the strict division between animal, vegetable and mineral.

The most important taxonomic issue was, therefore, that of the choice of criteria used to group individuals together into species, species into genera, genera into orders and so on. For animals and plants, the favoured criteria were those of external appearance, such as Linnaeus's widely practised sexual system for the classification of plants that identified and grouped species according to the number and conformation of their sexual organs. Nevertheless, there were also those mineralogists who sought hidden criteria that could not necessarily be deduced just by looking at the specimen, particularly in mineralogy. For those who believed that mineral species were determined by their chemical composition, the key to taxonomy was chemical analysis, although for practical reasons it was important to be able to rely on external appearance as an indicator of chemical content. Indeed, some mineralogists developed classificatory systems based purely on the outward appearance of minerals, such as Daubenton and, more famously, Abram Gottlob Werner. Nevertheless, such systems were exceptions in the taxonomic landscape and Werner himself admitted that the system based on external properties was just a practical device for fieldwork, and that he regarded the system based on chemical constitution as superior. Here, I want to present Wallerius's system in a little detail. This was a much more typical system than Daubenton's or Werner's and was based on a combination of chemical properties and superficial appearance. This example is meant to illustrate in broad terms what a mineralogical taxonomic system entailed. It is not, however, an entirely arbitrary choice, as Wallerius's system was often cited by Parisian collectors as the one they chose to organize their specimens. Furthermore, as we shall see in the discussion of Dubois-Jourdain's agates, it was a system that took account of certain interests that collectors might have, which would not today be considered strictly mineralogical.

Wallerius divided minerals into four major classes; earths, stones, minerals and concretions, adding a fifth minor class covering 'mineral preparations' (comprising the artificial products of chemical manipulation). The four main classes (a quite typical division) were each composed of four orders that were in turn divided into four genera to lend symmetry to the arrangement. As an example that will be useful in what follows, I will develop one particular branch of this taxonomy, the one leading to 'marble'. Thus, the stones were divided into the orders of calcareous, vitrifiable, refractory and composite stones (or rocks), and the order of

calcareous stones into the genera of chalk stones, marbles, gypsum and spars. The genera were in turn divided into species that, as with similar systems for living organisms, formed the bedrock of the classification system. As I explained above, natural historians generally acknowledged the primacy of species in any classificatory system, as these were considered to be the elementary groupings of individuals offered up by nature. Therefore, it is unsurprising that Wallerius's simple symmetry of fourfold division should break down at the level of the species. The number of species per genus varies depending on the order in question, as is also the case with the varieties (*formes*) that are specified within each species. Within the calcareous stones there are three species of chalk, three of marble, nine of gypsum and nine of spars. At every level the distinctions between different groupings or taxa are drawn using a variety of criteria, some that are limited to the outward appearance of the material, while others concern its chemical constitution or at least its response to chemical agents. Nevertheless, even when the criterion for classification is chemical in nature, it is usually assumed that the mineralogist should be able to use the appearance of the variety in question to deduce its 'essential' chemical nature.

The attraction of agates

Having given some idea of what a formal system of classification looks like, I now want to return to Madame Dubois-Jourdain's mineral collection to look at the issues it raises in terms of systematic order. Without any explicit claim of allegiance to a particular system, it is always difficult to determine which taxonomy was being applied, although the fact that what were generally regarded as varieties of species were grouped together (the metals, gold, silver, iron, lead and so on) suggests that a mineralogical system of some kind was being used. Nevertheless, rather than pushing the issue of which system was in use any further, I propose turning the question around and asking what lessons can be drawn with respect to taxonomic systems from the contents of the collection. From this perspective, one thing that is particularly striking about the catalogue is the large number of agates that Madame Dubois-Jourdain had in her collection. Excluding those that were specifically destined for making boxes or had been painted or etched, there are some four hundred listed in the catalogue. The author often grouped twenty or thirty such stones together, and it is difficult to know whether these groups of stones had been treated by Madame Dubois-Jourdain as specimens in the collection or kept apart as items for jewellery. Thus, for example, lot 789 (which I have not counted

in the four hundred) is described as 'seventy four samples of agate, almost all cut to be mounted as buttons'. It is not clear from this description whether these stones had been labelled and displayed as part of the mineral collection or were simply being sold off with the other agates for convenience. Whether she displayed them as minerals or kept them for jewellery, however, what is clear is that Madame Dubois-Jourdain had a passion for agates, a penchant that was far from exceptional among eighteenth-century mineral collectors.[13]

Wallerius seems to have been aware of this interest in agates and made allowance for it in his classification. While he is of the opinion that 'agates' really constitute only one single species, Wallerius nevertheless treats it as an exceptional item, generating a series of rather artificial ramifications within this single taxon. Thus, the species receives two major subdivisions – variegated or striped agates (*panachées ou rayées*), and figured agates (*figurées*) – that reflect the stone's appearance but not any essential chemical composition. Furthermore, the various sub-taxa within the figured agates, like the arborized agate and the zoomorphite agate, are distinguished according to the pictorial representation one can make out in the stone under consideration: 'when one sees the representation of a hare's head, one calls this agate *lagites*, and if one sees a woodpigeon in it, one calls it *phasachates*'.[14] At the end of this section, however, Wallerius expresses his reservations about this multiplication of varieties of agate, saying he is only characterizing the various types because collectors are liable to come across the associated names. This implicit criticism of a lack of taxonomic discipline does not, however, prevent Wallerius from offering helpful advice for those interested in painting on agates, as well as two methods for distinguishing between natural and artificial representations on such stones. The discomfort of this particular classifier reflects his situation, caught between the exigencies of rigorous (chemically oriented) mineral taxonomy and the practical demands of the private collectors who constituted his principal audience.

Although auction catalogues are by far the most common source of information on private collections from this period, they should nevertheless be treated with caution. One particularly relevant problem is that these catalogues could be rendered systematic in response to an expectation among the collecting public. Although Rémy denies that this was the case for the Dubois-Jourdain collection, Jean-Baptiste Glomy testifies to the practice in his presentation of a cabinet owned by M. Picard, an interesting collector who put together an impressive and very diverse collection on a limited budget. This was far from being exclusively a mineralogical

or even a natural history cabinet, as we can see from the full title of the catalogue in question: 'A catalogue raisonné of Egyptian, Etruscan, Greek, Roman, Gallic and Gothic antiquities, antique, modern and foreign Medals and Coins in gold, silver and bronze; ancient and primitive arms, agate vases from the Orient and from Germany, and Jade worked in India. Some paintings, drawings and prints. Diverse pieces of natural history from the three kingdoms, mineral, vegetable & animal; & other curiosities.' This is what Glomy had to say about the order in which the items were presented in the catalogue:

> No doubt you will *not* find the order I have observed here standard enough, but I offer as my excuse the extent and obscurity of the place wherein all these curiosities were shut up. This meant that I often came across objects that should have been placed in a different class from the one in which I placed them; but to do so would have meant reworking parts of what had already been done.[15]

According to this auctioneer, then, pressure from the public has forced him to adopt a strict order that does not accurately represent the way in which the specimens were arranged in the collection itself. Indeed, while minerals might have composed only a minor part of M. Picard's collection, the point is relevant across the board; for painting and statuary just as much as for natural history. Thus, while we obviously cannot discount what such auction catalogues do tell us – and they remain an irreplaceable source of information concerning these collections – we cannot assume that the order that we find in them is representative of an order that reigned in the collections themselves.

Order and disorder

I want now to turn to an example of the rare complete inventories of collections that constituted parts of wills or documents relating to contested inheritance. These provide a much more accurate image of what I want to term the exception-filled systematic order typical of such private collections. The illustration I will be using here is that of Jean-Baptiste-François Gigot d'Orcy's collection. He was a wealthy amateur naturalist who, although he specialized in insects, particularly butterflies,[16] also had a large mineral collection, partly constituted as a consequence of his position as a mining inspector. Gigot d'Orcy later changed career to become Receveur général des Finances de la généralité de Châlons and, thanks to his considerable income, was able to patronize a number of lavish

publishing ventures relating to natural history, some of which were continued after his death in 1793.[17] The death of this notable officer of the French state during the early days of the terror has led to a certain amount of confusion. Most of his biographers claim that Gigot d'Orcy was guillotined as an enemy of the Republic. However, his collection was not confiscated as it should have been were this the case, and his name does not appear in the lists of victims of the terror published in the nineteenth century. Nevertheless, what is less open to doubt is that Gigot d'Orcy's whole natural history cabinet was inventoried after his death in order to determine its value.[18]

The inventory, with estimates for each group of items, was carried out by a certain M. Monnier in the company of another naturalist. Together they moved through the rooms that contained the collection, noting each item, or group of items, and estimating their value in turn. From the resulting list, we get a much clearer picture of the actual arrangement of a collector's cabinet than we do from an auction catalogue. Thus, for example, we know that in line with recommendations from a number of specialists, Gigot d'Orcy had dedicated a whole room to the mineral kingdom, and the disposition of this room well illustrates the content and the limits of systematic order in such collections. First of all, as in the case of the Dubois-Jourdain catalogue, it is difficult if not impossible to identify what system Gigot d'Orcy was deploying. Although metals, once again, were clearly grouped according to species, other considerations besides the chosen system came into play in arranging the various cabinets, particularly in terms of what was on display or ready to hand. These ancillary factors ranged from mundane considerations such as the size of the specimens – it is not altogether surprising to learn that large pieces were generally placed either on the floor or on top of cabinets – to the much more intriguing sublime aesthetic appeal of certain items that were of little systematic interest.

The room was furnished with five large display cabinets, the drawers of which were mostly filled with specimens. One surprising feature of this room dedicated to the mineral kingdom is that one finds many strangers to the kingdom, particularly among the items used to embellish the furniture or otherwise visible. Thus, on one cabinet, we find two painted ostrich eggs, as well as jars and cages containing 'insects, reptiles, foetuses and a worm'. That these items were to be found in the room dedicated to the mineral kingdom already shows us that Gigot d'Orcy did not strictly enforce a systematic delimitation of his specimens. Nevertheless, it is not so much the intrusion of these objects from outside the mineral kingdom that is significant, as the criteria for what was put on display.

Again and again systematic order was ignored when it came to the visible part of the collection. While the drawers or 'shelves' contained ordered groups of specimens all belonging to the same species, the doors and windows were draped with whatever was eye-catching, with agates and arborizations featuring prominently among these. Thus, the well-ordered part of the collection was hidden from the casual visitor's view until he or she opened the drawers, and what remained in plain view was an unmethodical selection, clearly based on the items' aesthetic qualities rather than any systematic relevance.

There are several types of minerals that were sought after by collectors not for their representative status as mineral species but for their attractive appearance. The ones with which we are most familiar today are gemstones, which were popular items in a mineral collection both in their raw and cut forms. Indeed, they were often still included in the mineral cabinet even when they had already been mounted as jewellery. Nevertheless, there were other sorts of minerals that were of particular interest and value to collectors, despite being of limited systematic interest. We have already seen the case of Madame Dubois-Jourdain's agates, but here I want to consider two other types of stone that are less prized by today's professional mineralogists, although they were very popular in the eighteenth century. These are dendrites in general and a particular form of variegated stone known as Florentine marbles.[19] Dendrites (or arborizations) are relatively common formations in which a foreign substance (usually a metal ore) infiltrates a mineral to give ramifying patterns that often look like the outlines of trees or shrubs (Figures 6.1 and 6.2). Although such dendrites can occur in a wide range of minerals, they show up particularly well in agates and calcareous stones. The pictorial nature of these dendrites apparently made certain exceptional specimens very valuable indeed. Thus, for example, in the sale of a collection in 1764, what was described as a 'very beautiful agate, almost round, on which one sees quite distinctly two trees and a slight terrace; this stone is surrounded by a ring of gold and is oriental'[20] fetched 420 livres, a price comparable to those fetched by gemstones rather than the other agates.

Florentine marbles were another example of such mineral specimens distinguished by their 'pictorial' beauty. These formations consisted of two different colours of stone combining to give regular patterns, usually taken to depict the silhouettes of antique ruins (Figures 6.3 and 6.4). Marbles in general were usually well-represented in collections because of their variety and their use in building and decoration. Nevertheless, these Florentine marbles formed a group apart. It is interesting to note that Wallerius actually defined a separate species of 'figured marble' precisely

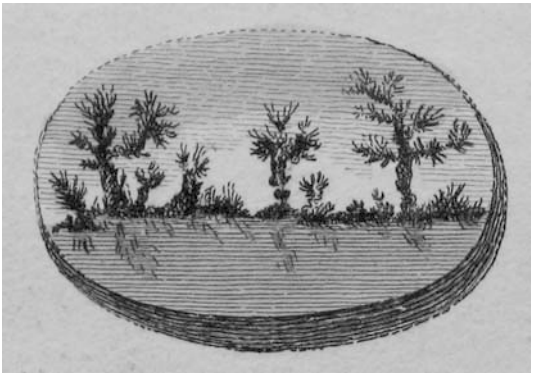


Figure 6.1 'Dendrite representing a lake bordered by several trees'

From Buc'hoz (editor), *Première Centurie de planches enluminées et non enluminées representant au naturel ce qui se trouve de plus intéressant et de plus curieux parmi les animaux, les végétaux et les minéraux* (Paris, 1778), Vol. 1, decade 9, plate 2, figure 8, from the collection of Dezallier d'Argenville. (Reproduced with the permission of the Bibliothèque des Sciences et Techniques du Service Commun de Documentation de l'Université Louis Pasteur, Strasbourg.)

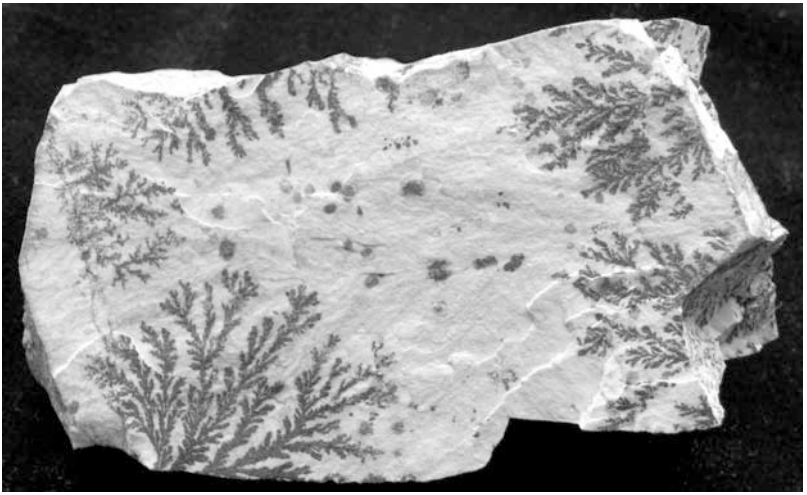


Figure 6.2 Dendrite on limestone base from the Island of Elba

Specimen from the collections of the Musée de Minéralogie, Ecole et Observatoire des Sciences de la Terre, Université Louis Pasteur, Strasbourg

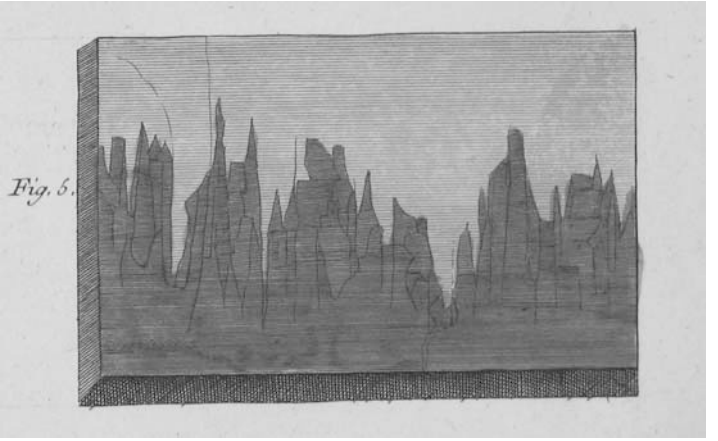


Figure 6.3 'Florentine marble'

From Buc'hoz (editor), *Première Centurie de planches enluminées*, decade 3, plate 1, figure 5, from the collection of Dezallier d'Argenville. (Reproduced with the permission of the Bibliothèque des Sciences et Techniques du Service Commun de Documentation de l'Université Louis Pasteur, Strasbourg.)

to contain these 'pictorial formations'. He was, however, exceptional in this, as most other mineralogists took marble to constitute a single species. These figurative marbles, like the agates and the range of dendrites that abounded in these private collections, threatened to distort the physical realization of a classificatory system by virtue of their over-representation. The ideal was to have one specimen per species (or variety), which might be multiplied for geographical reasons to give suites of the same species from different locations. As their name suggests, however, Florentine marbles were not collected for the diversity of their geographical origin, but simply for the appeal and variety of their appearance.

It should of course be noted that aesthetic considerations did not necessarily have to work against the systematic imperative. Indeed, the choice of exemplary specimens of any species was in large part dictated by taste. Nevertheless, the temptation of the aesthetic always had the potential to lead collectors away from the methodical exigencies of collecting. Furthermore, good taste was, as I have already suggested, a criterion that both preceded and subsumed system. Thus, it is easy to find collectors like M. Boucher who chose the items in his art and natural history collection strictly according to his own aesthetic values, selecting 'all that was pleasing to the eye'. According to Pierre Rémy, who drew up his auction catalogue, this collector was guided entirely by visual aesthetics:

Figure 6.4 'Florentine marble'

Specimen from the collections of the Muséum National d'Histoire Naturelle, Paris

> anything pleasing to the eye became an object for his quest, and he wanted no other. Rarity without charm held no attraction for him: nor was he concerned about making suites of collections; from each sort of thing he chose only those that pleased him, whether by their form or their colour.[21]

So, while the exercise of taste and the implementation of a system are not necessarily at odds, the threat was ever present that a pursuit of the aesthetic would push systematic considerations aside, particularly by over-representing certain species within a collection. As I have already suggested, this was a common problem for amateurs of agates, but there were also amateurs of marble: the sale of Madame de Bure's collection in 1764 included a remarkable 272 specimens of marble from mines in Italy, Flanders and France.[22]

In retrospect, it is easy to identify a tension between the austerity of scientific collections arranged strictly according to systematic classification and the frivolous inclusion of pieces whose aesthetic appeal compensated for a lack of taxonomic interest, such as jade boxes, arborizations and Florentine marbles. I would argue that such a tension was not perceptible before the French Revolution: the specimens chosen on the grounds of their appearance alone were considered just as much legitimate members of a mineral collection as those chosen to be the single representative of a particular mineral species or variety. The tension between what were perceived as different values became clear in France at the turn of the century, and had much to do with the French Revolution. This event dramatically shifted the balance between public and private collecting in France, enabling the instauration of a new scientific aesthetic of mineralogical collecting and collections.

Revolution

So what happened to these private natural history cabinets during the French Revolution? The first and most evident effect of the revolution was the confiscation of the collections belonging to many aristocrats, as well as those held at various monasteries and convents around Paris. Several prominent collectors, such as the Comte de Bournon, Prince de Condé and Philippe-Egalité (formerly the Duke of Orléans) were either executed or driven to emigrate, and their lavish natural history cabinets were automatically integrated into the already substantial national holdings. At the same time, the transformation of the Parisian institution that housed the royal collection – the Jardin des plantes – into the Muséum national d'histoire naturelle provided a clear focus for Republican science, directed by an ideology (or at least a rhetoric) turned toward austerity, equality and education rather than distinction, taste and luxury.[23] In keeping with these ideals, the curators at the Muséum, including the now aged Daubenton, who was succeeded at the beginning

of the nineteenth century by René-Just Haüy (the founder of modern crystallography), aimed to keep its mineral gallery systematic and free from unnecessary items that might clutter up the scientific collection. Already in 1784, before the institutional changes that followed the Revolution, Daubenton had proposed that in an ideal collection there should be a few well-chosen specimens to illustrate each species. Methodical exposition would render the natural history cabinet legible even to an uninitiated public:

> We need to separate out not only the kingdoms of nature, but also the orders, the classes and the genera; and to successively present one individual from each species, or the principal varieties of each sort. In this way, even the largest collection of natural productions becomes a methodical series. The vastest Natural History cabinet is an open book, of which one should only ever have one page at a time before one's eyes.[24]

Daubenton, curator of the mineral collection at the Jardin des plantes, and Buffon's right-hand man, did not, as I explained above, accept that there were species of minerals; but replacing the term 'species' with Daubenton's own preferred term 'sort',[25] we can see that he would not have tolerated the excessive multiplication of marbles, for example. Indeed, he regarded marble as a single genus consisting of six 'sorts' defined by their respective colours (white, grey, green, yellow, red, black), with the varieties composed of the various possible combinations of these colours (uniform in colour, two colours, three colours and so on). Thus, Florentine marbles as a combination of two colours constituted a single variety, requiring in principle only a single illustrative specimen. Similarly, agates were one 'sort' with eight varieties (*nuées*, *ponctuées*, *tachées*, *veinées*, *onix*, *irisées*, *herborisées*, *mousseuses*), and here dendrites or 'herborizations' counted as only one variety. In general, dendrites were considered at best a single variety of the mineral in which the impurity forming the dendritic structure was found. Thus, the multiplication of dendritic agates or Florentine marbles found in so many private collections worked against the ideal presentation of a system as Daubenton theorized it: what was needed was a single specimen that would accurately reflect the place of these stones in the mineralogical classification.

Dendrites and Florentine marbles did, however, have a redeeming feature in Daubenton's eyes. The attractive appearance of these minerals that made them appealing to children (and, presumably, also to unenlightened

adults) could provide natural history teachers in schools with a useful pretext for explaining the mechanics of rock formation:

> When a pupil sees a stone from Florence, which is a sort of marble, he will be very surprised to perceive figures of bell towers, of chimneys, and of ruined and burned buildings: for it appears as though the flames are coming out of the chimneys and the rubble of the buildings. The pupil will ask what is the cause of all these figures. The professor would be giving an unsatisfactory response if he said the marble of Florence is a figured stone, and that the representations that he sees on it come about by chance, as one has always said.[26]

Daubenton suggests instead a modern petrological explanation of the phenomenon, which the teacher can use to turn childish curiosity into a source of mature scientific knowledge. Indeed, this example represents the new ethic of Republican collecting quite nicely, resting as it did on the twin virtues of utility and austerity. The first of these virtues demanded that collections be primarily used for education, and the second meant turning one's back on the frivolous and luxurious. Aesthetics and financial value needed to be subordinated to pedagogical utility, and so the systematic disposition of a collection could only gain in importance. Furthermore, the curatorial decisions made for the national collection at the Muséum national d'histoire naturelle would serve as a model for all serious mineralogical collections around France in the nineteenth century. It was all the more important to consolidate the Republican value of the national collection at a time when some critics were taking advantage of the freedom offered by the Revolution in order to launch barbed attacks against it. Sage, for example, complained that, although the minerals at the Jardin de plantes constituted a collection of outstanding specimens, they had never been assayed, and 'the public is only permitted to see them for a few hours twice a week, as curiosities'.[27]

But it was private collections rather than the national one that constituted the true ideological target of revolutionary criticism, as we can see in the citation with which I opened this chapter, or the following one from the newly founded *Journal de mines*:

> The possession of something unique could formerly be a source of personal pleasure and pride, but the only glory to which a Republican can aspire is to provide pleasure to his brothers.[28]

Thus, the inadequacy of the specimens found in private collections was simply a reflection of the un-Republican spirit in which they had been

put together in the first place. The spirit of fraternity was best expressed in the desire to educate one's fellow citizens, and the Republican mission of education came to dominate the discourse about collections, presupposing a form of public access incompatible with the eighteenth-century tradition of personal collections. This did not mean, of course, that the public collections were themselves readily accessible to all citizens, but access was not – in principle at least – restricted according to private personal interests. Thus, the large-scale projects for the confiscated collections often involved compiling economically useful collections that could be sent on tour to teach French citizens about the mineralogical potential of their own localities. To provide a functional educational tool, these model collections would, therefore, be stripped of the frivolous. In this austere Republican climate, it is clear that system would take precedence over beauty.

One finds the condemnation of luxurious specimens everywhere in the period of the Revolution, although the extent to which the new ideal passed beyond 'politically correct' rhetoric and was put into practice is hard to judge. Furthermore, not all private collections were condemned out of hand, as is suggested by the quote at the beginning of the chapter, which is taken from a report by the commission charged with evaluating collections confiscated from aristocratic enemies of the Republic. It is perhaps ironic that this same commission judged Gigot d'Orcy's mineral collection to be particularly well-suited to the kind of educational project I just described, principally because of its samples of ores from different mines around France, and yet in the end it was the only part of his cabinet that was not purchased by the nation. Nevertheless, in 1802, the state did arrange an emblematic exchange with a German collector, disposing of many of its gemstones and some of its gold. In return, France received some two thousand mineral specimens, including many complete suites of minerals. No doubt this enterprising collector realized a handsome profit from the Republic's wish to convert the aesthetic into the functional, but the principal issue for the state was, as I have explained, no longer the financial value of the specimens.

Thus, I want to suggest that the French Revolution served to fix the boundaries of collecting more tightly, helping to align this practice with increasingly well-defined systems of classification. Of course, this change was not entirely due to political and social reform in France, but also depended on the changing nature of mineral classification and an increasing consensus over the ideal basis for such systems. Improved chemical analysis, allied with the rise of Lavoisier's pragmatic definition of

elements and his analytically oriented 'new chemistry', was one key factor in the rise of chemical-based systems, as more and more chemists came to agree about the essential chemical nature of the minerals in question. Crystallography was also establishing itself as an important taxonomic force at the end of the eighteenth and beginning of the nineteenth century, following the foundational work of Romé de l'Isle and Haüy on the stability and characteristic nature of crystal forms. Thus, this new science of crystallography would lend stability and scientific rigour to mineral classifications in the decades that followed. Nor should we forget the influence of the science of geology introduced in the nineteenth century, which increasingly interpreted minerals as clues to the deep history of the changing conformation of the landscape, rather than simply as individual instantiations of chemical species.[29]

The overall effect of these developments was that the nineteenth century would see a handful of systems, based on criteria both of chemical composition and of crystal form, come to dominate the organization of the major public collections. A private mineral collection with pretensions to scientific respectability would be obliged to follow suit. Thus, the French Revolution, traditionally associated with the reign of disorder and the dissolution of long-standing social hierarchies, actually served to unify the meaning and application of order in natural history collections, mineral collections in particular. One element of this history that deserves to be emphasized, however, is that eighteenth-century collections were considerably less orderly than the standard image of enlightenment culture would suggest. Furthermore, the world of private mineral collections was multiple and decentralized, intersecting intermittently with the rising specialist sciences and their more or less rigorous taxonomies, without these disparate elements ever forming any kind of integrated system. In retrospect, what we might see as an uncomfortable mix of taxonomic rigour with frivolous aesthetic indulgence was simply a feature of the diverse and varied world of collections that was an essential constituent of eighteenth-century mineralogy. One might be tempted to interpret this situation as an illustration of the immaturity of the natural sciences in the eighteenth century, wallowing in a sort of pre-paradigmatic confusion.[30] I would prefer to adopt a different approach and, taking this heterogeneity as a standard for scientific knowledge, use it as a basis for reflecting on our own methodologies. Just because our present-day sciences are ordered according to nineteenth-century standards of rigour means neither that science was always like that nor that this is the only legitimate form that science can take.

Notes

1. Archives Nationales, Paris, F17-1238.
2. The work that has made the argument for the essentially taxonomic nature of eighteenth-century natural history common currency is M. Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1973). See in particular Chapter 5, 'Classifying'.
3. For more on Linnaeus, see L. Koerner, *Linneaus: Nature and Nation* (Cambridge, MA: Harvard University Press, 1999).
4. G. V. Sutton, *Science for a Polite Society: Gender, Culture, and the Demonstration of Enlightenment* (Boulder, CO: Westview Press, 1995).
5. For more on this subject, see T. Broman, 'The Habermasian Public Sphere and Science in the Enlightenment', *History of Science*, 36 (1998), pp. 123–49.
6. D. Diderot and J. D'Alembert (eds) *Encyclopédie* (Paris: Panckoucke, 1751–65), Vol. II, p. 488. 'Pour former un *cabinet d'Histoire naturelle,* il ne suffit pas de rassembler sans choix, & d'entasser sans ordre & sans goût, tous les objets d'Histoire naturelle que l'on rencontre; il faut savoir distinguer ce qui mérite d'être gardé de ce qu'il faut rejetter, & donner à chaque chose un arrangement convenable. L'ordre d'un *cabinet* ne peut être celui de la nature; la nature affecte par-tout un desordre sublime.'
7. In her article on the representation of shells in the eighteenth century, Emma Spary has made a similar argument concerning the practices of 'scientific' representation: E. Spary, 'Scientific Symmetries', *History of Science*, 62 (2004); pp. 1–46.
8. This sum backs up Rémy's assessment of the collection as one of the finest that he had ever put up for sale.
9. P. Rémy, *Catalogue raisonné des curiosités qui composoient le cabinet de feu Mme Dubois-Jourdain* (Paris: Didot, 1766), p. xi: 'des Tableaux peints sur Lapis, Agates, Jaspes & autres, où l'Artiste a marié la couleur des accidents de la pierre avec son sujet'.
10. Ibid., pp. v–vi: 'Sa fortune le mettoit à portée de satisfaire ses gouts: celui auquel il se livra d'abord, fut celui de l'Histoire; mais peu content de savoir les faits historiques, surtout les anciens, qui lui étoient familiers, il aimoit à les voir comme présens dans tout ce qui pouvoit les retracer aux yeux … En cherchant ce qui pouvoit avoir trait à l'Histoire, il rencontra chez les Marchands, les objets d'Histoire Naturelle: ces objets lui plûrent; ils plûrent aussi à Madame Dubois Jourdain, en très peu de tems son gout devint très vif.'
11. K. Pomian, *Collectionneurs, amateurs et curieux: Paris, Venise: XVIe–XVIIIe siècle* (Paris: Gallimard, 1987). In particular, 'Medailles/Coquilles = Erudition/ Philosophie', pp. 143–62.
12. P. Rémy, *Catalogue raisonné*, p. vi.
13. In a recent article, Robert Proctor has argued against the over-valuation of the 'ugly' monotonous diamond, and in favour of the revival of agates in all their figurative diversity. See R. Proctor, 'Anti-Agate: The Great Diamond Hoax and the Semiprecious Stone Scam', *Configurations*, 9 (2001), pp. 381–412.
14. J.-G. Wallerius, *Minéralogie ou Description générale des substances du règne minéral,* trans. d'Holbach (Paris: Hérissant et Durand, 1759), p. 168.
15. J.-B. Glomy, *Catalogue raisonné d'antiquités égyptiennes, etrusques, grecques, romaines, gauloises, et gothiques …* (Paris: Mérigot, 1779), p. vii: 'On ne

trouvera pas sans doute assez régulier l'ordre que j'ai observé, mais j'ai pour excuse le peu d'étendue & l'obscurité du lieu où toutes ces curiosités étoient renfermées; ce qui est cause que j'ai souvent retrouvé des objets qui demandoient à être placés dans une autre classe que celle où je les ai mis: mais il auroit fallu refondre une partie de ce que j'avois déja fait …'.

16. Between 1779 and 1793, Gigot d'Orcy published a six-volume work on butterflies, entitled *Papillons d'Europe*.
17. The most important such project was G.-A. Olivier, *Entomologie, ou Histoire naturelle des insectes avec leurs caractères génériques et spécifiques, leur description, leur synonymie et leur figure enluminée* (Paris: Baudouin, 1789–1808), which ran to eight volumes.
18. After a series of negotiations between Gigot d'Orcy's widow and the French state, the cabinet was sold and incorporated into the national collection. For some reason, the minerals were not included in this sale, and were later bought by a wealthy American officer, George Gibbs, who took them back to the USA. In 1825, he sold them to Yale University, where many of the minerals are still to be found today.
19. Good examples of these types of stone remain highly prized today, although it is rare to find them in scientific collections.
20. P. Rémy, *Catalogue raisonné des Minéraux, Cristallisations, Cailloux, Jaspes, Agates arborisées, Pierres fines; … de la Succession de M. Savalete de Buchelay* (Paris: Didot, 1764), p. 54: '362 Une très belle Agate de forme presque ronde, on y voit très distinctement deux arbres & une légère terrasse; cette pierre est entourée d'un cercle d'or, & c'est orientale.'
21. P. Rémy, *Catalogue raisonné des tableaux, desseins, estampes, bronzes, terres cuites, laques … et autres curiosités qui composent le cabinet de feu M. Boucher* (Paris: Didot, 1771) avant propos: 'enfin tout ce qui pouvoit plaire à la vue, devenoit un objet digne de ses recherches, & il n'en vouloit point d'autres. La rareté sans agrément n'avoit nul attrait pour lui: aussi ne s'attachoit-il pas à faire des collections suivies; dans chaque genre il ne choisissoit que les choses qui pouvoient plaire, ou par la forme ou par les couleurs.'
22. P. Rémy, *Catalogue d'une collection de très belles coquilles, madrepores, stalactiques, litophytes, pétrifications, cristallisations, mines, plaques & cailloux agathisés & cristallisés; Plaques d'agathes, pierres figurées très singulières, pierres fines montées & non montées, agathes arborisées, bois pétrifié, agathisié & en nature; animaux, oiseaux, bijoux & autres morceaux qui composoient le cabinet de feue Madame de B*** (Paris: Didot, 1764).
23. For more on the transformation of the Jardin des plantes into the Muséum, see E. Spary, *Utopia's Garden: French Natural History from Old Regime to Revolution* (Chicago: University of Chicago Press, 2000).
24. L.-J.-M. Daubenton, *Tableau méthodique des minéraux, suivant leurs différentes natures et avec des caractères distinctifs, apparents ou faciles à reconnoître* (Paris, 1784), p. ix: 'Il faut séparer non-seulement les règnes de la Nature, mais aussi leurs ordres, leurs classes & leurs genres; ne présenter successivement qu'un individu de chaque espèce, ou que les principales variétés de chaque sorte. De cette manière, la plus grande collection des productions de la Nature, devient une suite méthodique. Le plus vaste cabinet d'Histoire Naturelle est un livre ouvert, dont vous n'avez jamais sous les yeux qu'une page à la fois.'

25. Daubenton reasoned that the term 'species' could only be applied to living beings, as the existence of a species could only be determined thanks to the reproduction of individual members of the species and the continuity of characteristics across generations.
26. L.-J.-M. Daubenton, *Lettre du professeur d'histoire naturelle des anciennes écoles normales, à un professeur d'histoire naturelle d'une école centrale* (Paris, 1797), p. 24: 'Lorsqu'un élève verra une pierre de Florence, qui est une sorte de marbre, il sera fort surpris d'y apercevoir des figures de clochers, de cheminées, de bâtimens ruinés et incendiés: car il paroit qu'il sort des flammes des cheminées et des décombres des bâtimens. L'élève demandera quelle est la cause de toutes ces figures. Le professeur ne donneroit qu'une réponse peu satisfaisante, en disant que le marbre de Florence est une pierre figurée, et que les représentations que l'on y voit, sont dues au hasard, comme on l'a toujours dit.'
27. B.-G. Sage, *Observations sur un écrit qui a pour titre, Vues sur le Jardin Royal des Plantes et le Cabinet d'Histoire naturelle* (Paris: Baudouin, 1789), p. 8.
28. *Journal des Mines*, Vol. I, no. 1. Vendémiaire de l'an III. (Paris: du Pont), pp. 7–8; 'Posséder quelque chose d'unique pouvoit être autrefois une jouissance pour l'amour-propre; en faire jouir ses frères, est la seule gloire que puisse ambitionner un Républicain.'
29. For more on the development of this discipline, see R. Laudan, *From Mineralogy to Geology: The Foundations of a Science, 1650–1830* (Chicago: University of Chicago Press, 1987).
30. This idea of pre-paradigmatic science is to be found in T. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970).

7

The *Système figuré des connaissances humaines* and the Structure of Knowledge in the *Encyclopédie*

David Adams

If, as Horkheimer and Adorno argued many years ago, the Enlightenment as we now see it is an attempt to eliminate the mythical (in the sense of abolishing belief in the supernatural), it has conversely become a myth in its own right.[1] One essential component of this 'myth' is that the period was a monolithic 'rational' struggle against obfuscation and intellectual control, and no work is perhaps more closely associated with this interpretation than the *Encyclopédie*.[2]

The *Encyclopédie, ou Dictionnaire raisonné des Sciences, des Arts et des Métiers* (1751–80) has gradually come to be seen as the summa of Enlightenment values, beliefs and attitudes. Indeed, the vicissitudes and setbacks which attended its publication are customarily regarded as emblematic in some respects of the struggles between the new philosophical spirit emerging in France and the reactionary forces which attempted to contain and to repress it. This assessment prevails to such a degree that the work is often taken as the single most important contribution to the task which the *philosophes* set themselves: that of reforming French, and indeed European, thinking in such different spheres of intellectual activity as theology, metaphysics, politics and science.[3]

Yet, however widespread it may be, this view is not wholly accurate, for the enterprise was less self-assured and less coherent, at least in its early stages, than it endeavoured to seem. As commentators have observed in a number of recent studies,[4] the editors of the *Encyclopédie* were well aware of the practical difficulties of encompassing the totality of human knowledge within the confines of a single work, and of the artificiality of arranging the information in alphabetical order. Indeed, these problems were adumbrated as early as 1750, when Diderot

wrote in the *Prospectus* to the work that nature 'ne nous offre que des choses particulières, infinies en nombre et sans aucune division fixe & déterminée' (HV, 91).[5] D'Alembert takes up this point no less directly in the *Discours préliminaire* of 1751, where he discusses the *Système figuré des connaissances humaines*. This elaborate diagram of knowledge was drawn up by Diderot, purportedly to explain the workings of the mind (the 'Understanding') by allocating all subjects to one of three categories, Memory, Reason and Imagination, to which they allegedly belonged:

> Le système général des Sciences & des Arts est une espece de labyrinthe, de chemin tortueux, où l'esprit s'engage sans trop connoître la route qu'il doit tenir ... ce désordre tout philosophique qu'il est de la part de l'âme, défigurerait, ou plutôt anéantirait entièrement un arbre encyclopédique dans lequel on voudrait le représenter ... Il reste donc nécessairement de l'arbitraire dans la division générale. (I, xiv–xv)[6]

D'Alembert also compares the *Système figuré* to a *mappa mundi* which enables the philosopher to look down upon the whole world of knowledge, and to see the relationship between the various parts all at once. But, in pursuing the cartographic comparison, he once more voices his doubt that any particular representation of knowledge can be wholly reliable:[7]

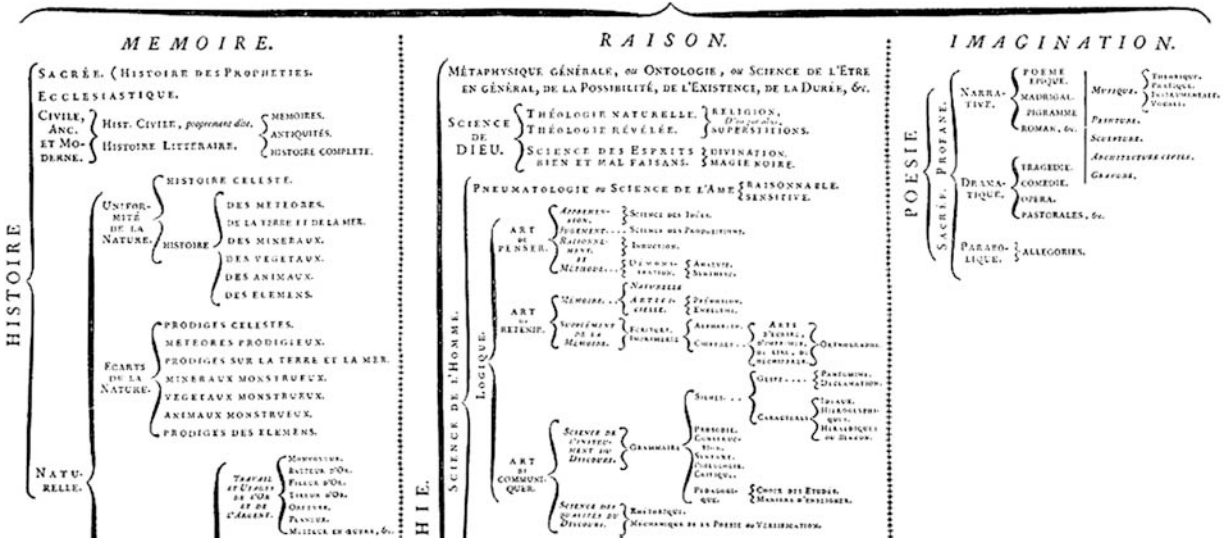
> Quoi qu'il en soit, celui de tous les arbres encyclopédiques qui offrirait le plus grand nombre de liaisons et de rapports entre les sciences, mériterait sans doute d'être préféré. Mais peut-on se flatter de le saisir? (I, xv)[8]

He thus recognized from the outset the very real disadvantages of any diagrammatic representation of nature. Implicitly and explicitly, he realized that any systematic arrangement of knowledge, such as the diagrammatic 'arbre encyclopédique' shown in the *Système figuré*[9] (see Figure 7.1), was open to the objection that it must inevitably distort and misrepresent what it encompassed.

Strangely, these serious reservations are then put aside in the *Discours préliminaire*, and d'Alembert proceeds to discuss the taxonomy of the *Encyclopédie* as if no such objections need be considered. While voicing these doubts, he repeatedly writes as though there is, after all, no difficulty

*SYSTÉME FIGURÉ
DES CONNOISSANCES HUMAINES.

ENTENDEMENT.



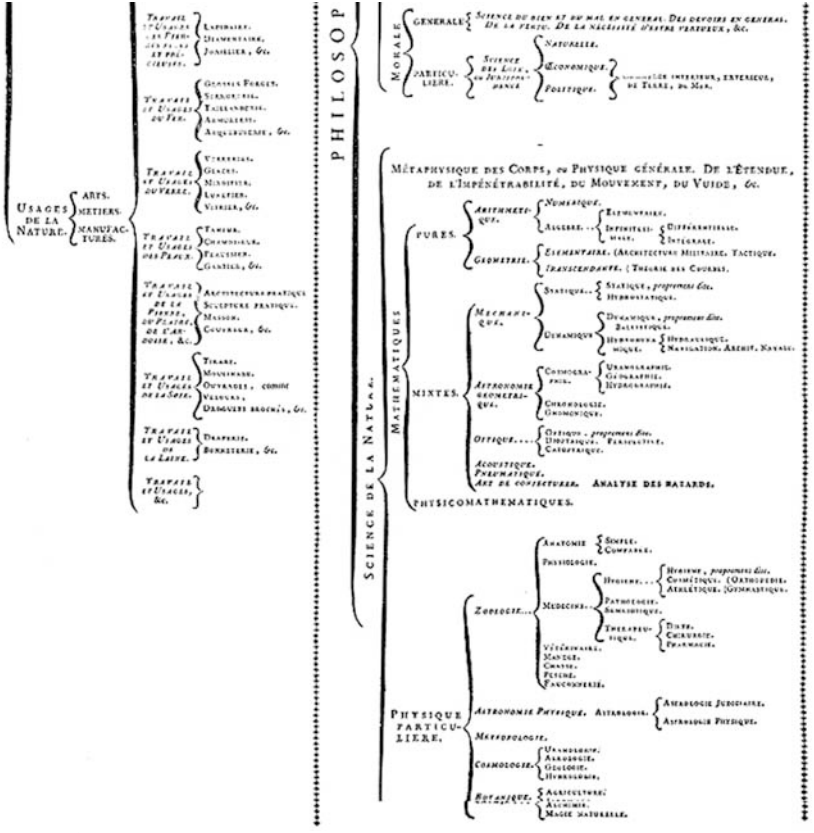


Figure 7.1 The *Système figuré des connaissances humaines*

From the *Encyclopédie* of Diderot and d'Alembert, Volume I (Paris, 1751). (Private collection.)

in explaining how the mind operates. Our ideas come via our sense-impressions:

> Toutes nos connoissances directes se réduisent à celles que nous recevons par les sens; d'où il s'ensuit que c'est à nos sensations que nous devons toutes nos idées ... Rien n'est plus incontestable que l'existence de nos sensations; ainsi pour prouver qu'elles sont le principe de toutes nos connoissances, il suffit de démontrer qu'elles peuvent l'être: car en bonne Philosophie, toute déduction qui a pour base des faits ou des vérités reconnues, est préférable à ce qui n'est appuyé que sur des hypothèses, même ingénieuses. (I, ii)[10]

There is, too, a natural order by which the mind operates:

> [l]a seule ressource qui nous reste donc dans une recherche si pénible, quoique si nécessaire, & même si agréable, c'est d'amasser le plus de faits qu'il nous est possible, de les disposer *dans l'ordre le plus naturel*. (I, vii: italics added)[11]

The art of logic, he maintains:

> enseigne à ranger les idées *dans l'ordre le plus naturel*, à en former la chaîne la plus immédiate, à décomposer celles qui en renferment un trop grand nombre de simples, à les envisager par toutes leurs faces, enfin à les présenter aux autres sous une forme qui les leur rende faciles à saisir. C'est en cela que consiste cette science du raisonnement qu'on regarde avec raison comme la clé de toutes nos connoissances. (I, ix; italics added)[12]

The general point is reiterated a few pages later:

> Si nous plaçons la raison avant l'imagination, cet ordre nous paraît bien fondé, et conforme *au progrès naturel des opérations de l'esprit*: l'imagination est une faculté créatrice; et l'esprit, avant de songer à créer, commence par raisonner sur ce qu'il voit, et ce qu'il connaît. (I, xvi; italics added)[13]

Hence, however artificial may be the divisions between one branch of nature and another, the mind itself operates in an essentially 'natural' way. Consequently, it must be assumed that some intrinsic, immanent principle of organization is inherent in it, imposing itself on our perceptions and ordering our observations. What is more, on at least two occasions, d'Alembert makes specific claims for the validity of the approach to

knowledge adopted in the *Système figuré*. First, he claims that the three faculties of Memory, Reason and Imagination on which it is built correspond to the major operations of the mind:

> Ces trois facultés forment d'abord les trois divisions générales de notre système, et les trois objets généraux des connaissances humaines; l'histoire, qui se rapporte à la mémoire; la philosophie, qui est le fruit de la raison; et les beaux-arts, que l'imagination fait naître. (I, xvi)[14]

He then refers to Diderot's *Système figuré* as a sort of analytical index showing the relationship between each one of the many subjects covered in the *Encyclopédie*:

> On a placé pour l'ordinaire après le mot qui fait le sujet de l'article, le nom de la science dont cet article fait partie; il ne faut plus que voir dans le système figuré quel rang cette science y occupe, pour connaître la place que l'article doit avoir dans l'encyclopédie. (I, xviii)[15]

From this assertion (the validity of which is open to serious doubt),[16] it would seem that there was little if any room for manoeuvre in positioning the various branches and subdivisions of knowledge set out in the diagram, and that the tree of knowledge is constructed on firm, demonstrable principles.[17] More significantly, it also suggests that, far from being a doomed attempt to encompass the entirety of human knowledge, the plan of the work as a whole had already been determined in considerable detail.[18] While articles perhaps remained to be written, their place in the overall scheme was allegedly already clear. This assertion was to prove too optimistic: the *Encyclopédie* was published, eventually, in 35 folio volumes over some thirty years, with interruptions due to the effects of censorship, and with great variations in the approach adopted by the numerous contributors. Inevitably, therefore, it was never able to be the unified and highly focused enterprise which d'Alembert's remarks suggest.

Indeed, inconsistencies can be detected even in the preliminary observations quoted above. There is nothing intrinsically inconsistent, of course, in describing the *Système* as a *mappa mundi* and as an index. But there is a great deal of inconsistency in claiming both that it may be impossible to achieve anything like reliability in such a scheme, and that it is a valid guide to the relationship between all branches of knowledge. D'Alembert's hesitations at the very least hint that the 'mappemonde' presented in the *Système figuré* is neither definitive nor wholly objective. These doubts are not, however, pursued: the problems raised by his

remarks on the 'tree of knowledge' are merely passed over, without being resolved, though, as we shall see, they cast doubt on many of the claims made in the *Discours* and the *Système figuré*.

This refusal to be deterred by methodological or epistemological difficulties which d'Alembert himself had identified explains why the *Discours*, which occupies some 64 double-columned folio pages, is in the main a vigorous exposition of the aims and purposes of the *Encyclopédie*, which does not disguise its modernist and even internationalist tendencies. Having (somewhat sceptically) reviewed the history of Western thought up to the seventeenth century in a way which leaves no doubt of his preference for the Moderns over the Ancients in the matter of science, he offers fair, but not unstinting, praise for the greatest of previous French thinkers, Descartes. While he acknowledges that Descartes did much to found modern science, d'Alembert concludes that his methods are now useful primarily for exposing the defects of his own system:

> S'il a fini par croire tout expliquer, il a du moins commencé par douter de tout; et les armes dont nous nous servons pour le combattre ne lui en appartiennent pas moins parce que nous les tournons contre lui.[19]

These reservations as to the validity of Cartesian doubt is of a piece with d'Alembert's avowed preference for thinkers who use experiment rather than pure ratiocination. Like Voltaire before him, in the *Letters concerning the English Nation* (1733), d'Alembert does not hide his admiration for British philosophy, and he singles out for particular praise the same three figures as Voltaire. The first is Francis Bacon, who is hailed as a genius in an age of ignorance and as a great practical and utilitarian philosopher (I, xxiv–xxv). The second is Isaac Newton, who is feted for his use of proper scientific method, which had explained why the planets move as they do, and which is contrasted with the all-too-fallible deductive rationalism of Descartes (I, xxv–xxvii). The third is John Locke, whom he regards in some respects as directly comparable with Newton. Basing himself tacitly on Voltaire's *Letters*, d'Alembert makes explicit what had been implied in that work, namely that there exists a link between the method of Newton in the sciences and that of Locke in philosophy:[20]

> Ce que Newton n'avait osé, ou n'aurait peut-être pu faire, Locke l'entreprit et l'exécuta avec succès. On peut dire qu'il créa la métaphysique a peu près comme Newton avait créé la physique. Il conçut que les abstractions et les questions ridicules qu'on avait jusqu'alors agitées,

> et qui avaient fait comme la substance de la philosophie, étaient la partie qu'il fallait surtout proscrire. (I, xxvii)[21]

The somewhat reserved tone of d'Alembert's comments on Descartes, and his obvious enthusiasm for English intellectual life (the freedom of which Voltaire had praised openly in the *Letters*)[22] were intended as a snub to the received ideas of the French intellectual and religious establishment.[23] Those who had elevated Descartes to a place of honour in the pantheon of French thinkers were unlikely to accept with enthusiasm d'Alembert's rather restrained praise of him. Nor were the defenders of religious orthodoxy likely to find the *Discours* to their liking, and it is the views on religion set out by d'Alembert which form the second axis of the text.

His hostility to the Catholic Church, and to Christianity in general, was scarcely disguised by his irony, as in a notable passage dealing with ecclesiastical history (I, xxiii). Here, he claims that Christianity has nothing to fear from rational investigation, for its truth is guaranteed by God; however absurd a religion may be, philosophers merely point out its absurdities and, unlike priests, do not force others to accept their point of view.[24] These bold and even foolhardy pronouncements in many respects sum up what was most outspoken and controversial in the *Encyclopédie*.[25] Indeed, such sentiments as these, expressed or implied repeatedly in articles by a variety of contributors to the *Encyclopédie* itself, were the basis for the persistent persecution which the work endured for the next fifteen years or so.[26]

But whatever feelings of hostility d'Alembert may have stirred up in writing the *Discours préliminaire*, its clear lines of historical exposition testify unmistakably to his belief in the mind's capacity to order coherently the empirical data presented to it, and to draw conclusions from that information. The preference for the experimental method over pure ratiocination, and for science over theology, is similarly a positive assertion of the importance of selecting and interpreting evidence. None the less, in the *Discours* as a whole, we have on the one hand the assertion that there are no discrete categories in nature, and on the other the idea that the mind proceeds by categorizing and ordering information, on the basis of the tripartite division of information into reason, memory and imagination, the knowledge which comes to us via our senses. The means by which this process is accomplished and the relationship between these essential principles remain obscure in the *Discours préliminaire*.

The task of elucidating this relationship would indeed have been difficult, and in fact, until Kant's 'Copernican revolution', there would be no plausible attempt to resolve this issue.[27] Although the sensory epistemology outlined in the *Discours* (in the passage quoted above at note 10) is ascribed

to unspecified 'early Philosophers', it had been revived to great acclaim in more recent times in the *Essay concerning Human Understanding* (1690) by John Locke,[28] whose impact on French thinking was, if anything, greater still than his influence on English thought.[29] One of the major weaknesses of any such system of empirical epistemology, as contemporary critics pointed out,[30] was that it did not, and perhaps on its own terms could not, explain why the mind arranged its perceptions as it did. How certain categories of ideas or certain subjects are 'taken in charge' by one faculty of the mind rather than another remains inexplicable unless some prior affinity between them is assumed. Indeed, the very idea of distinct faculties has to be argued for at some point, and their characteristics delineated on some demonstrable basis, if the tripartite scheme propounded in the *Encyclopédie* is to be more than mere assertion. If our minds are a *tabula rasa*, as Locke claimed, the cerebral organization of knowledge cannot be explained on that principle alone; it presupposes an underlying structure which might be at variance with the basis of his system, but which is not, at any rate, accounted for by it. Locke's own reflections offer little help in explicating the nature of the process. In the introduction to his *Essay concerning Human Understanding*, he famously declared:

> I shall not at present meddle with the physical consideration of the mind; or trouble myself to examine wherein its essence consists; or by what motions of our spirits or alterations of our bodies we come to have any sensation by our organs, or any ideas in our understandings; and whether those ideas do in their formation, any or all of them, depend on matter or not. These are speculations which, however curious and entertaining, I shall decline, as lying out of my way in the design I am now upon.[31]

His only contribution to solving this problem is to claim that repeated experiences produce memories;[32] d'Alembert, for his part, does nothing to clarify the nature of the faculties when he asserts that the *Encyclopédie* is based on 'the metaphysical order of the operations of the mind' (I, xxv). Hence, neither author manages to explain why certain kinds of knowledge should be of necessity allocated in the *Système figuré* to one of the three faculties of the mind rather than another. D'Alembert advances these disparate claims without attempting to defend or elucidate them,[33] and his approach does nothing to shore up the uncertain foundations on which the *Discours* is built.

The *Discours* is riven also by other tensions which have been less remarked upon, because they are less apparent, but which come into focus when one compares it with Diderot's *Système figuré*. In comparison

with d'Alembert's overt audacities, the latter text looks rather slight, consisting as it does of a full-page folding diagram accompanied by a mere six pages of text (I, xlvii–lii). The key to the relationship between the two texts lies in their treatment of the work of Francis Bacon.

Like d'Alembert (I, xxiv),[34] Diderot acknowledges that he is indebted to Bacon's *Advancement and Proficiencie of Learning* (1603) for the idea of the 'arbre encyclopédique', though both have reservations as to its value in its original form. D'Alembert regards Bacon's taxonomy as impeded by its adherence to scholasticism (I, xxiv–xxv), and Diderot points out that, in the 'arbre encyclopédique', a great many things, especially in philosophy, were not borrowed from Bacon's scheme (I, li). Any resemblances between the two arrangements, such as their respective divisions of mathematics, are due to the nature of the subject; even if they have found something of use in his work, as in their treatment of logic, the editors have changed what was in the original (I, lii).

At no point does Diderot go into detail as to the differences between his tree of knowledge and that of Bacon; he prefers, he says, to leave this task to the philosophers among his readers, since these few are the only people who care about such things (I, li).[35] In omitting to specify the ways in which the *Système* is indebted to Bacon's work, Diderot is making a double point. First, he is letting it be known that there are things in his tree of knowledge which sophisticated, 'philosophical' readers are invited to discover for themselves. Second, if he recognizes that the editors do not share Bacon's conception of what such a work should contain, it is because they do not share his perception of what is and is not important in exploring the world of nature.

And indeed, the differences between the two systems are quite revealing. Bacon's tree is spread over some ten pages of his *Advancement*. It consists of a general introduction dividing the intellectual faculties into Memory, Imagination and Reason, together with nine other pages, each of which corresponds to one section of the *Advancement*.[36] Diderot's *Système figuré* is indebted primarily to the tripartite division of knowledge set out by Bacon on the first page, into which it incorporates elements borrowed and rearranged from a number of other books of the *Advancement*. As a consequence, the division of the mental faculties in the *Système* does not fully resemble that of the *Advancement* in a number of important respects. But Diderot was also tacitly indicating, in the very act of modifying Bacon's arrangement of knowledge, that the subjects listed under each of the faculties were not fixed or unalterable, but changing and hence subjective.

The consequences of these changes are readily apparent. In perhaps the most significant change, Diderot departed radically from Bacon in devoting much more space to the mechanical arts, and in making theology,

and God himself, subordinate to philosophy, in a way which the English philosopher would have regarded as impious, and even blasphemous.[37] From the outset, therefore, Diderot was following d'Alembert in telling those with eyes to see that here was a work in which respect for religion was not to have pride of place.

This hint was wholly appropriate, for the true purposes of the *Système* are polemical rather than epistemological; this becomes evident when we move away from the general headings of the 'arbre encyclopédique' to consider the tabular arrangement of subjects and material which Diderot created to set out its contents in detail. In doing so we can see the questionable, and indeed eccentric, basis of the editors' attempts to apportion types of knowledge to specific faculties of the mind; in the process, the real reasons why they adopted so egregious an approach to epistemology become apparent.

The way in which religion is handled in the table shows that the divisions of knowledge set out in the *Système* are not based on any demonstrably cogent or logical principles.[38] Contemporary readers would have been familiar with pious books which claimed to reconcile reason with religion. Among such works was *Le Christianisme raisonnable*, one of several French translations of John Locke's *The Reasonableness of Christianity as delivered in the Scriptures*.[39] As if in deference to such texts, the *Système* places the knowledge of God in the category of those things which we know by means of our reason. This divine knowledge is divided into natural theology and revealed theology, a procedure which was wholly conventional and unexceptionable.[40]

But appearances are deceptive, for natural and revealed theology are bracketed together on the right as 'Religion, d'où par abus Superstition'. The naive reader might nod sagely, and acknowledge that religion could indeed become superstition in the wrong hands, as was shown by the many heretical sects with which the Church had had to contend during her long history.[41] The slightly less naive reader might, however, want to ask the editors of the *Encyclopédie* just how, and where, they proposed to draw the dividing-line between true religion and superstition, since there is no hint in the diagram itself as to how this should be done. An answer of sorts is, however, forthcoming. In his commentary on 'Metaphysics' in the central column, Diderot has this to say about what the *Système* calls 'Pneumatology, or science of the soul':

> Cette Science s'est distribuée en *Science de Dieu*, ou *Théologie naturelle*, qu'il a plu à Dieu de rectifier et de sanctifier par la *Révélation*, d'où *Religion* et *Théologie proprement dite*; d'où, par abus, *Superstition*. (I, xlviii)[42]

It would require an extraordinarily credulous reader to take these statements as proof of Diderot's adherence to orthodox Christian teaching. As anyone with the wit to understand this elucidation would have seen, he is simply playing with words; his explanation does nothing to establish on a genuinely scientific basis – how could it? – the rationality of theology. Nor does he explain how anyone could avoid the slippage from truth into error and the trap of Superstition, simply by following orthodoxy. The point is that the inclusion of theology under reason, 'knowledge of God', 'science of the soul' and so forth is mere strategic camouflage, designed to placate those who would wish to oppose, or even suppress, the *Encyclopédie* in its cradle.

Suspicious readers might well not be appeased by what they found next in looking down the *Système*. There, they would see that the second part of 'knowledge of God' consists of a category labelled 'Knowledge of good and evil spirits', which shades off to the right into 'divination and black magic'. So, reading from bottom right to top left in this section of the table, there appeared to be a chain of associations between 'black magic', 'superstition' and 'knowledge of God'. Readers who began by doubting Diderot's orthodoxy would, if they had mastered the somewhat unusual technique of reading from right to left, while reading from left to right, be rather more than doubting by the time their gaze had travelled over this section of the *Système*.

People of a more scientific and practical turn of mind would also have found the *Système* odd. In the central column of the table, we find, again under 'Philosophy' and 'Reason', the science of nature, which encompasses zoology, astronomy, botany, chemistry and so on. But on the left-hand side, as far from that section as the table allows, we have 'history', which includes, *inter alia*, 'uniformity of nature' and 'exceptions to nature', such as celestial prodigies, monstrous animals and monstrous vegetables. The thinking behind this separation of what might legitimately be regarded as related questions does not become noticeably clearer when Diderot embarks on a detailed explanation of the contents of the *Système*:

> Il est inutile de s'étendre sur les avantages de *l'histoire de la nature uniforme*. Mais si l'on nous demande à quoi peut servir *l'histoire de la nature monstrueuse*, nous répondrons, à passer des prodiges de ses *écarts* aux merveilles de l'*art*. (I, xlvii)[43]

So, according to Diderot, what we would now call teratology,[44] or the study of monsters, is not designed primarily in the *Encyclopédie* to

advance the study of nature on an experimental basis, but to correct the descriptive process required by the science of natural history. Its value is purely taxonomic, not investigative. There is no hint that it forms part of the actual study of nature, or why it is separated so widely from the sciences listed to the right of it. Again, in the commentary on nature under the general rubric of 'History' in the left-hand column of the *Système,* Diderot alleges that nature can create monstrosities in the heavens, on earth and in the seas. Yet simultaneously, under 'Science of nature' the variations between bodies such as stars and meteorological phenomena are said to be the province of 'la physique particulière' which is subsumed under 'Raison' and 'Philosophie' to the right.[45]

There is something very peculiar here. It is not at all clear why the study of nature, the 'science de la nature' as Diderot calls it, should be so utterly and clearly separate from 'uniformity of nature'. After all, one can scarcely study astronomy, for example, unless one assumes that the planets and stars have, as Newton had demonstrated some seventy years earlier, a regular, mathematical, predictable course through the heavens. But, conversely, the advancement of zoology and botany would also be restricted if unusual or extraordinary creatures and plants were regarded as 'exceptions to nature' and hence outside, or at least peripheral to, the remit of scientists working in these fields.

It would therefore be difficult to argue for methodological or taxonomic consistency on the basis of this division of knowledge within the confines of the *Système* itself. Even allowing for d'Alembert's comparison with the subjective distortions of a map of the world, it is apparent that Diderot has resorted to subterfuge in a number of areas. Consequently, the divisions between segments of knowledge are distinctly arbitrary, in a way which is not simply subjective, but is incompatible with any consistent taxonomic perspective.[46] It could be contended, of course, that the *Système figuré* brings together a diversity of viewpoints, but this interpretation merely undermines further any claim it may have to scientific rigour or consistency. Ultimately, then, the manifest internal difficulties detectable in the *Système* invite us to treat it less as a true system than as a polemical tract, whatever weight we may wish to give to d'Alembert's views of its effectiveness as a map of human knowledge. One cannot avoid the impression, in looking at the arrangement of knowledge set out in the *Système*, that there is something at once artificial and subversive about it. It represents both the actualization of the principles set out in the *Discours* and a clear demonstration of their inability to account adequately for what we know and how we know it. And when we examine its structure more closely, it becomes clear that the polemical purposes of

the 'arbre encyclopédique' far outweigh any concern for taxonomic or logical consistency.

The *Discours* and the *Système* are alike, too, in another respect. Neither refers to the intellectual difficulty created by the simultaneous adoption of the empirical Lockean principle that all our knowledge, which comes via the senses, is imprinted on the 'blank sheet' of our minds, and of the Baconian assertion that these sense-impressions are sorted into three specific categories through some unspecified (but necessarily preexisting) process in the mind. Bacon had merely ascribed different kinds of intellectual activity to what he called the 'faculties' of the mind, and had been concerned only with the practical acquisition of knowledge; he had not investigated the question of how the mind knows. In the *Encyclopédie*, however, the tripartite Baconian arrangement is paired with a Lockean sensualism, and the two theses are silently accepted without further explanation; as a glance at the *Système* will show, there is no indication of the specific affinities of each of the subjects grouped under the headings in question. What is more, as we have seen, there is good reason to doubt that these lists are in any sense coherent or valid as taxonomic divisions. This point is in itself a good reason to conclude that the *Système*, in particular, was the product of much less cogent reflection than might have been supposed. It is hard to avoid the conclusion that both d'Alembert and Diderot used this (albeit modified) Baconian picture of the mind's operations because its simplicity appealed to them, rather than because it possessed any obvious affinity with the epistemological doctrines of John Locke.[47] And, unsurprisingly, the fact that, in modifying Bacon, they had implicitly recognized the less-than-objective value of the 'arbre encyclopédique' is passed over without a word.

Our doubts as to the explanatory value of the *Système* is increased when we recognize that, in addition to its own internal inadequacies, it has a striking lack of consonance with Diderot's views on epistemology and on the operations of the mind as he had formulated them up to that time. The disparities between his previously expressed ideas and those which underlie the *Système* throw further light on its idiosyncrasies, and point up clearly the discrepancies between the assertions made here for the sake of taxonomic convenience or polemical propaganda and the ideas which he expressed when he was free to follow his own thoughts wherever they led him.

Perhaps the most fundamental of Diderot's ideas is that of the unity of nature, to which he clung consistently elsewhere, despite the disjointed impression given by the *Système*. This concern with the unity of nature can be traced back to his earliest publications as an independent writer.

His first attempt to express his own ideas in print was the *Essai sur le mérite et la vertu* (1745), a translation with commentaries of Shaftesbury's *Essay concerning Virtue and Merit* of 1699. Here, Diderot affirms his belief in the organic, perhaps divine unity of nature,[48] and in the almost Platonic harmony which it manifests. In one of his observations on Shaftesbury's text, he states (HI, 313) that 'in the universe everything forms part of a whole'. This unity is, however, fragile even at the social level, since even one member of society who is not in his 'right' place can upset the delicate mechanism governing our existence:

> Si quelque particulier occupe une place qui n'était point faite pour lui, le bien général en souffrira ou même s'anéantira; et la société ne sera plus que l'image d'une montre détraquée. (HI, 361)[49]

The idea of the fragility of order recurs, more forcefully and at a more fundamental level, in his next work, the *Pensées philosophiques* [*Philosophical Thoughts*] of 1746. The doctrine espoused in *Pensée* XXI is essentially a Lucretian atomism,[50] according to which the number of possible combinations of atoms (or, as Diderot puts it, the number of throws of the dice) is infinite; hence, the universe could have been created by this means alone. If this is the case, it is no longer necessary to suppose that it was created by God, and one of the premises of the *Essai* is largely dispensed with. Whereas nature, in the *Essai*, had been a unified, if fragile, structure, in which each element has its place, it is now the product of chance, of blind forces which create it apparently at random. Of course, these positions are not necessarily incompatible, in that a viable universe, in which every element has its place, may well be produced by chance. Yet both in the *Essai* and in the *Pensées philosophiques*, Diderot deals, first explicitly and then implicitly, with the fragile and precarious character of creation, aware as he is of how easily its balance may be disturbed. As he makes clear in the *Pensées*, we cannot know whether nature will decide to 'throw the dice' again, and change the world as we know it in ways which we cannot predict.

Until 1746, therefore, Diderot's concern is, first and foremost, in philosophical terms at least, with the stability or fragility of the natural order, and with the possibility that it may be disturbed or overthrown without warning. But in neither case does he argue for the disorder or incoherence of creation, however fragile it may be: creatures can survive only if they are compatible with creation as a whole. Having presented his reflections in these terms, he then turns to consider in more depth not the fragility of nature, but the ways in which we can know and understand

it, however imperfectly. He advocates two distinct approaches to achieve this understanding.

The first is that of experimental science; this is a topic addressed, surprisingly perhaps, in his pornographic novel *Les Bijoux indiscrets* [*The Indiscreet Jewels*] in 1748. The young figure of Experiment grows stronger as it progresses, destroying the 'arch of hypotheses' (HII, 134), and eventually encompassing the whole world in its embrace. This rather ponderous allegory gives a clue to one of Diderot's principal philosophical aims in the novel. This is to undermine and invalidate the Cartesian deductive method, much as d'Alembert was to do, and for much the same reasons, in the *Discours préliminaire* a few years later. Whatever else he may have had in mind in writing one of the classics of French erotica, Diderot was attempting to show the inadequacy of the most prestigious of French thinkers, and to indicate his preference for Newtonian science. Yet even here, a note of uncertainty creeps in: without denying the greatness of Newton as an experimenter, Diderot suggests that anyone interested in physical science should repeat his experiments to determine the nature of light. This is not simply in order to learn how he achieved his results, but to confirm them. As Diderot puts the matter: 'I incline strongly to the view that [Newton] had found the truth; even so, it is a good idea to make sure' (HII, 332).

Unconvinced at this stage that experimentation could produce unequivocally reliable results,[51] Diderot turned to mathematics, in a second attempt to find a means of arriving at certainty in his investigation of nature. He first explored the epistemological possibilities which it offers in a rather technical treatise, the *Mémoires sur différents sujets de mathématiques* [*Memoirs on Various Mathematical Subjects*], published like *Les Bijoux indiscrets* in 1748. In the first *Mémoire*, which deals with the principles of acoustics, he argues that the quality of an organ such as the ear is to be judged by its fitness to perform its natural functions. But he goes further than this, asserting that our appreciation of musical sounds is governed by the conjunction of the acoustic laws of harmony, the state of our organs and our own experience of similar sounds, which may vary not only from individual to individual, but also from culture to culture. Scientific understanding thus requires us to take into consideration not only the fixed laws of nature, which account for the proportions of musical sounds relative to one another, but also the experience accumulated by the individual percipient mind. Hence, the process involves both the sentient individual, in true Lockian fashion, and the laws of nature. The laws remain fixed, but we may perceive them differently in accordance with the state of our organs, so that the perception of the world depends both on an invariable and on a variable.[52]

Yet again, one detects a note of doubt creeping into Diderot's epistemological reflections. In *Les Bijoux indiscrets*, he had been uncertain whether even the experimental results obtained by Newton could be accepted without further confirmation by others. Now he acknowledges that variations between individuals may affect or alter our perception of the world, making it more difficult to arrive at any certain truth unless we know the extent to which those individual variations influence our perceptions. Hence, both in regard to knowledge obtained by 'objective' experimentation and in regard to knowledge obtained via the senses, Diderot points to the deficiencies and uncertainties attendant upon the process of investigation.

He therefore made one further attempt at discovering some means which would lead to certain knowledge of a reliable, objective kind. In the *Lettre sur les Aveugles* [*Letter on the Blind*] (1749), he builds on the interest in mathematics which he had demonstrated in the *Mémoires* of 1748. In the *Letter*, he gives a particular twist to Locke's sensualism by trying to imagine how a man born without sight would come to understand the world, and what form that understanding would take. Having dwelt on the differences between the perceptions of the blind and the sighted, he turns to the question of how best to achieve meaningful communication between the two. His discussion of this point takes up much of the second part of the *Letter*, which is centred on the alleged experiences of the blind Cambridge mathematician Nicholas Saunderson (1682–1739).[53]

In bringing his blind man into the *Letter*, Diderot is attempting first and foremost to construct a means whereby the truth can be guaranteed without undue reliance either on subjective perception or on the changing world of external phenomena. The solution which he expounds in discussing Saunderson's case is that of allowing the blind to acquire the notion of number. At one point, Diderot asserts that 'as sensations contain nothing which essentially resembles objects, it is experience which provides us with information about analogies which seem to be based purely on custom' (HIV, 62). Given the disparity between our sensations and the objects which cause them, Saunderson overcomes his sensory limitations by the use of large and small pins arranged in different ways in holes made in a board. Each digit from ten to zero is represented by a specific arrangement of pins. By this means, having gradually become familiar with his system, he is able to perform complex calculations at a speed which astonishes the sighted. These calculating pins are a means whereby he can reliably convert the world of unseen, but felt, shapes into mathematical terms. Hence, numbers can be made to operate consistently, and can be perceived accurately, through constant repetition, via the sense of touch.

More than this: Saunderson makes much of the fact that when he describes a circle or a square on the basis of his calculations, the sighted can understand and accept his descriptions. From this evidence, he concludes: 'all men therefore see in the same way' (HIV, 69).

The recourse to number is intended to be both a way around the subjective difficulty of ascertaining or proving the reliability of our sensations (and hence of our knowledge), and a way of establishing with other percipient minds a usable and reliable means of understanding the world. Through number, Diderot hoped that he had found some means of dealing with the unpredictability and instability of natural phenomena. Consistency is to be found in number, in the properties of number, and in the geometrical predictability of shapes and objects as described by mathematics. Strictly speaking, this solution does not answer the difficulty (raised by Berkeley and others) that we cannot know that objects continue to exist when we have no perception of them, since there is no guarantee that the objects which are described by reference to number actually exist.[54] Even so, if the practical purpose is to discover a means of speaking reliably and consistently, at least about objects significant for their mathematical properties, then number offers a solution which a purely sensationalist epistemology cannot. It allows the individual to speak comprehensibly to others about properties and quantities which can be measured geometrically or mathematically; agreement can thus be reached on these matters, if not necessarily on others, between individual percipient minds. However imperfectly, mathematics offers a way out of solipsism and a means of discovering at least those truths which fall within its ambit.[55]

The *Lettre sur les Aveugles* was not Diderot's last word on the subject of epistemology at the time he was laying the foundations for the *Encyclopédie*. In 1751 he published the *Lettre sur les Sourds et Muets* [*Letter on the Deaf and Dumb*], a curious work which went through at least five incarnations that year, expanding and developing with each new edition.[56] This second *Lettre* echoes the *Lettre sur les Aveugles* in at least one essential respect, namely the emphasis on the mathematical structure of our perceptions. As Diderot puts it: 'pure mathematics enters our soul through all the senses' (HIV, 194–5). There is also the same emphasis on the probative value of reiterated experience, and the idea of number as a product of those experiences again occupies a prominent position in giving us reliable evidence of the existence of the world outside ourselves. None the less, a deeply significant change has taken place in Diderot's thinking since 1749. In the *Aveugles*, number was a means whereby different individuals could agree on a system of measurement and calculation in order to overcome the defects of the senses and the

problem of solipsism. There, number is, so to speak, the bridge to the outside world. In the *Sourds et Muets*, Diderot turns his focus inwards, so that number is now the common factor uniting the senses; all our sense-impressions are converted into numbers, and presumably are linked to one another (HIV, 194). His concern now is not with the stability of external phenomena, which is taken for granted, but rather with the way in which the mind organizes the multifarious sense-impressions which crowd in upon it.

He does not doubt that the many stages through which the mind passes in perceiving experience are covered so rapidly that we are usually unaware of their component parts (HIV, 162). But he argues that, to organize these multiple sensations, there is an underlying, stable structure to the mind. He pictures our sense-impressions as being governed by a 'petite figure' or 'soul' which surmounts a bell (or 'timbre') linked by threads to all parts of the body. Diderot develops this comparison, linking the 'petite figure' and memory:

> les sons rendus par le timbre ne s'éteignent pas sur-le-champ ... ils ont de la durée ... ils forment des accords avec ceux qui les suivent ... la petite figure attentive les compare et les juge consonants ou dissonants ... la mémoire actuelle, celle dont nous avons besoin pour juger et pour discourir, consiste dans la résonance du timbre, le jugement dans la formation des accords, et le discours dans leur succession. (HIV, 160)[57]

The reference to 'memory' and to 'judgement' should alert us at once to the relationship between the *Lettre* and the *Système*. Diderot goes on:

> Notre âme est un tableau mouvant d'après lequel nous peignons sans cesse: nous employons bien du temps à le rendre avec fidélité; *mais il existe en entier et tout à la fois*: l'esprit ne va pas à pas comptés comme l'expression. (HIV, 161; italics added)[58]

If the mind or 'soul' (in the sense of the point at which all the 'fils' meet) does indeed exist simultaneously in all its faculties, then the processing of the mathematical data which we acquire via the senses must involve all parts of the brain simultaneously, and the division of its workings into Reason, Memory and Imagination is of little help in explaining either its structure or its operation. Far from representing separate divisions or faculties of the mind, these categories overlap and act together as

integrated functions. The idea that certain subjects belong to one faculty rather than another, which is central to the *Système*, is, on this basis, more untenable than ever, or at least more difficult to reconcile with the structure of the 'arbre encyclopédique'.

This is not to ignore the external similarities between the view of the mind presented in the *Lettre sur les Sourds et Muets* and the *Système*. Just as, in the *Lettre*, all the 'fils' lead to the 'petite figure', or 'âme', so in the *Système figuré* all the divisions and subdivisions ranged under the three headings of Reason, Memory and Imagination are grouped under the general heading 'Entendement' ['Understanding']. There, too, under 'Raison' are brought together 'Mémoire' ('art de retenir') ['Memory (the art of retaining information)'][59] and 'Art de communiquer' ['The art of communicating'] and both are subsets of 'Logique', leading to 'Science de l'homme' ['The knowledge of man'] and ultimately to 'Philosophie'. In both works, memory plays a crucial role in helping us to retain diverse sense-impressions long enough to make comparisons, and to seek resemblances between them, and in each case memory and expression are closely connected.

Yet these similarities, significant though they are, should not lead us to suppose that the two analyses of the mind's operations are simply variants of each other. In the *Sourds et Muets*, Diderot is describing general processes, without allocating particular subjects to any area of the mind; indeed, he carefully avoids doing so, and refers only to 'echoes' which are set up by sense-impressions, without speculating on their passage through the mind.

What is more, the faculties which are central to the *Lettre sur les Sourds et Muets*, such as memory and language, are merely subsections in the *Système*. Mathematics, which bulks so large in the *Lettre sur les Aveugles* and is the foundation of the harmonies at the centre of the *Sourds et Muets*, is given no significant epistemological role in the *Système figuré*. Although they both came from Diderot's pen at much the same time, the *Système figuré des connaissances humaines* and the *Lettre sur les Sourds et Muets* present two very different conceptions of the mind's structure and of the means by which it processes and organizes knowledge. At most, these two texts attempt, each in its own way, to offer an analysis of the mind; they have no telling points of contact with regard to the precise analysis of mental processes, or the significance of certain types of enquiry for the establishment of the truth. The simplest way, perhaps, to sum up the differences between them is to regard the *Lettre* as offering a dynamic interpretation of the mind's operations, while the *Système* offers a static, flat account of its supposed divisions.

The unsystematic and inconsistent view which Diderot takes of the contents and faculties of the mind as presented in the *Système figuré* looks even stranger when compared to the unifying processes described in the *Sourds et Muets*. This latter text is based in the assumption that the echoes set up in the mind can resound unimpeded. In contrast, the three major faculties identified in the *Système figuré*, for all that they are subsumed under the heading 'Entendement', appear to have no communication between them, irrespective of the processes involved in acquiring knowledge through their agency, and there is no indication in the *Système* that the mind is a unity. Memory, Reason and Imagination work alongside one another, but do not, apparently, overlap. Since Diderot does not there tell us how different parts of the mind do in fact interconnect, and produce complex thoughts, we cannot say what connection there may be, for example, between epic poetry (I), ecclesiastical history (M) and the art of thinking (R). Unless there is some deep relationship between these faculties, as well as some separate identity, it is hard to see how an epic poem could ever be produced. Nor is it apparent from the indications in the *Système* that the relative importance of these three areas of the mind may differ from individual to individual. Some people are deficient in memory, while others forget nothing; some have little imagination while others live in a world consisting of little else. It may be that the 'arbre' represents an idealized version of the mind, but this point too remains unclear.

The *Encyclopédie* itself was not unduly hampered by the taxonomic eccentricities of the *Système figuré*, and in fact established a much richer, more complex and more subversive means of linking apparently disparate subjects via the *renvois*, or cross-references. These were sometimes used to indicate genuine connections between subjects, but often served to undercut a seemingly inoffensive article by cross-referencing it with a much more critical account of the same subject.[60] If there is a connection between the *Système* and the text of the work, it lies much more in their subversive qualities than in their taxonomy.

In conclusion: it is hard to reconcile the *Système figuré* not only with sensualist epistemology, but also with Diderot's ideas up to 1751. The varied responses which, between 1745 and 1751, he brings to the question of how the mind knows, and how it expresses that knowledge, are eloquent testimony to the dissimilarities between the *Système figuré des connaissances humaines* and his other works. An examination of the *Système figuré* shows that it is a deeply flawed document; indeed, d'Alembert's hints that Diderot's text is not to be taken as authoritative are highly significant as an indication of its true value. The *Système* is a text written specifically to introduce the *Encyclopédie*. It is neither expository nor

epistemological, but diversionary and polemical, and needs to be seen as such. It was written to give the appearance of having a serious philosophical purpose, but does not conform to the essential requirements for doing so. Its inconsistencies and gaps should alert readers to its lack of overall coherence, and should tell them that it is not to be taken at face value. It should also put us on our guard yet again today when we seek to define the coherence and unity of the encyclopedic project.

Notes

1. *Dialectic of Enlightenment*, trans. John Cummings, new edition (New York: Continuum, 1987). The work was written in 1944, and is perhaps most noteworthy for its emphasis on the 'disastrous' consequences of the Enlightenment, in which reason has been used to dominate and master others, not to improve human life.
2. This view of the Enlightenment has proved remarkably tenacious, even though it was comprehensively undermined by Isaiah Berlin more than half a century ago, in a series of essays later published under the title *Against the Current* (London: Hogarth Press, 1979).
3. Jonathan I. Israel is entirely typical of modern commentators in calling it 'the most famous and one of the greatest projects of the European Enlightenment' (*Radical Enlightenment: Philosophy and the Making of Modernity 1650–1750* (Oxford: Oxford University Press, 2001), p. 711).
4. See especially Julie C. Hayes, *Reading the French Enlightenment: System and Subversion* (Cambridge: CUP, 1999) pp. 39–50, and Fabienne-Sophie Chauderlot, 'Encyclopédismes d'hier et d'aujourd'hui: informations ou pensée? Une lecture de l'*Encyclopédie* à la Deleuze', in *Using the 'Encyclopédie': Ways of Knowing, Ways of Reading*, ed. D. Brewer and Julie C. Hayes (*Studies on Voltaire and the Eighteenth Century*, 2002:05) (Oxford: Voltaire Foundation, 2002), pp. 37–62.
5. '[Nature] offers us only particular things, infinite in number and without any fixed and determinate division between them'. 'H' designates the ongoing edition of Diderot's *Œuvres complètes*, ed. Herbert Dieckmann and others and published by Hermann (Paris, 1975–). The volume and page numbers are given after the designation. Cf. Chauderlot, 'Encyclopédismes d'hier et d'aujourd'hui', p. 47, and D. Bates, 'Cartographic aberrations: epistemology and order in the encyclopedic map', *Using the 'Encyclopédie'*, pp. 1–20 (p. 15).
6. 'The general field of Arts and Sciences is a kind of labyrinth, or twisting path, along which the mind sets off without quite knowing the route it should take ... this wholly philosophical absence of order on the part of the soul would distort, or rather would utterly destroy any tree of knowledge in which one tried to represent it ... Hence, there necessarily remains an element of the arbitrary in the general division [of subjects].' All quotations, unless otherwise indicated, are taken from the first edition of the *Encyclopédie* (Paris, 1751–80, 35 vols), specifying the volume and page numbers.
7. On this and other similar images in the *Encyclopédie*, see Bates, 'Cartographic Aberrations', and Chauderlot, 'Encyclopédismes d'hier et d'aujourd'hui', p. 50.

8. 'Be that as it may, of all the trees of knowledge, the one which offered the greatest number of connections and links between the sciences, would probably deserve to be preferred. But can we flatter ourselves that we have identified it?'
9. The *Discours* uses the terms 'arbre encyclopédique' and *Système figuré* interchangeably, and this usage is followed in the present study.
10. 'All our direct knowledge can be reduced to what we know via our senses; from which it follows that we owe all our ideas to our sensations ... Nothing is less a matter for debate than our sensations; hence, in order to prove that they are the basis of all our knowledge, it is enough to show that they can be so: for in sound philosophy, any deduction based on facts or acknowledged truths is preferable to what is supported only by hypotheses, however ingenious.'
11. 'The only resource left to us, therefore, in so arduous an investigation (though it is a very necessary and even agreeable one), is to collect as many facts as possible and to arrange them in the most natural order.'
12. 'Logic teaches us to arrange ideas in the most natural order, to use them to make a chain which is immediately apparent, to analyse those which contain too many simple ideas, to consider all their aspects, and finally to present them to others in a way which makes them easy to grasp. That is the essence of the science of reasoning which is rightly regarded as the key to all our knowledge.'
13. 'If we put reason before imagination, this order seems to us to be soundly based, and to be in keeping with the natural course of the operations of the mind: the imagination is a creative faculty; and the mind, before it thinks of creating, begins by reasoning on what it sees, and what it knows.'
14. 'These three faculties, first of all, form the three general divisions of our system, and the three general objects of human knowledge; history, which is related to memory, philosophy, which is the fruit of reason; and the fine arts, which are brought into being by the imagination.' The Baconian origins of this assertion are, curiously, unremarked here (see below).
15. 'As a general rule, we have placed after the word indicating the subject of the article the name of the branch of knowledge to which this article belongs; all that the reader then has to do, in order to discover what place the article must have in the *Encyclopédie*, is to check what position this branch of knowledge occupies in the *Système figuré*.'
16. At a conference on this aspect of the work held at the University of Nanterre in November 2004, a number of papers were presented showing conclusively that the designations printed after the heading of most articles, to indicate the branch of knowledge to which they allegedly belonged, were often inconsistent or erroneous.
17. D'Alembert acknowledges (I, xxxv) that Ephraim Chambers's *Cyclopedia* (of which the *Encyclopédie* was initially to be a translation) made use of an 'arbre généalogique' of knowledge, but claims that it was not a source for the *Système figuré*. The initial *Prospectus* for the *Encyclopédie* issued in 1745 contained a faithful translation of Chambers's table; this translation and the English original are reproduced in *Recherches sur Diderot et sur l'Encyclopédie*, 37 (October 2004), pp. 38–9; it is clear from them that d'Alembert's claim is justified.
18. This was not necessarily the case, of course. The *Prospectus* itself had announced, quite falsely, that the *Encyclopédie* was fully ready for publication in 1750 (see J. Lough, *The 'Encyclopédie'* (London: Longman, 1971), p. 20).

19. 'If in the end he thought he could explain everything, he did at least begin by doubting everything; and the weapons which we use to fight him are no less his because we turn them against him.' On the attitudes expressed towards Descartes here, see Lough, *The 'Encyclopédie',* pp. 141–3.
20. Voltaire had devoted Letter XIV to showing the superiority of both Locke and Newton over Descartes, but had not explicitly connected their methodology.
21. 'What Newton had not dared to do, or could not perhaps have done, Locke undertook and effected with success. It is fair to say that he created metaphysics more or less as Newton created physics. He realized that the abstractions and ridiculous questions which had caused so much controversy up to that time, and which were so to speak the substance of philosophy, were what needed above all to be banished.' The relationship between Newton and Locke clearly impressed the Encyclopédistes; the link between them was still being made some fifteen years later when, in the article 'Science' (1765), de Jaucourt repeated almost literally the second sentence of this quotation.
22. Again, Letter XIV is perhaps most relevant here.
23. One indication of the extent to which French sensibilities had been offended was the publication in 1753 of the *Apologie de la Métaphisique, à l'occasion du Discours Préliminaire de l'Encyclopédie*. This was a response by a Protestant minister, David Bouillé, to the attack on Descartes in the *Discours*. On the role of this work in the controversy created by the *Discours,* see J. Lough, *Essays on the* Encyclopédie *of Diderot and D'Alembert* (London: Oxford University Press, 1968), pp. 260–1, 353–4, 376–7.
24. He was to take up this theme again in his *Eloge de M. du Marsais*, published in Volume VII of the *Encyclopédie* in 1757 (pp. i–xiii).
25. As early as September 1751, the *Journal des Savants* detected in the *Discours préliminaire* 'a laconic and affected attitude towards religion' (quoted by J. Lough, *The 'Encyclopédie'*, pp. 104–5).
26. For a succinct account, see Lough, *The 'Encyclopédie'*, chapter 2.
27. Kant proposed the category of synthetic *a priori* knowledge, based on the idea that objects conform to our ways of knowing, rather than vice versa. See the *Critique of Pure Reason*, translated by J. M. D. Meiklejohn (Amherst, MA: Prometheus Books, 1990), pp. 97 ff.
28. Locke's debt to Aristotle and to the Stoics is discussed by Louis Dutens, *Recherches sur l'Origine des Découvertes attribuées aux Modernes,* 2 vols (Paris, 1766), Vol. 1, pp. 18–22.
29. See Ross Hutchison, *Locke in France 1688–1734* (*Studies on Voltaire and the Eighteenth Century,* 290) (Oxford: Voltaire Foundation, 1991).
30. Claude Buffier raised, but did not pursue, this problem in his *Principes du raisonnement* (1714); see Hutchison, *Locke in France, 1688–1734*, pp. 150–2. On other reactions to Locke, which similarly failed to engage fully with the problem of how the mind organizes ideas, see Israel, *Radical Enlightenment,* pp. 480–2.
31. *An Essay concerning Human Understanding* (1690), 38th edn (London: Tegg, n.d.), p. 1.
32. Ibid., Book II, Chapter X.
33. Cf. Hayes, *Reading the French Enlightenment,* pp. 39–42.
34. D'Alembert writes: 'Taking into account the sensible and wide-ranging views of this great man, the multitude of subjects on which his mind dwelt, the boldness of his style which always brings together the most sublime images

and the most exact precision, one would be tempted to regard him as the greatest, the most universal and the most eloquent of philosophers.'

35. The *Proficiencie and Advancement of Learning* had been translated into French as early as 1624, but does not thereafter appear to have attracted much attention among French readers until the middle of the eighteenth century. An *Histoire de la Vie et des Ouvrages de François Bacon* appeared in 1742, and a number of studies of his work were published in the years which followed. For an assessment of his impact on the Philosophes, see Lilo K. Luxembourg, *Francis Bacon and Denis Diderot: Philosophers of Science* (Copenhagen: Munksgaard, 1967).
36. See *Of the Advancement and Proficiencie of Learning,* new edition (London, 1674), ten unnumbered pages preceding the First Book.
37. See Robert Darnton, 'Philosophers Trim the Tree of Knowledge: The Epistemological Strategy of the *Encyclopédie*', in *The Great Cat Massacre and Other Episodes in French Cultural History* (Harmondsworth: Penguin Books, 1985), pp. 185–207 (p. 194).
38. John Lough observes that 'Inevitably this system of classification was more than a little arbitrary; at times the results are even mildly comic' (*The 'Encyclopédie',* p. 65). This is no doubt true for a modern audience; Diderot was as aware as anyone at that time of the dangers attending anyone who treated religion in a way which might strike the authorities as disrespectful.
39. This text had originally appeared in English in 1695. A French translation was published the following year, and the work had gone into at least four editions by 1740. Locke uses the miracles of Christ as proof of His divinity, and the success of Christianity as proof of its reasonableness. See Hutchison, *Locke in France 1688–1734,* pp. 25–7, 203.
40. The impeccably orthodox *Dictionnaire de Trévoux* (1762) makes the same distinction.
41. Superstition is defined by the *Dictionnaire de Trévoux* as 'Excessive devotion ... a false opinion of God mixed with fear'.
42. 'This branch of science has been divided into *Knowledge of God*, or *Natural Theology*, which it has pleased God to rectify and sanctify by Revelation, from which derive *Religion* and *Theology in the proper sense of the term*; from it also, through misuse, derives *Superstition*.'
43. 'It is useless to dwell on the advantages of the category "History of uniform nature". But if we are asked what is the use of a "History of nature's monsters" we shall answer that it allows us to move from the prodigies of nature's exceptions to the marvels of art.'
44. The word 'teratologie' is recorded as early as 1752, according to the *Petit Robert*, but it does not occur in the *Encyclopédie* at any point. For wider consideration of the question of monsters in Diderot's *œuvre*, see Andrew Curran, *Sublime Disorder: Physical Monstrosity in Diderot's Universe* (*Studies on Voltaire and the Eighteenth Century* 2001:01) (Oxford: Voltaire Foundation, 2001).
45. Bacon had placed natural history (including monsters) under 'Memory' (*Advancement*, Book II).
46. Similar objections have been urged against the successor to Diderot's *Encyclopédie*, the *Encyclopédie méthodique* published by Panckoucke. See Christabel P. Braunrot and Kathleen Hardesty Doig, 'The *Encyclopédie méthodique*: An Introduction' (*Studies on Voltaire and the Eighteenth Century,* 327) (Oxford: Voltaire Foundation, 1995), pp. 1–152.

47. Lough (*The 'Encyclopédie'*, p. 145) concludes apropos of Diderot: 'It is obvious that Locke was not a thinker who thrilled him.'
48. Cf. Jacques Roger, *Les sciences de la vie dans la pensée française du XVIIIe siècle*, (Paris: Armand Colin, 1963), p. 587.
49. 'If some private citizen occupies a place which was not meant for him, the general good will suffer, and may even be destroyed; and society will resemble nothing more than a broken watch.' One is tempted to compare these sentiments with Rousseau's condemnation of the citizen who will not accept the general will, in the *Social Contract* of 1762. Both Diderot and Rousseau were sufficiently acquainted with the Classics to have come across the idea, in early Greek philosophy, that in the universe as a whole, 'every person and every thing has his or its appointed place and appointed function' (Bertrand Russell, *History of Western Philosophy*, new edition (London: George Allen & Unwin, 1965), p. 130).
50. See E. Callot, *La Philosophie de la Vie au XVIIIe siècle* (Paris: Marcel Rivière, 1965), pp. 303–5.
51. He was to adopt a more favourable view of its value in the *Pensées sur l'interprétation de la Nature* (1753–4).
52. See the introduction to my edition of the *Thoughts on the Interpretation of Nature and Other Philosophical Works* (Manchester: Clinamen Press, 1999), p. 9.
53. Ibid., pp. 11–13.
54. George Berkeley (1685–1753) had argued, in his *Dialogues of Hylas and Philonous* (1713), that we can know nothing beyond our own sensations. There is no guarantee that objects continue to exist when we do not apprehend them by our senses, unless we suppose that God is always there to witness what we cannot experience. In the *Lettre sur les Aveugles,* Diderot says that this solipsistic doctrine is 'the most difficult of all systems to combat, even though it is the most absurd' (HIV, 44).
55. For a discussion of Diderot's use of mathematics, especially in the *Système figuré,* see Michael E. Hobart, 'The Analytical Vision and Organisation of Knowledge in the *Encyclopédie*', *Studies on Voltaire*, 327, 1995, pp. 153–82 (pp. 164 ff.).
56. For details see the introduction to the critical edition of the *Lettre* by J. Chouillet (HIV, 111–27).
57. 'The sounds made by the bell do not die at once ... they last for a time ... they form harmonies with those which follow; the little figure attentively compares them and judges them to be consonant or dissonant; our present memory, which we need in order to judge and to speak, is found in the resonance of the bell, judgement in the formation of harmonies, and speech in the way they succeed one another.'
58. 'Our soul is a moving picture on the basis of which we paint unceasingly; we spend a great deal of time depicting it faithfully; *but it exists in its entirety and all at the same time*; the mind does not proceed step by step as speech does.'
59. The presence of 'Memory' in both the first and the second column of the *Système,* with no indication that there is any difference between the ways in which it is used in each of them, casts further doubt on the validity of the subject divisions proposed in the table.
60. Hence, the innocuous 'Cordelier' refers the reader to the highly critical 'Capuchon', which in turn refers to 'Scotisme'. On the use of the *renvois,* see Daniel Brewer, *The Discourse of Enlightenment in Eighteenth-Century France* (Cambridge: Cambridge University Press, 1993), pp. 48–50.

8

'Encircling the Arts and Sciences': British Encyclopedism after the French Revolution

*Judith Hawley**

Writing in 1799, the Scottish cleric George Gleig fulminated against the famous *Encyclopédie* of Diderot: 'The French *Encyclopédie* has been accused, and justly accused, of having disseminated, far and wide, the seeds of Anarchy and Atheism.'[1] This counter-revolutionary blast – written while England was at war with the apparently anarchistic and atheistical France – did not appear in one of the myriad of pamphlets which recorded and conducted debate in that spasmodic era, but in the *Supplement* to the third edition of the *Encyclopaedia Britannica* (1801), in the Dedication addressed to the King. Far from presenting this work of reference as an impersonal and disinterested record of the current state of knowledge, its editor, Gleig, stressed his own 'upright intentions' (p. iv) – the personal loyalty and piety which underpinned the work:

> In conducting to its conclusion the *Encyclopaedia Britannica*, I am conscious only of having been uniformly influenced by a sincere desire to do Justice to those Principles of Religion, Morality, and Social Order, of which the Maintenance constitutes the Glory of Your MAJESTY's Reign, and will, I trust, record Your Name to the latest Posterity, as the *Guardian of the Laws and Liberties of Europe*. (p. iii)

We might expect the inflated professions of a Dedication or other liminary piece not quite to tally with the outlines of the work itself. But there is plenty of evidence from encyclopedias written either side of the French Revolution that the content and organization of the work were affected by principles of religion, morality and social order. Robert Collison, the most comprehensive historian of the universal book, prizes encyclopedias in so far as they approach the ideal of neutral receptacles for objective knowledge. Thus he can argue that 'Diderot deserved to be censored by

[his publisher] Le Breton … for Diderot was using his encyclopedia as a means of conveying his own partisan views'.[2] However, the encyclopedia can never be a neutral or value-free entity. Given that the encyclopedia both pretends to contain everything worth knowing and aims to represent in its very structure the inherent organization of knowledge, it must be considered as an ideological structure. Moreover, because through its physical organization it hopes to make that knowledge accessible to a wider audience, it intervenes in the intellectual and social life of its culture.

Encyclopedias are such monumental works – lumbering Leviathans requiring the turning distance of an oil tanker – that we cannot really expect them to respond in any kind of quick-fire way to the dangerously fast pace of events of the Revolutionary era. As complicated scholarly and commercial endeavours, they have a long lead time. Diderot's *Encyclopédie* was many years in the making and eventually appeared in 17 volumes of text and 11 of plates between 1751 and 1772, with supplements down to 1780. As well as contributing to the climate that produced the French Revolution, the *Encyclopédie* launched something of a craze for voluminous dictionaries of arts and sciences. Its successors included Abraham Rees's *New Cyclopaedia* (45 volumes, 1802–20), and David Brewster's *Edinburgh Encyclopaedia* (18 volumes, 1808–30), both of which were dwarfed by the great Germans, Zedler (64 volumes, 1731–50, with four supplementary volumes, 1751–4) and Krunitz (242 volumes, 1773–1858).[3] So numerous and voluminous were encyclopedic productions at the end of the eighteenth century that one reviewer opined that 'If the Age in which we live cannot be complimented with the title of Augustan, we may at least denominate it the Age of Encyclopaedias'.[4] Despite being massive and complex productions, however, encyclopedias did indeed respond to the Revolution and its aftermath. In Britain – which is the focus of my interest in this essay – around two dozen significant encyclopedias were published from 1789 to 1830, and many of them directly or implicitly responded to the crisis of the Revolution and its aftermath.[5] The response took the form of the content of particular articles, the organization of the work as a whole, and the presentation of its idea of order in prefatory materials such as Introductions and diagrammatic presentations of a scheme of knowledge.[6]

I cannot attempt a survey of post-Revolutionary encyclopedias here. All I intend to do is to discuss two examples of encyclopedic responses to the revolutionary crisis. Focusing on Samuel Taylor Coleridge and Hannah More, I mean to examine both the claims made about, and the actual organization of, several key encyclopedic projects, to see how encyclopedic order might have related to other cultural and political ways of

ordering the world. Although the Romantic and the Bluestocking are odd bedfellows, they have much in common on the question of the role of education in the maintenance of social order.[7] Both of them saw their projects as an attempt to restore order after the chaos of the French Revolution, the Napoleonic Wars and attendant social unrest. Both saw Diderot's *Encyclopédie* specifically, and the democratic tendencies of the Enlightenment encyclopedia more generally, as leading to the French Revolution and fostering the Jacobin movement in Britain.

Coleridge was habitually an encyclopedist: unable to confine his interests and energies, he wrote on almost every branch of learning. He also sketched out plans for several encyclopedic compilations to be undertaken by himself, either alone or in collaboration with Southey, including in 1803 a *Bibliotheca Britannica*; a 'Propaedia (or Propaideia) cyclica' in 1812; and, in 1815, an *Encyclopaedia Biblica*, including 'An elaborate Commentary, philo- chrono- phyto- zoo- geo- etho- theo- -logical, historical and geographical'.[8] Coleridge's most prominent encyclopedic project was his plan for the *Encyclopaedia Metropolitana* (1817–45, 28 vols quarto). This is not the place for a full rehearsal of the sorry tale of his falling out with the publishers – richly detailed by Alice Snyder and by H. J. Jackson and J. R. de J. Jackson – but it is an object lesson in the clash between the intellectual and the practical.[9] The publishing team of Rest Fenner and Thomas and Samuel Curtis approached Coleridge because of his reputation as a thinker and, in Collison's words, they invited him 'to discuss with them the form of the ideal encyclopaedia' (p. 231). His plan was to set knowledge on a new metaphysical footing and to embody his conception of the relationship between the branches of knowledge in the form of a systematic encyclopedia. The ideal encyclopedia lived in the poet's head only. Not only was he incapable of the drudgery that editorship entailed, and unwilling to submit to the particular enslavement the publishers demanded (they required him to quit his Highgate residence, where he was under his doctor's care, and remove to Camberwell to live under the printer's thumb), but the publishers were not prepared to embody Coleridge's ideal. They remodelled his intellectual edifice and mishandled the business, bankrupting themselves and cheating Coleridge in the process. Nevertheless, his 'General Introduction; or, A Preliminary Treatise on Method', which appeared in different versions in the *Encyclopaedia Metropolitana* and *The Friend*, represents a significant attempt to reorder the world.[10]

Hannah More did not contribute to a multi-volumed encyclopedia, but she did attempt to reform the education of all the social classes from royalty to the rabble. Her work was encyclopedic in that it was both universal

in scope and analytical in structure. In her educational writings and practical projects, More insisted on social inclusion (she addressed herself to each social class in turn) and social order (the strict separation of classes within a providentially governed whole). Her educational writings ranged from *Hints Towards Forming the Character of a Young Princess* (1805) to the *Cheap Repository Tracts* (1795–98). Her *Strictures on the Modern System of Female Education* (1799) reflects her experience of mingling with fashionable society and of running schools for the daughters of Bristol merchants.[11] She also famously and controversially set up a series of Sunday schools in the Mendips to provide basic education for the rural poor. Her pronouncements on the position of women are particularly interesting. She opened the intellectual circle to women at the same time as insisting that they were to be more firmly contained in their separate sphere.

Given that she did not compile a dictionary of arts and sciences, why is she included in this discussion of encyclopedias? To understand that, we need at once to refine and to extend the notion of the encyclopedia. Although the current *Encyclopaedia Britannica*, now issued only in electronic format, defines 'Encyclopaedia' simply as a 'reference work that contains information on all branches of knowledge, or that treats a particular branch of knowledge in a comprehensive manner', all the major encyclopedias of the long eighteenth century define the word in much broader terms. In the first really great English-language encyclopedia, Ephraim Chambers's *Cyclopaedia* (1728), the definition opens: 'ENCYCLOPAEDIA, the Circle, or Chain, of all Sciences and Arts'. Johnson's *Dictionary* (1755) defines 'Encyclopaedia' as 'The circle of sciences; the round of learning'.[12] In the original Greek, the term *encyclos paedia* meant something like 'general education'. The image of the circle gives us the sense of 'cyclical', therefore 'recurring', and thus it came to mean 'usual' or 'ordinary', that is, 'the traditional education' one gives a child, 'comprising letters, arithmetic, music, and dance'.[13] It came to be used to refer to the seven liberal arts – the proper schooling of a freeman. In the Renaissance, the term was first applied to what might be called 'reference works', at the same time as it became an ideal of cultured living, an ideal represented by, or aspired to by, such polymaths as Angelo Poliziano, Juan Luis Vives or Nicolas Pieresc.[14] The idea that the *paedia* is a rounded education, preparatory to something else, is lost in the definition of the encyclopedia as a work of general reference. Yet the original metaphor contained in *encyclos paedia* was still potent in the eighteenth century. The term encyclopedia connects the alphabetically ordered folios with a richer sense of the circle of learning as something that not only brought together the arts and sciences, but also united the macro- and microcosms in a harmonious sphere of divine plenitude.

The older and more ample conception of the encyclopedia would have been familiar to More. In her *Strictures on Female Education* (1799), she urged that women should follow a carefully directed programme of reading, including 'what is called dry tough reading', to strengthen the soft female mind (Vol. 1, p. 180). As with the idea of the *paedia*, this programme is preparatory: whatever strengthens the mind,

> whatever rectifies the judgement, whatever corrects self-conceit, whatever purifies the taste, and raises the understanding, will be likely to contribute to moral excellence: to woman moral excellence is the grand object of education; and of moral excellence, domestic life is to woman the appropriate sphere. (Vol. 2, p. 152)

Thus, education is a training for life. The life More imagined for women was one circumscribed by religious and domestic duty. Ironically, her own extensive education and the active public life she herself led fell without the bounds of her own sense of women's proper sphere.

Coleridge also conceived of the encyclopedia not just as a work of reference, but as a structured course of education, and one with religious aims: 'By the bye,' he wrote to Southey in 1803,

> what a strange abuse has been made of the word encyclopaedia! It signifies, properly, grammar, logic, rhetoric, and ethics and metaphysics, which last, explaining the ultimate principles of grammar … formed a circle of knowledge … To call a huge unconnected miscellany of the *omne scibile*, in an arrangement determined by the accident of the initial letters, an encyclopaedia, is the impudent ignorance of your Presbyterian bookmakers.[15]

When he complains of 'your Presbyterian bookmakers', he particularly has the *Encyclopaedia Britannica* in mind: 'Presbyterian' because published in Scotland, and the product of 'bookmakers', rather than scholars and philosophers, because it was hatched by a group in the trade. The first edition of the *Encyclopaedia Britannica* (1771) was produced by an engraver, Andrew Bell (1726–1809), and a printer, Colin Macfarquhar (*c*.1745–93), and edited by William Smellie (1740–95), a printer, scholar, scientific writer and translator. The second edition (1777–84) was not much more distinguished in academic terms: its editor, James Tytler, was an eccentric miscellaneous writer, most famous for his exploits in a hot air balloon. Macfarquhar edited the first 13 volumes of the third edition (1788–97) and George Gleig was brought in to edit the remaining six

and the two-volume supplement (1801). It was not until Macvey Napier took on the editorship of the *Supplement* to the fourth, fifth and sixth editions (1816–24) that the *Encyclopaedia Britannica* gained an editor of real intellectual stature. However, the religious allegiances of its publishers and editors were more varied than Coleridge suggests. Smellie was raised in the outlawed Presbyterian sect, the Cameronians, and became a radical Whig, committed to the democratization of knowledge; Tytler's religious liberalism and political radicalism led to his exile in Salem, Massachusetts. However, George Gleig was an Episcopalian (he became Bishop of Brechin in 1808) who forged closer ties between the Church of England and the Scottish Episcopal Church.

Because of their commitment to progressive education and their exclusion from the English universities, Dissenters were particularly interested in encyclopedias as a vehicle in the dissemination of knowledge. The compiler of the first significant English encyclopedia, Ephraim Chambers, was a Dissenter, as was his successor, Abraham Rees. Rees was a prominent Presbyterian minister who, at times when it was in question, was called upon to defend the loyalty of Nonconformists.[16] In his letter to Southey, Coleridge might also have been thinking of Rees, as the first volumes of his *New Cyclopaedia* (completed in 44 volumes in 1820) had begun to appear in 1802. Nonconformists made up a significant proportion of the 'eminent professional Gentlemen' who contributed articles to the *New Cyclopaedia*, and Rees took pains to counter charges of subversion. According to the *Oxford Dictionary of National Biography*,

> Several of the contributors were active in radical politics; one was gaoled for sedition and another indicted for treason. At the time of its publication, when philosophical radicalism was so suspect in Britain, aspects of the *Cyclopaedia* were thought to be subversive and attracted the hostility of the loyalist press. The editor and authors went to great pains to emphasize their Englishness, to the extent of Anglicizing many French words. The French kings Louis appear under the heading Lewis, for example.

Infected bales

More and Coleridge use remarkably similar terms in their attacks on encyclopedias. Both argue that under cover of retailing knowledge, encyclopedias have smuggled in subversive material. Moreover, they figure this subversion as a hidden poison or infection which is more dangerous

than obviously inflammatory material. Coleridge complains that 'infected bales, have been imported under the neutral flag of scientific instruction',[17] while Hannah More counsels that the enemies of religion and social order have planted a fly in the ointment of learning. The 'infidels' and revolutionaries who have triumphed in France, she argues, 'conscious of the influence of women in civil society' (*Strictures*, Vol. 1, p. 43), are trying to insinuate their doctrines into Great Britain by seducing the minds of women. The pernicious influences of fiction, especially sentimental novels, and of 'the doctrines of Voltaire and his associates' (p. 41) are so obvious that they can easily be avoided. The danger now comes, she warns, from the sorts of works 'hitherto chiefly addressed to the male sex' (p. 43), that is, works of learning. Alluding to the sin of Eve, she argues that 'the same allurement has been held out to women of our country, which was employed by the first philosophist to the first sinner – Knowledge' (p. 44). Christianity, she insists, calls upon 'women of rank and influence'

> to banish from their dressing-rooms … that sober and unsuspected mass of mischief, which, by assuming the plausible names of Science, of Philosophy, of Arts, of Belles Lettres, is gradually administering death to the principles of those who would be on their guard, had the *poison* [emphasis added] been labelled with its own pernicious title. Avowed attacks upon revelation are more easily resisted, because the malignity is advertised. But who suspects the destruction which lurks under the harmless or instructive names of *General History*, *Natural History*, *Travels*, *Voyages*, *Lives*, *Encyclopaedias*, *Criticism*, and *Romance*? Who will deny that many of these works contain much admirable matter; brilliant passages, important facts, just descriptions, faithful pictures of nature, and valuable illustrations of science? But while 'the dead fly lies at the bottom,' the whole will exhale a corrupt and pestilential stench. (*Strictures*, Vol. 1, pp. 31–2)

She alludes here to a number of key texts of the French Enlightenment, including Buffon's *Histoire naturelle* (1749–1804), Montesquieu's *Persian Letters* (1721), Voltaire's *Philosophical Letters* (1734) and Diderot's *Encyclopédie*. To her mind they are all dangerous because they attempt to weaken man's dependence on Providence, but, as we will see later, the *Encyclopédie* posed a particularly intense degree of danger because its form as well as its content possessed a hidden malignity.

In identifying the *philosophes* and contributors to the *Encyclopédie* as the ginger group that fomented the French Revolution, More's opinion

coincides with the conspiracy theory put forward by the arch conservative, the Jesuit émigré, Abbé Augustin Barruel. She may have read his *Mémoires pour servir à l'histoire du Jacobinisme* (1794) in the original or in an English translation published in 1798.[18] In a forcefully lurid style and obsessively ordered structure, Barruel claimed that the French Revolution was the result of a conspiracy between a triple sect of *philosophes*, freemasons and illuminés.[19] The first prong of their three-pronged attack was 'The Antichristian Conspiracy' and the 'First Means of the Conspirators' was the *Encyclopédie*.[20] According to Barruel, d'Alembert the mastermind and Diderot his side-kick pretended that the *Encyclopédie* was to be a compendium of knowledge, but really their aim was

> to convert the Encyclopedia into a vast emporium of all the sophisms, errors or calumnies, which had ever been invented against religion, from the first schools of impiety, to the day of their enterprize; and these were to be so artfully concealed that the reader should insensibly imbibe the *poison* [emphasis added] without the least suspicion. (*Mémoires*, p. 57)

The jury is still out on the question of the influence of the *Encyclopédie* on the French Revolution; indeed, the relationship between the Revolution and the Enlightenment more generally continues to generate debate.[21] The political allegiance of the historian has tended to influence, if not determine, the line that is taken: Marxist, economic, Whiggish or intellectual historians view the *philosophes* as variously irrelevant to, or a vital influence on the Revolutionaries.[22] Another way to approach the issue is to study the fate of the *Encyclopédistes* and their ideals during the Revolution. According to Roland Stromberg, 'The Jacobin followers of Robespierre and Saint-Just, who sent the Girondists to the guillotine or to suicide in '93–'94, bitterly denounced the *philosophes* and *Encyclopédistes*, who were to them almost symbols of Satanism. "Men of Letters" became synonymous with traitors' ('The Philosophes'; p. 330). The only figure whose reputation remained untarnished and was even polished up by the Jacobins was Rousseau. Even he does not provide a direct link between the *Encyclopédie* and the Revolution: not only did he break with the *Encyclopédistes*, it is also not clear how thoroughly – if at all – the Jacobins read his work. Stromberg notes the survival of *Encyclopédique* and Enlightenment ideas within the *Cercle Social*/Girondist complex (pp. 328–9). Yet it would be a mistake to identify the surviving *Encyclopédistes* themselves as Girondists, or even as belonging to or behaving like a particular group. Studies by, for example, Frank Kafker, of the political ideas

of the *Encyclopédistes* before the Revolution and of those who lived long enough to see it (hampered always by uncertainty about the actual identity of the contributors), have tended to stress their political conservatism.[23] Robert Darnton, though, rejects Kafker's findings about the opinions of the surviving *Encyclopédistes*, not least because his 38 *philosophes* are unrepresentative of the original group of three hundred or more.[24] It might also be objected that, with a phenomenon as unstable as the Revolution, it is impossible to predict how anyone might have reacted to the changing situation. Beliefs espoused in the 1750s and 1760s might not have been upheld in the 1790s. The *Encyclopédistes* might well have seen the Revolution as a betrayal of their principles.[25] Nevertheless, enemies of the Revolution such as Barruel perceived them as its progenitors: 'The French Revolution has been a true child to its parent Sect; its crimes have been its filial duty; and those black deeds and atrocious acts the natural consequences of the principles and systems that gave it birth' (Barruel, *Mémoires*, p. viii).

Writing nearly twenty years later, Coleridge argues that the pernicious influence of the *philosophes* has been dispersed and passed down the line of encyclopedic inheritance. For him the dangers of the *Encyclopédie* are too obvious; the new threat comes from apparently innocent British encyclopedias. He ends his Prospectus to the *Encyclopaedia Metropolitana* with the warning that

> Not only open warlike stores and the avowed and ostensible implements of hostility against the truths of Natural as well as Revealed Religion, but infected bales, have been imported under the neutral flag of scientific instruction; and the melancholy distinction of having perverted a work devoted to the Arts and Sciences into a vehicle for the contraband wares of licentiousness, materialism and infidelity, is no longer left entire to the volumes of the French Encyclopaedia. (p. 582)

Coleridge reinforces More's suggestion of secret infection with martial imagery and reference to the dirty tricks of war. In hinting at the unorthodox tendencies of Rees's *Cyclopaedia* (1802–20), or the supposed materialistic tendencies of the *Encyclopaedia Britannica* – incidentally, his closest commercial rivals – the suggestion is that, if there are not quite Jacobins under the bed, these (mildly) unorthodox encyclopedias pose a threat to the established beliefs and institutions of Church and State.[26]

Desultory reading

More and Coleridge objected to both the form and the content of encyclopedias. Coleridge in particular develops a complex critique of the relationship between form and content: the arrangement of the Enlightenment encyclopedia betrays the fact that it is based on a false 'idea' of knowledge. For both of them, the principal danger inheres in the fragmented form of the modern encyclopedia – a form which, they argue, fosters ways of reading that ultimately damage desirable habits of mind. Coleridge was concerned that the *Encyclopaedia Metropolitana* should constitute a continuous discourse so as not to encourage 'the dangerous habit of desultory and unconnected reading, than which perhaps scarce any thing tends more to weaken alike the morals, the judgement, and the memory' (Prospectus, p. 586).[27] Desultory implies superficial and unmethodical and of course derives from the idea of jumping or even vaulting over, thus skipping, the important things.

Both More and Coleridge associate encyclopedias with other kinds of fragmentary texts: abridgements, anthologies, essays, collections of 'beauties' of literature which, according to Leah Price, increasingly constituted middle-class reading.[28] More complains that women in particular are led into 'desultory and unconnected reading', because they are encouraged to read abridgements and discouraged from tackling substantial texts. 'Desultory reading' prevents them from understanding the divine order that underlies the creation:

> in those crippled mutilations they have seen nothing of that just proportion of parts, that skilful arrangement of the plan, and that artful distribution of the subject, which, while they prove the master hand of the writer, serve also to form the taste of the reader, far more than a dis-jointed skeleton, or a beautiful feature or two can do. The instruction of women is also too much drawn from the scanty and penurious sources of short writings of the essay kind: this, when it comprises the best part of a person's reading, makes smatterers and spoils scholars; for though it supplies ready talk, yet it does not make a full mind; it does not furnish a store house of materials to stock the understanding, neither does it accustom the mind to any trains of reflection; for the subjects, besides being each succinctly, and, on account of this brevity, superficially treated, are distinct and disconnected; they form no concatenation of ideas, nor any dependent series of deduction. Yet on this pleasant but desultory reading, the mind which has not been trained to severer exercise, loves to repose itself in a sort of creditable

> indolence, instead of stretching its power in the wholesome labour of consecutive investigation. (*Strictures*, Vol. 2, pp. 58–9)

It is necessary to quote at such length because More is not a pithy writer; indeed, I would suggest that the prolixity of her style enacts her argument. She eschews aphoristic statements that could be easily extracted. Rather, her complex syntax enforces moral lessons: the gradual unfolding of her argument forces the reader to exercise patience and to attend to the interconnectedness of her ideas. Thus her style is of a piece with her objections to anthologies and encyclopedias, which she accuses of relaxing the mind too much. Her works, in contrast, aim to demonstrate the providential order of the world and create mental habits which prepare the reader for living a good life.

Encyclopedic order

Coleridge obviously took his objections to the organization of encyclopedias much further than More, in that he drew up a plan for an encyclopedia along new lines. His plan was to organize the volumes in accordance with the inner structure of knowledge itself. In his 'Treatise on Method', he claims that 'to *methodize* such a compendium has either never been attempted, or the attempt has failed, from the total disregard of those general connecting principles, on which Method essentially depends' (p. 629). However, he underestimates the extent to which an intellectual plan underlay the alphabetical order of some of his predecessors. In fact, it had become a tradition that successive encyclopedists would dismiss their predecessors at the same time as they were heavily dependent on them. Ephraim Chambers, in the Preface to the first edition of his *Cyclopaedia* (1728), argued that 'Former Lexicographers have not attempted anything like Structure in their Works; nor seem to have been aware that a Dictionary was in some measure capable of the Advantages of a continued Discourse' (p. i). Chambers's statement is quoted in a number of post-Revolutionary encyclopedias, which cite him admiringly as the father of the modern encyclopedia.

The chief Enlightenment encyclopedias were compiled with an underlying scheme in mind, even if in practice readers merely consumed them bit by bit. Although the *Cyclopaedia* was arranged alphabetically, Chambers claimed in his substantial Preface that branches of knowledge could be reassembled and the circle of knowledge be rounded by following his system of cross-references and attending to his diagrammatic representation of the structure of knowledge. The cross-references were more than a

practical convenience: they embodied the Lockean conception of understanding that underpinned the *Cyclopaedia*. That is, the individual articles were analogous to the sense-impressions which Locke claimed the mind passively received. Articles on complex terms were analogous to the ideas produced by reflection on discrete sensations, and the cross-references were to act like chains of association linking the ideas together.[29] However, much of the scientific content of the *Cyclopaedia* was Newtonian – that is, in the mixed mathematical rather than empirical, Lockean mode. Nevertheless, Coleridge would have rejected Chambers's conception of knowledge as materialistic, because it assumed that ideas were formed by the mechanical assemblage of sensations that were merely physical in origin. As he argued at length in his *Biographia Literaria* (1817), perception could not be reduced to the impression of an external object on a passive mind; rather, it was 'a repetition in the finite mind of the eternal act of creation in the infinite I AM'.[30]

Others objected to Chambers's mental order. Smellie and the other early editors of the *Encyclopaedia Britannica* argued that the alphabetical arrangement of articles which dominated encyclopedia-making after Chambers was not really encyclopedic. By concentrating some at least of its material into substantial treatises or systematic digests of each branch of science, editors claimed that their work preserved the structure of knowledge. Nevertheless, their long articles on, say, Chemistry and Mechanics were arranged alphabetically and interspersed with articles of different degrees of brevity. Coleridge objected that the plan of the *Encyclopaedia Britannica* 'consists in the more or less complete disorganization of the Sciences and Systematic Arts' (*Prospectus*, p. 579).

Although critics and historians have questioned the politics of the contributors to the *Encyclopédie*, there is a general acknowledgement that Diderot and d'Alembert's project was radical in nature on both a theoretical and a practical level.[31] The organization of the *Encyclopédie* posed a challenge to orthodoxy and was intended to construct new ways of thinking. Because the ordering of knowledge in the *Encyclopédie* is explored at greater length by David Adams in his contribution to this volume, I will mention only the tree of knowledge as set out in d'Alembert's *Discours préliminaire*, and the often subversive effect of Diderot's cross-references.

Like Chambers, d'Alembert maintains a basic Lockean distinction, elaborated by Condillac, between the senses and reason, representing primary and secondary knowledge.[32] As well as discussing how the individual acquires knowledge, d'Alembert sketched a conjectural history of the development of branches of knowledge, in the first instance on the basis

of human need (pp. 15 ff.). Yet he also follows Francis Bacon in dividing the branches of knowledge according to whether they are derived from the mental faculties of Memory, Reason or Imagination. Thus history, both natural and human, appears under Memory; physics and metaphysics under Reason; and the fine arts under Imagination. Whereas Bacon had allowed a separate tree for theology, the *encyclopédistes* subordinated theology to reason. It is a branch of philosophy, admittedly the first branch, but it is not the trunk or the centre or the apex, as it would have been in a medieval scheme of knowledge. Moreover, their 'reason' was empirical, not abstract, so knowledge of God had to be dependent on the evidence of the senses, rather than on metaphysical speculation or divine revelation.

Their system of cross-references was more extensive than that of Chambers. Diderot intended them to form a chain that linked the articles and even revealed the secret unity of all knowledge. Yet he also used them to fracture traditional systems of belief by forging ironic and satirical connections. Thus consulting the article 'Anthropophagy', the reader was instructed to 'See: Eucharist, Communion'; 'Freedom of Thought' led him to 'Intolerance & Jesus Christ'.[33] The *Encyclopédie* was far from being a perfect work, as Diderot himself admitted; in some respects it was more elliptical than circular. Nevertheless, Diderot intended it to fracture the intellectual order of the *ancien régime*; its very publication was a challenge to orthodoxy.

Coleridge's method

The *Encyclopédie* was the most notoriously 'impious' encyclopedia. Yet all the major Enlightenment encyclopedias were dangerous in the view of Coleridge: even if they were not obviously subversive, they threatened the unity of knowledge by organizing their articles alphabetically. Alphabetical order is not really order: it does not impart an understanding of the interrelatedness of the sciences or the structure of knowledge on a more profound level. So an alphabetical encyclopedia was a contradiction in terms: 'If ever we recall the original import of the word, (Instruction in a circle) it is to provoke an innocent smile at its incongruity with its present application – viz. Instruction in a straight line from A. to Z.' ('Prospectus', p. 579). The *Encyclopaedia Metropolitana* had to have an alphabetical miscellaneous section, but Coleridge was dismissive of it. Towards the end of his Treatise, he tucks away the comment 'Of the Miscellaneous or Alphabetical Division we have little to add' ('Treatise', p. 683). The only positive claim he could make about it was that he had not overused or

abused the system of cross-references: 'Throughout the ENCYCLOPAEDIA METROPOLITANA, the philosophical arrangement predominates and regulates; the alphabetical arrangement, and the references, whether to it or from it, are auxiliary' ('Treatise', p. 684). The 'philosophical arrangement' is the most distinctive feature of this encyclopedia.

Most importantly, all of the Enlightenment encyclopedias were, according to Coleridge, based on a mistaken conception of knowledge. For him it was vital that an encyclopedia – like all forms of knowledge – should be based on a proper 'Method'. 'Method', he asserts, 'results from a balance between the passive impression received from outward things, and the internal activity of the mind in reflecting and generalizing' ('Treatise', p. 652). However, lest this be thought to imply a support for Locke's argument that impressions of the external world precede ideas derived from mental processing of sense data, Coleridge insists that ideas are prior to impressions: 'There are certain stores proper, and as it were indigenous to the mind, such as the ideas of number and figure, and the logical forms and combinations of conception or thought' ('Treatise', p. 634). Even in experimental natural philosophy, the idea must precede the experiment, or the results will be meaningless.

Moreover, Coleridge's philosophy entails a fundamental division between sciences which deal with 'ideas' or 'laws', and those which deals with mere 'theories'. That is, he distinguished between, on the one hand, the '*Pure Sciences*', which 'represent pure acts of the mind' ('Treatise', p. 675) and concern fundamental laws of relation, and, on the other hand, the '*Mixed and Applied Sciences*', which concern the external world, or nature, and are necessarily 'theoretical' (that is, hypothetical) because they cannot produce fundamental laws from anything as changeable as experience ('Treatise', p. 677). Grammar, Logic, Mathematics, Metaphysics, Morals and Theology he classifies as Pure Sciences. Examples of his Mixed Sciences include: Mechanics, Pneumatics and Astronomy. Under Applied Sciences, he lists Experimental Philosophy with branches such as Electricity and Chemistry; Useful Arts such as Agriculture and Commerce; Natural History and Applied Natural History (including Anatomy, Pharmacy and Medicine) (see the Plan of the *Encyclopaedia*, pp. 686–7). Coleridge's thinking here is fundamentally Platonic, even though he hoped that he had squared the philosophical circle by reconciling Plato's metaphysics and Bacon's empiricism ('Treatise', pp. 659–68).

How did Coleridge envisage that his philosophical method would be embodied in the actual arrangement of the *Encyclopaedia Metropolitana*? (I phrase it thus because the publishers did not carry out his wishes to the letter.) There are several key features of his concept of method which

could readily be instantiated in the order of the book. Obviously, knowledge in Coleridge's encyclopedia could not be ordered alphabetically. First, since method, in his view, means progressive transit, the *Encyclopaedia* was to be a course of education to be read in order, rather than a work of reference to be dipped into at random. Second, metaphysics precedes physics: the Pure Sciences with their supposed basis in innate ideas occupied the 'First Division', comprising two volumes, and provided a foundation for the Mixed and Applied Sciences of the 'Second Division', which occupied the next six volumes. Third, the different branches of science were conceived of as being each independent, but also related and parts of a whole:

> as each of these great divisions of knowledge [the Pure and the Mixed] has its own department in the grand moral science of man, it is obvious that a scheme, which, like our own, not only contains each separately, but combines both as indivisible, the one from the other; must present, in the most advantageous point of view, whatever is useful and beautiful in either. ('Treatise', pp. 678–9)

These great divisions were not equally valuable to Coleridge, but were subordinated in an intellectual and indeed moral hierarchy:

> we now allude to the subordination which necessarily arises among the different branches of knowledge, according to the difference of those ideas by which they are initiated and directed: for there is a graduation of ideas, as of ranks in a well ordered state, or of commands in a well regulated army ('Treatise', p. 635).

The Romantic poet who had been kept under government surveillance as a suspected Jacobin sympathizer had now completed his transformation to a conservative who upheld the 'ranks of a well-ordered state'. That transformation was wrought both by his philosophical researches and by his response to the events that followed the French Revolution.

In addition, the status and coherence of the chief ideas were to be maintained by separating the essentials from the finer details. The chief ideas were to be dealt with in Treatises, the details relegated to the 'Fourth Division', the 'Alphabetical, Miscellaneous, and Supplementary' volume ('Treatise', p. 687). Again, this arrangement was motivated by the premise that 'the philosophical arrangement predominates and regulates': 'Practical detail, and niceties or peculiarities of construction, can seldom be interwoven with propriety among the regular deductions of a

methodical treatise' ('Treatise', p. 684). The details were necessary to the big idea, but had to be kept at arm's length.

The position of the Fine Arts was crucial to Coleridge's conception of the hierarchical unity of knowledge. For him, Fine Arts such as '*Poetry*, *Painting*, *Music*, *Sculpture*, *Architecture*' lay between the Pure and the Mixed Sciences because they combined an idea that came from within the artist with sensible impressions which came from without. Before an artist can respond to the external, he must be 'impelled first by a mighty, inward power' ('Treatise', p. 681). This concept of genius, which he had recently elaborated in his *Biographia Literaria*, accounts for a feature of his Treatise which must have puzzled his publishers and readers: between his discussion of the physical sciences and his analysis of Plato and Bacon, he breaks into an apparent digression on Shakespeare (which runs to eight pages in the Bollingen edition). One of his aims is to defend Shakespeare against the charges levelled by French critics such as Voltaire, that he was a barbarian who could not follow the laws of poetry.[34] But the main point is to prove that artists in general are guided by method; they demonstrate 'that Method results from a balance between the passive impression received from outward things, and the internal activity of the mind in reflecting and generalizing' ('Treatise', p. 652). Thus they provide a bridge between the pure and applied sciences. This rather obscure and idiosyncratic conception of the place of the Fine Arts did not meet the publishers' sense of what made for a saleable encyclopedia. Their decision to demote them apparently provoked – or provided an excuse for – Coleridge's withdrawal from the editorship.[35]

In limiting the cross-references, Coleridge maintained the integrity of the chief ideas and avoided one of the chief inconveniences of encyclopedias published serially: as Benjamin Franklin complained, a reader could wait ten years for a cross-reference. Equally, Coleridge eschewed encyclopedic serendipity – the accidental juxtaposition which, for example, throws together Egypt and Ejaculator, Egg and Elastic, or Frank and Fraud, Freedom and Fratricide (*Encyclopaedia Britannica*, 1st edn, Vol. 2, pp. 469, 630–1), or which sparks off new trains of thought by leading the reader away from the main subject into its ramifications. Coleridge hoped to control the way people read the encyclopedia, making the reader stick to the path of progressive improvement along predetermined lines.

Coleridge's implied reader is different from that envisaged for most encyclopedias of this period. His construction of the ideal reader marks out his conception of the social function of self-directed education (which is ultimately what an encyclopedia is about) as being different from that of both the Enlightenment and the post-Revolutionary encyclopedists.

The encyclopedia in the long eighteenth century was an experiment in harnessing developments in commercial printing and in literacy in order to distribute knowledge along the axis of a wider range of social classes, as well as along the axis of the alphabet. That is, it was more or less a democratizing project. This was increasingly the case in the nineteenth century: encyclopedias aimed at the middle and lower classes proliferated. Most encyclopedias tried to maximize their sales by claiming that they possessed universal appeal. Thus the aptly named *Pantologia* (1813) claimed to be equally useful for 'the clergyman and the magistrate, the man of business, and the man of ease; to the merchant, the manufacturer, the agriculturalist, and the philosopher; the student in law, medicine, theology, or polite literature' (p. 5). The *London Encyclopaedia* (1829) boasted a similar list of potential buyers, but its editor seems to have envisaged that it would appeal more directly to a lower class of people than clergy and magistrates. Indeed, in the Publisher's Address, Thomas Tegg adopts a campaigning tone, declaring that a great range of people, including classes 'deemed hardly susceptible of intellectual culture' are now educating themselves. He boasts of its 'unprecedented cheapness' compared to other encyclopedias on the market, and declares: 'IT IS AN ENCYCLOPAEDIA FOR THE PEOPLE' (p. vi). When he refers to more exclusive encyclopedias, Tegg undoubtedly alludes to the *Encyclopaedia Metropolitana*. The editor of the *London Encyclopaedia* was Thomas Curtis, who, after Coleridge withdrew, took over the editorship of the *Metropolitana* until he was replaced by Edward Smedley.[36]

Coleridge's views were implicitly and explicitly hierarchical and elitist. The inclusion of untranslated Latin and Greek in his Prospectus and Treatise indicates that he had in mind an audience whose members already possessed a certain degree of education. Yet he implicitly patronizes such people by arguing that they will not be able to acquire knowledge without him to guide them. To illustrate the importance of his method, he asks his readers to 'imagine an unlettered African, or rude, but musing Indian' unable to understand the Bible on his own: 'But see, the friendly missionary arrives!' ('Treatise', pp. 672–3). Coleridge is that friendly missionary and we are the unlettered Africans. We are subordinated in his hierarchy of knowledge, which grades ideas and people like 'ranks in a well ordered state' ('Treatise', p. 635).

Hannah More's social and intellectual circle

More's encyclopedic discourse was also aimed at restoring social order, but the sense that she was more in line with the trajectory of history is

suggested by the subtitle of Anne Stott's biography of More: *The First Victorian*. There are several significant differences between the approaches and assumptions of More and Coleridge. For example, More's plans were more practical than those of Coleridge. She did not only frame her theories in treatises, but put them in practice in schools aimed at both rich and poor. Moreover, whereas Coleridge implicitly aimed to establish an intellectual and spiritual elite which, one presumes, would be male, More opens education to women, though she aimed to situate them more firmly in their position in the social scale.

More's educational work, both her treatises and her schools, manifest a comparable concern with the twin themes of unity and division. She believes in social unity, but a unity with strictly demarcated hierarchy. Different subjects were appropriate for the upper, middle and lower classes. Her governing principles were utility and stability: she wanted each group to learn what was useful to maintain its station in life, not to advance up the social ladder. She argued that each class experienced different circumstances and thus had varying scope for intellectual enlargement. The class division is further subdivided by gender: women are to learn enough to fit them for their appropriate and subordinate sphere.

More frequently employs the vocabulary of encyclopedic discourse, referring to parts and wholes, subordination, division, order, method, circles and dependence. It is also a political vocabulary. In a well-known passage in her *Essays on Various Subjects, Principally Designed for Young Ladies* (1777) – a work she later rejected – More compared the intellectual capacities of men and women and declared her own sex to be inferior in many ways: 'Women consider how things may be prettily said; men how they may be properly said. – In women, (young ones at least) speaking accompanies, and sometimes precedes reflection; in men, reflection is antecedent.'[37] Although her later *Strictures on the Modern System of Female Education* (1799) is much less trivializing and conventional in its assessment of women's abilities, she still thinks in binary terms that privilege 'masculine' characteristics, even though she is arguing against the evidence of her own achievements: 'women have equal *parts*, but are inferior in *wholeness* of mind' (*Strictures*, Vol. 2, p. 28). Because of the position they hold in the social scale, a position which suits their natural disposition, women cannot be properly encyclopedic:

> They are accurate observers, and accurate judges of life and manners, as far as their own sphere of observation extends; but they describe a smaller circle. A woman sees the world, as it were, from a little elevation in her own garden, whence she takes an exact survey of home

> scenes, but takes not in that wider range of distant prospects, which he who stands on a loftier eminence commands. (*Strictures*, Vol. 2, p. 27)

Whether or not it is intended to recall the *Encyclopédie*, More's image revises an iconic description d'Alembert presents in his *Discours préliminaire*:

> the encyclopedic arrangement of our knowledge … consists of collecting knowledge into the smallest area possible and of placing the philosopher at a vantage point, so to speak, high above this vast labyrinth, whence he can perceive the principal sciences and the arts simultaneously. From there he can see at a glance the objects of their speculations and the operations which can be made on these objects; he can discern the general branches of human knowledge, the points that separate or unite them; and sometimes he can even glimpse the secrets that relate them to one another. (p. 47)

However, in her *Character of a Young Princess*, More demonstrates that while the gender divide is primary, it is modified by social hierarchy. More was urged to write a conduct manual for the eight-year-old Princess Charlotte, who was feared to be running wild after the break-up of the disastrous marriage of her parents, the Prince of Wales and Caroline of Brunswick (see Stott, pp. 260–7). To More this was an urgent duty because, as she had already argued in *Thoughts on the Importance of the Manners of the Great to General Society* (1788), the upper echelons of society ought to set a good example to the lower orders. This was especially the case in a time of national crisis, when the Emperor Napoleon was practically knocking on the door. The education of a princess – the formation of her character – had to be different from that of a humble citizen: 'Her mind should be trained to embrace a wide compass; it should be considered distinctly, yet connectedly, with strict attention to its due proportions, relative situations, its bearings with respect to others, and the dependence of each part on the whole' (*Character of a Young Princess*, p. 33). A future monarch has to bear everything in mind and order the separate parts methodically. Poor Charlotte could not bear More's comprehensive education. She complained one day that her tutor, John Fisher, Bishop of Exeter 'is here & reads with me for an hour or two every day from Mrs *Hanna* [*sic*] *More's* "Hints for forming the education of a Pss". This I believe is what makes me finde the hours so long. I *am not quite good enough* for that.'[38] Far from being free to act as she desires, More's monarch is a queen bee, maintained in her position by a system of which she is but a part.

Would Charlotte have preferred the more circumscribed education More prescribed for the middling sort? In her *Strictures*, More is strongly

critical of parents of the genteel and the middle ranks who declare '*That their daughters shall learn every thing*'; it is, she warns,

> so general a material maxim, that even unborn daughters, of whose expected abilities and conjectured faculties, it is presumed, no very accurate judgement can previously be formed, are yet predestined to this universality of accomplishments. This comprehensive maxim, thus almost universally brought into practice, at once weakens the general powers of the mind, by drawing off its strength in too great a variety of directions; and cuts up time into too many portions, by splitting it into such an endless multiplicity of employments … the care taken to prevent *ennui* is but a creditable plan for promoting self-ignorance. (*Selected Writings*, pp. 157–8)

For the middle ranks, More argues, a universal education leads to a fragmentation of the self because it allows no time for the self-reflection which is necessary for self-knowledge. Coleridge voiced a similar complaint about disintegration, but he was more concerned about how alphabetical arrangement fractured the harmony of the 'circle of knowledge', dividing it 'into innumerable fragments scattered over many volumes, like a mirror broken on the ground, presenting, instead of one, a thousand images, but none entire' (*Treatise*, pp. 683–4). This shattered mirror was of no use to the 'men of science and literature' whom he envisaged as his audience. To More the problem was that multiplication of mere 'accomplishments' distracted women from the central purpose of their lives, and denied them opportunities to enrich their minds with self-knowledge.

In the case of the lower orders, the danger was not that their minds were being turned by reading the encyclopedias and sentimental novels which, she claimed, corrupted the higher social ranks, but rather that, if they could read at all, they would read Tom Paine. His *Rights of Man* (1791) spread so quickly through the artisan class that More was prompted to respond first with the dialogue *Village Politics* (1793) and then with the series of *Cheap Repository Tracts* which she edited, distributed and partly wrote and funded from 1795 to 1798. (A second series of tracts was prompted by crisis and social unrest in 1819.) Typical of the *Tracts* is the first she wrote, *The Shepherd of Salisbury Plain* (1795), in which the indigent but contented shepherd counsels that the Bible is all the reading the poor need.[39] For the poor who could not read, More and her sisters, at great expense and personal cost, established a series of Sunday schools in the economically depressed villages of the Mendips. Although Stott's biography tends to downplay More's interest in the French Revolution and emphasizes personal more than political motives,

there is no doubt that she was seriously engaged in what was happening over the Channel, and her attempts to influence the minds of the lower orders were provoked by her fear of unrest in her own country.

These schools went beyond the kind of universal education represented by the encyclopedia in book form. They were an attempt to reinforce and reinvigorate the social order by means of literacy, religious and moral instruction, and the prescription of dress and behaviour, even diet and ritual – both mind and body were affected by the More sisters' comprehensive project. Moreover, unlike many other conservative thinkers, she was concerned for the suffering of the poor, and aware that the danger of rebellion was exacerbated by unjust treatment of them. The schools had a lesson for the rich as well as the poor.

The complexity of More's position *vis-à-vis* the social order needs to be acknowledged. At the same time as attempting to silence the protests of the poor by assuring them that the richer sort had their best interests at heart, she was also demonstrating that both rich and poor were bound in one order by the law – both human and divine. While she defends the constitution in *Village Politics*, there and in her *Hints towards … a young Princess* she advises both rulers and ruled that the British Constitution – unlike the French, whether before or after the Revolution – was a balanced constitution which supposedly ensured the rights of all parties (however limited they might be).[40] While she attempted to confine selected groups – women and the poor – within their allotted spheres, she inadvertently opened up their intellectual horizons and social opportunities. Literacy opened the world to the poor in new ways; More could not limit their reading to the Bible. The irony is that More herself was accused of conspiring with the Jacobins because the enthusiastic evangelism of her Sunday schools was branded 'Calvinism in disguise'. Calvinism and Methodism were lumped together by conservatives as being, like Jacobinism, subversive of Church and State (Stott, pp. 230–1). Furthermore, the importance she attributed to women as formers of public opinion also sat uncomfortably with her social conservatism. The fuller and deeper education she desired for women, coupled with her own example of social prominence and public activity, pointed to an enlarged sphere of activity for her sex.

Conclusion: the end of the circle

Encyclopedism after the French Revolution was put under pressure by both centripetal and centrifugal forces. On the one hand, the increasing number

and bulk of encyclopedias disseminated more knowledge to a wider range of people. On the other, their focus became narrower. There were encyclopedias for every pocket from 'penny' encyclopedias to expensive metropolitan ones. In addition, their titles now expressed local or national loyalties (Perth, London, Edinburgh, Oxford, Britain), suggesting that the Enlightenment concept of a universal Republic of Letters had had its day. Moreover, their contents were increasingly written by experts, indicating that the unity of the arts and sciences had been riven by increasing specialization and the erection of disciplinary boundaries. The fact was that knowledge was moving too quickly to be contained with the bounds of a fixed circle.

The work of More and Coleridge exemplifies and responds to these contradictory forces. They were alike in thinking that the *Encyclopédie* was fragmentary and irreligious and that these things were dangerous to the spiritual life of the individual and to the order of the state. More responded with a discourse of unity which was one of ever decreasing circles: the knowledge offered to the labouring classes was much more restricted than that she thought appropriate for the higher social echelons. Coleridge seems to have abandoned the idea of universal social appeal altogether. As a young man he had dreamed of a 'Pantisocracy'; in his later years, he pinned his faith on a select 'clerisy'.[41] Intellectually he aimed at a unified philosophical order: one that reconciled the arts and sciences, ancient and modern philosophy, subjective and objective experience, general ideas and particular details. Yet in this post-Revolutionary intellectual order, the Mind was monarch; all else was subordinated to a ruling ideal.

Notes

* I am grateful to the editors for organizing the stimulating conference from which this volume derived, and for their patience and advice in the preparation of my essay.

1. George Gleig, Preface to the *Supplement* to *Encyclopaedia Britannica*, 3rd edn (Edinburgh: Thomas Bonar, 1801), p. iv. Subsequent references to this encyclopedia will be abbreviated thus: *EB* 3, with the number referring to the edition.
2. Robert Collison, *Encyclopaedias: Their History Throughout the Ages, A Bibliographical Guide*, 2nd edn revised (New York: Hafner, 1966), p. 14. See also pp. 130–1.
3. Denis Diderot and Jean Le Ronde d'Alembert (eds), *Encyclopédie, ou Dictionnaire raisonné des sciences, des arts et des métiers*, 17 vols of text, 11 vols of plates (Paris: Briasson, David l'aîné, Le Breton, Durand, 1751–72); eight supplementary volumes were published (1776–80) after Diderot's editorship; Abraham Rees (ed.), *The Cyclopaedia: or Universal Dictionary of Arts, Sciences, and Literature,* by Abraham Rees … with the assistance of eminent professional gentlemen, 39 vols of text, six vols of plates (London: Longman, Hurst, Rees,

Orme & Brown, 1802–20); *The Edinburgh Encyclopaedia*, conducted by David Brewster … with the assistance of gentlemen eminent in science and literature, 18 vols (Edinburgh: William Blackwood and John Waugh, 1808–30); Johann Heinrich Zedler, *Grosses vollständiges Universal Lexicon aller Wissenschaften und Künste*, 64 vols (Halle and Leipzig: J. H. Zedler, 1731–50), with four supplementary vols (1751–54); Johann Georg Krunitz *et al*. (eds), *Oekonomisch-technologische Enzyklopädie, oder allgemeines System der Staats-, Stadt, Haus- und Landwirtschaft* …, 242 vols (Berlin: J. Pauli,1773–1858).

4. Anon., 'Review of Ten Encyclopaedias', *Eclectic Review,* 5 (1809), p. 541. The *Eclectic Review* was an avowedly Christian publication, the profits of which went to a society for Circulation of the Holy Scriptures; it was designed to limit the dissemination of 'pernicious principles under the most popular and specious forms' of literature (Preface, non-paginated).
5. *EB* 3, ed. Colin Macfarquarhar and George Gleig, 18 vols (Edinburgh: A. Bell and C. Macfarquhar, 1797), *EB* 4, ed. James Millar, 20 vols (Edinburgh: A. Constable & Co., 1810), *EB* 5, ed. James Millar, 20 vols (Edinburgh: A. Constable & Co., 1815), *EB* 6, ed. C. McLaren, 20 vols (Edinburgh: A. Constable & Co., 1823); *Supplement to the Third Edition of the Encyclopaedia Britannica*, ed. Gleig, 2 vols (Edinburgh: T. Bonar, 1801); *Supplement to the Fourth, Fifth and Sixth Editions of the Encyclopaedia Britannica,* ed. Macvey Napier, 6 vols (Edinburgh: A. Constable & Co., 1816–24); William Henry Hall and Thomas Augustus Lloyd, *The New Royal Encyclopaedia,* 3 vols (London: C. Cooke, 1791), various editions, sometimes called *New Royal Encyclopaedia*; Alexander Aitchison (ed.), *Encyclopaedia Perthensis; or Universal Dictionary of the Arts, Sciences, Literature, etc*., 23 vols (Perth: C. Mitchell, 1796–1806); 2nd edn, including *Supplement*, 24 vols (Edinburgh: J. Brown, 1807–16); Anon., *The English Encyclopaedia*, 10 vols (London: G. Kearsley, 1802); *Pantologia; A New Cyclopaedia, Comprehending a Complete Series of Essays … Alphabetically Arranged*, by G. M. Good, Olinthus Gregory and N. Bosworth, 12 vols (London: G. Kearsley, etc., 1802–13); *Cyclopaedia*, ed. Abraham Rees (1802–20); George Gregory, *A Dictionary of Arts and Sciences*, 2 vols (London, 1806, 1807); William Nicholson, *The British Encyclopedia; or, Dictionary of Arts and Sciences*, 6 vols (London: Longman, Hurst, Rees, Orme, etc., 1809); William Moore Johnson and Thomas Exley, *The Imperial Encyclopaedia*, 4 vols (London: J. & J. Cundee, 1812); G. Gregory, *A New & Complete Dictionary of Arts & Sciences* (London: S. A. Oddy, 1813); *The Edinburgh Encyclopaedia*, ed. David Brewster (1808–30); John Wilkes *et al*. (eds), *Encyclopaedia Londinensis*, 24 vols (London: for the proprietor, 1810); *Encyclopaedia Metropolitana; or, Universal Dictionary of Knowledge, on an Original Plan: Comprising the two-fold Advantage of a Philosophical and an Alphabetical Arrangement*, edited by the Rev. Edward Smedley … the Rev. Hugh James Rose … and the Rev. Henry John Rose, 29 vols (London: B. Fellowes, F. & J. Rivington, etc., 1817–45); *Encyclopaedia Edinensis, or, Dictionary of Arts, Sciences and Literature,* chiefly edited by J. Millar, 6 vols (Edinburgh: J. Anderson Jr., 1827); *The London Encyclopaedia, or Universal Dictionary of Science, Art, Literature, and Practical Mechanics …* By the original Editor of the *Encyclopaedia Metropolitana* [T. Curtis], assisted by professional and other gentlemen, 22 vols (London: T. Tegg, 1829). Significant encyclopedic works published shortly after my period include *The Cabinet Cyclopaedia*, conducted by … D[ionysius] L[ardner], etc., 133 vols (London, 1830–49) and *The Penny*

Cyclopaedia, published by The Society for the Diffusion of Useful Knowledge in 27 vols in 14 with two supplementary volumes between 1833 and 1846.

6. See, for example, the article on the Guillotine in *EB* 3 *Supplement* quoted in Richard Yeo, *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture* (Cambridge: Cambridge University Press, 2001), p. 184. Implicit or explicit political allegiances were commented on by readers. A reviewer noted of *EB* 3 that 'Its theology is generally sound; and its politics apparently the result of honest conviction, though often delivered in the intemperate tone which marked most political discussions 10 years ago.' Of *EB* 4, he complained that 'The tone of the political discussions *is a little relaxed*' (*Eclectic Review*, 5 (1809), pp. 547, 551.) The editor of the *Encyclopaedia Perthensis* (1816) complained of the difficulty of keeping up with events in France, but hoped to have made the best of it by reclassifying the country: 'the various convulsions and terrestrial arrangements which have resulted from the revolution of France, were purposely referred from the word FRANCE to the word REVOLUTION, that the sketch of events might be as complete and as recent as possible. The article REVOLUTION further refers to the article WAR, under which the chain of events is wrought down to the latest period, and almost to the completion of the work' (Preface, pp. 5–6). Not all encyclopedias managed to keep up to date: *The London Encyclopaedia* (1829), s.v. 'America' takes the continent's history only up to the settlement of Louisiana in 1732.
7. They share another distinction pointed out by Anne Stott: More's 'now forgotten play *Percy* was the most successful tragedy of its day, only eclipsed a generation later by Samuel Taylor Coleridge's equally forgotten *Osric*' (Stott, *Hannah More: The First Victorian* (Oxford: Oxford University Press, 2003), p. vii).
8. For the *Bibliotheca Britannica*, see *Collected Letters of Samuel Taylor Coleridge*, ed. Earl Leslie Griggs, 6 vols (Oxford: Clarendon Press, 1966–71), Vol. 2, pp. 955–6, 960–4; for the 'Propaedia', see Coleridge, 'General Introduction; or, A Preliminary Treatise on Method', in *The Collected Works of Samuel Taylor Coleridge*, Vol. 11, *Shorter Works and Fragments*, ed. H. J. Jackson and J. R. de J. Jackson (Routledge: Bollingen Series LXXV) (Princeton, NJ: Princeton University Press, 1995), Vol. 1, p. 626, n. 3; for the *Encyclopaedia Biblica*, see ibid., Vol. 1, pp. 393–4. A number of sketches of schemes of knowledge and discussions of the nature of knowledge punctuate his *Shorter Works* and attest to Coleridge's continued meditation on the issues tackled in his 'Treatise on Method'. He also contributed to Robert Southey's *Omniana* (1812) and mentioned a 'Plan for republishing in the form of Elegant Extracts, of Chalmers Poets, all the ana, [of] common-places, &c, chronologically arranged' in a list of Literary Projects (1821) (*Shorter Works*, Vol. 2, p. 627), but after his experience of working with Fenner and Curtis, his enthusiasm for encyclopedic projects considerably cooled. Subsequent references to the 'Treatise on Method' in the Bollingen *Collected Coleridge* appear in the text.
9. Alice D. Snyder (ed.), *S. T. Coleridge's Treatise on Method as Published in the 'Encyclopaedia Metropolitana'* (London: Constable & Co., 1934), pp. vii–xvii. See Headnote to 'Treatise on Method', in *Shorter Works and Fragments*, ed. H. J. Jackson and J. R. de J. Jackson, and *The Friend,* in *Collected Coleridge*, Vol. 4, ed. Barbara Rooke (Princeton, NJ: Princeton University Press, 1969), pp. lxxix–lxxxv; *Collected Letters*, Vol. 4, pp. 723–5 n.; and *Biographia Literaria*, in *Collected*

Coleridge, Vol. 7, ed. James Engell and W. J. Bate (Princeton, NJ: Princeton University Press, 1983), I, pp. lix–lxiv.

10. A version of the 'Treatise on Method' appeared in *The Friend,* 3 (1818) in the form of eight 'Essays on the Principles of Method'.
11. Hannah More, *Hints Towards Forming the Character of a Young Princess*, 2 vols (London: T. Cadell & W. Davies, 1805). I have consulted her *Cheap Repository Tracts* in *The Works of Hannah More*, 'a new edition', 11 vols (London: T. Cadell, 1830); *Strictures on the Modern System of Female Education* (London: T. Cadell & W. Davies, 1799) is reprinted in the series *Revolution and Romanticism, 1789–1834*, introd. Jonathan Wordsworth (Oxford: Woodstock Books, 1995).
12. Ephraim Chambers, *Cyclopædia: or, An Universal Dictionary of Arts and Sciences*, 2 vols (London: James and John Knapton, John Darby *et al*., 1728), Vol. 1 (non-paginated); Samuel Johnson, *A Dictionary of the English Language*, 2 vols (London: Knapton, Longman *et al*., 1755), Vol. 1 (non-paginated).
13. Robert Fowler, 'Encyclopaedias: Definitions and Theoretical Problems', in Peter Binkley (ed.), *Pre-Modern Encyclopaedic Texts: Proceedings of the Second COMERS Congress, Groningen, 1–4 July 1996* (Leiden, New York, Köln: Brill, 1997), p. 15.
14. On Renaissance encyclopaedism, see Binkley and Collison, *op. cit*.; Hilary Clark, 'The Encyclopedic Impulse' (www.substance.org/67/67clark_R.html); Neil Kenny, *The Palace of Secrets: Béroalde de Verville and Renaissance Conceptions of Knowledge* (Oxford: Clarendon Press, 1991); Robert Shackleton, 'The Encyclopaedic Spirit', in Paul J. Korshin and Robert R. Allen (eds), *Greene Centennial Studies: Essays Presented to Donald Greene in the Centennial Year of the University of Southern California* (Charlottesville: University Press of Virginia, 1984), pp. 377–90; William N. West, *Theatres and Encyclopaedias in Early Modern Europe* (Cambridge: Cambridge University Press, 2002), and Richard Yeo, *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture* (Cambridge: Cambridge University Press, 2001), pp. 5–12.
15. Letter to Robert Southey, July 1803, *Collected Letters*, II, p. 956.
16. According to the on-line version of the *Oxford Dictionary of National Biography*, 'He was deputed to present the address of loyalty on behalf of the three denominations (Baptists, Independents, and Presbyterians) of ministers residing in London on the accessions of both George III and George IV. On the earlier occasion Lord Halifax, lord-in-waiting, expressed the opinion that had Rees not been a Dissenter, his loyalty might have been personally rewarded.' He also defended Dissenters in his sermons, see, for example, *The Principles of Protestant Dissenters Stated and Vindicated* (London: Longman, Hurst, Rees, Orme & Brown, 1813).
17. 'Prospectus' to *Encyclopaedia Metropolitana*, *Collected Coleridge*, p. 582.
18. Abbé Augustin Barruel, *Memoirs Illustrating the History of Jacobinism*, trans. the Hon. Robert Clifford, 4 vols in 2, 2nd edn revised and corrected (London: printed for the translator, 1798). See Stott, *Hannah More*, p. 230.
19. Similarly, *Proofs of a Conspiracy against all the Religions and Governments of Europe* (London: T. Cadell, 1797) argued that the Revolution was the result of a Masonic conspiracy. Its author was John Robison, professor of natural philosophy at Edinburgh, and a significant contributor to *EB* 3 and its *Supplement*. See Yeo, *Encyclopaedic Visions*, p. 184.
20. The phrases are taken from the titles of Part 1 and of Part 1, Chapter 4 of the *Memoirs*, trans. Clifford.

21. See, for example, Paul H. Meyer, 'The French Revolution and the Legacy of the Philosophes', *The French Review*, 30 (1957), pp. 429–34; W. Paul Vogt, review of *The Influence of the Enlightenment on the French Revolution*, ed. William F. Church, 2nd edn (Lexington, MA: D. C. Heath & Co., 1974), in *The History Teacher*, 8 (1975), pp. 306–7; Carolyn C. Lougee, 'The Enlightenment and the French Revolution: Some Recent Perspectives', *Eighteenth-Century Studies*, 11 (1977), pp. 84–102; William Doyle, 'The Origins of the French Revolution: A Debate. Reflections on the Classic Interpretation of the French Revolution', *French Studies*, 16 (1990), pp. 743–8; Roger Chartier, *The Cultural Origins of the French Revolution*, trans. Lydia G. Cochrane (Durham: Duke UP, 1991); Clorinda Donato and Robert M. Maniquis (eds), *The Encyclopédie and the Age of Revolution* (Boston, MA: G. K. Hall, 1992).
22. See, for example, Roland N. Stromberg, 'The Philosophes and the French Revolution: Reflections on Some Recent Research', *The History Teacher*, 21 (1988), pp. 321–39; Thomas E. Kaiser, 'This Strange Offspring of Philosophie: Recent Historiographical Problems in Relating the Enlightenment to the French Revolution', *French Historical Studies*, 15 (1988), pp. 549–62.
23. See, for example, Alan Charles Kors, *D'Holbach's Coterie: An Enlightenment in Paris* (Princeton, NJ: Princeton University Press, 1976); Meyer, 'The French Revolution'; Frank A. Kafker, 'Les Encyclopédistes et la terreur', *Revue d'histoire moderne et contemporaine*, 14 (1967), pp. 284–95.
24. Robert Darnton, *The Business of Enlightenment: A Publishing History of the 'Encyclopédie' 1775–1800* (Cambridge, MA: Harvard University Press, 1979), p. 512. Darnton could not take into account the extension of Kafker's findings in Frank A. Kafker (ed.), *The Encyclopédistes as Individuals: A Biographical Dictionary of the Authors of the 'Encylopédie'* (Oxford: Voltaire Foundation, 1988) and *The Encyclopédistes as a Group: A Collective Biography of the Authors of the 'Encylopédie'* (Oxford: Voltaire Foundation, 1996).
25. Robert Maniquis maintains that Diderot's ideals of tolerance and inclusion were contradicted by the Revolution, and that what came after his *Encyclopédie* was a falling off from his high ideal of intellectual community (Donato and Maniquis, *The Encyclopédie and the Age of Revolution*, pp. 84–5). Blom echoes this nostalgic view: 'The Revolution had no time for the generosity of spirit that marked Encyclopedist thought. The values espoused by the Encyclopedists [toleration, optimism, gradual progress], which had once seemed likely to dominate for decades, were swiftly crushed by Europe's first, though short-lived, totalitarian regime' (Philipp Blom, *'Encyclopédie': The Triumph of Reason in an Unreasonable Age* (London: Fourth Estate, 2004)), p. 312. See also Kaiser's discussion of this issue, 'This Strange Offspring', pp. 558–9.
26. The Bollingen editors identify *EB* 5 (1815, 1817) as the target of Coleridge's attack in the passage above, but it was a reprint of the not particularly controversial *EB* 4 (1810). Possibly, Coleridge was thinking of the S*upplement* to *EB* 4–6 (1816–24), ed. Macvey Napier. It contained a number of important articles by the utilitarian political philosopher James Mill and by other progressive figures, as it proudly advertized in its Prospectus (1812) and Preface (probably not published till 1824), and thus it espoused positions antithetical to those of Coleridge. See Yeo, *Encyclopaedic Visions*, p. 258. Also compare Coleridge's complaint that the *Encyclopédie* and *Encyclopédie methodique* had poisoned 'the fountains of education' (*Collected Coleridge*, p. 673).

27. Coleridge returns to this phrase in his 'Treatise on Method': 'To oppose an effectual barrier to the rage for desultory knowledge, on the one hand, and to support that body of independent attachment to the best principles of *all* knowledge, which happily distinguishes this country, on the other, the ENCYCLOPAEDIA METROPOLITANA has been projected' (p. 674).
28. Leah Price, *The Anthology and the Rise of the Novel: From Richardson to George Eliot* (Cambridge: Cambridge University Press, 2000).
29. For Locke's influence on Chambers, see Judith Hawley, 'Sterne and the *Cyclopaedia* Revisited', in *The Shandean*, 15 (2004), p. 61, and Yeo, *Encyclopaedic Visions*, *passim*.
30. H. J. Jackson (ed.), *The Oxford Authors: Samuel Taylor Coleridge* (Oxford: Oxford University Press, 1985), p. 313. His early enthusiasm for associationism is symbolized by his naming of his first son Hartley after David Hartley, the associationist philosopher. His eventual rejection of this philosopher is narrated at length in his *Biographia Literaria*, Chapters V–VIII of which constitute a sustained attack on Enlightenment philosophy and psychology. Chapter XIII is supposed to present Coleridge's own grand theories, but fails to deliver.
31. What the *Encyclopédie* excluded as well as what it included could be seen as subversive, as Blom notes: 'a work that was to contain every workman's tool but very little information on kings, ruling houses, great battles, or saints was also revolutionary' ('*Encyclopédie*', p. 45). Daniel Brewer recognizes the radical impression given by the organization of the *Encyclopédie*, but challenges the view that the rational critical method of the Enlightenment was a liberating force. The *Encyclopédie*, he argues, by making man feel he could master knowledge, trapped Diderot in the discourse of power he attacks (*The Discourse of Enlightenment in Eighteenth-Century France: Diderot and the Art of Philosophizing* (Cambridge: Cambridge University Press, 1993), pp. 4–5).
32. Jean Le Rond d'Alembert, *Preliminary Discourse to the Encyclopedia of Diderot*, translated … by Richard N. Schwab (Indianapolis: Bobbs-Merrill, 1963), pp. 6 ff.
33. These famous examples are cited by Blom, '*Encyclopédie*', p. 154.
34. Voltaire's writings on Shakespeare are collected in a volume edited by Theodore Besterman, *Studies on Voltaire and the Eighteenth Century*, 54 (1957).
35. See *Collected Coleridge*, 11:1, pp. 576–7. Coleridge also complained that the publishers' decision to publish the alphabetical Fourth Division at the same time as the other volumes rendered the project impracticable. More's attitude to the fine arts is strikingly different: she advised Princess Charlotte that they were not worth her wasting her time on; she only needed enough knowledge to recognize and reward quality in her role as patron (*Princess*, pp. 16–17).
36. The *Metropolitana* consumed the lives of several editors besides Curtis. After Smedley's death in 1836, editorship was assumed by the Rev. Hugh James Rose, and, on his death, by his younger brother, Henry John Rose. See Collison, *Encyclopaedias*, p. 179.
37. *Essays*, pp. 9–10, quoted in Robert Hole (ed.), *Selected Writings of Hannah More* (London: William Pickering, 1996), pp. xxvi–xxvii.
38. A. Aspinall (ed.), *Letters of Princess Charlotte, 1811–1817* (London, 1949), p. 38, quoted in Stott, *Hannah More*, p. 266. A copy of the *Hints* was later given to Princess Victoria (Stott, p. 313).

39. *The Shepherd of Salisbury Plain*, in *Works*, Vol. 3, p. 432.
40. For a discussion of More's politics in the 1790s and for an analysis of her more rigidly conservative position after 1815, see Stott, *Hannah More*, pp. 138–41, 307–12.
41. The utopian plan for a Pantisocrasy was formulated with Robert Southey in 1794. Coleridge's ideas about the role of the clerisy – an educated elite who were supposed to safeguard the soul of the nation – were outlined in his *Lay Sermons* (1816, 1817) and *On the Constitution of Church and State* (1829).

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