

AN EIGHTEENTH-CENTURY TIME MACHINE

The *Encyclopedia* of Denis Diderot

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In 1755 the French philosopher Denis Diderot published his article “Encyclopedia” in the fifth volume of a work he was then editing with the mathematician Jean le Rond d’Alembert. The importance of this work, the *Encyclopedia, or a Rational Dictionary of the Sciences, Arts, and Trades* (1750–72), to the Enlightenment is difficult to overestimate. Robert Darnton, for example, refers to it as the “supreme work” of the period.¹ It remains so familiar today that it is most often simply referred to as the *Encyclopedia*. The article “Encyclopedia” served Diderot as an opportunity to reflect on the nature of the enterprise.

Diderot’s article is preoccupied with two problems, the relationship between the encyclopedia and *language* and the status of the encyclopedia in *time*. Of these two concerns, scholars know much more about the first. Indeed, it has become quite common for intellectual and cultural historians, philosophers and literary scholars to study the Enlightenment through the lens of its ideas about language.² Language served the Enlightenment as an essential model for the structure of thought and knowledge, and during that period the study of language and the study of reason frequently converged.³ As the philosopher Etienne Bonnot de Condillac put it, “Every language is an analytic method, and every analytic method, a language.”⁴ Condillac’s own work bears this out in many domains. For example, his textbook on algebra and geometry takes the form of a discourse on what he calls the “language” of calculation. And he means this literally. He treats mathematical operations as a kind of syntax, and the algebraic sign as a kind of

purified linguistic marker. Diderot's *Encyclopedia* has often, and not incorrectly, been seen in a similar light. Among other things, it is a philosophical lexicon, a "rational dictionary," a sourcebook and repertoire to accompany the rational syntax of a philosopher like Condillac. Diderot discusses this at some length in the article "Encyclopedia."

The other preoccupation of Diderot's article "Encyclopedia," the problem of the relationship between knowledge and time, has been less well explored. This is in part because it is so often taken for granted that the linguistic turn of the eighteenth century was a turn away from considerations of history and time and toward a purely universalizing perspective on the domain of knowledge. There are elements of truth in this judgment. But, as the philosophically important eighteenth-century projects on etymology, neology, and language origins all suggest, the tension between the project of seeing philosophy through the lens of language and of accounting for history, contingency, act, and change occurs during this period as just that, a tension, and many Enlightenment writers address it from one perspective or another. As Diderot's article makes plain, the question of the status of knowledge in time should be central to the project of any encyclopedia. Moreover, the importance of addressing it only intensifies given Diderot's view, and the view of many contemporaries, that the process of change in the many domains of knowledge seems to be accelerating manifold. For Diderot, the question of how to construct an encyclopedia is crucially a question of how to construct an encyclopedia in (historical) time.

In fact, this is a question in many ways novel in the Age of Enlightenment, and it echoes questions heard throughout philosophy and natural philosophy at the time. One of the distinctive aspects of this historical moment in contrast to the centuries that precede it, is a sense of vertiginous opening in the horizons of past and future. In the 1760s, for example, the natural scientist Buffon raised eyebrows among scientists and hackles among theologians by arguing that the earth might be as much as 75,000 years old. But even as he published these figures, Buffon was entertaining the possibility that the earth might be millions, not tens of thousands, of years old.⁵ Buffon's perspective (and his change in perspective) was far from unique. Historians of science refer to this moment in biology, geology, astronomy, and other areas as that of the "discovery of deep time." While this development has roots that extend earlier, its importance only became clear in the eighteenth century. To the philosophers of the Enlightenment, it appeared that much had changed very quickly. Indeed for writers such as Diderot and Buffon, it seemed that *everything* had changed in the short period since the beginning of the century, in the short period since even Isaac Newton himself had engaged in a serious attempt to reconcile astronomical chronology with the literal chronology of the Bible.⁶

It is interesting to note that Buffon recognized very clearly how great a cognitive leap would be required in order to give up the notion that the earth was really 6,000 years old, as the Church had long taught. Clearly, Buffon's hesitations in publishing his speculations about the long geological history of the earth were in part motivated by his concerns about the censorship of his ideas and the problems they posed for scriptural interpretation; but as Paolo Rossi has shown, part of his tentativeness had to do with his acknowledging the difficulty of contemplating what he called the "dark abyss" of geological and biological time. Indeed, when first presenting his new time scales, he intentionally collapsed them by tenfold or more. "This abbreviated version," he wrote, "was necessary . . . to preserve the order and the clarity of the ideas. . . . Although it is quite true that the more we stretch time, the closer we get to the truth . . . still, we must shorten it as much as possible in order to conform to the limited power of our intelligence."⁷ Over time, Buffon grew bolder, but he was always conscious of the cognitive and cultural strangeness of thinking of time in new ways.

As the dimension of the past began to burst open during the eighteenth century, a parallel development began within the dimension of the future. With the unsettling of the traditional 6,000-year history of the earth, the meaning of the future changed immensely. As J. B. Bury and Reinhart Koselleck have shown in different ways, during the Enlightenment, the meaning of the future became arguable in a way quite unfamiliar to Europeans only a generation removed.⁸ Koselleck explains that this new territory of the future, freed from the straight-jacket of eschatology, "is characterized by two main features: first, the increasing speed with which [the future] approaches . . . , and second, its unknown quality. 'Unknown' because this accelerated time . . . abbreviated the space of experiences, robbed them of their constancy, and continually brought into play new, unknown factors."⁹ With the end no longer in plain sight, Koselleck argues, imaginative demands on the future intensify sharply.

This is a period of flowering for the *uchronian* imagination, for the shift of *utopian* themes into narratives of the future. In the twentieth century it is so common to locate our *utopian* visions somewhere in the chronological future (whether in the tomorrowlands of Disney World or Star Trek), that it is difficult to remember that this convention is actually very young. Indeed, it can be dated fairly precisely to the decade of the 1770s in which, seemingly out of nowhere, a spate of novels on the great year 7603, or 1850, or 2440 all of a sudden begin to appear.¹⁰ The German critic Lessing identified a new species of writer emerging in this period, one who, "cannot wait for the future," who "wants this future to come more quickly, and . . . wants to accelerate it [himself]."¹¹ These cultural and intellectual developments

can be formulated, as they are in J. B. Bury's classic study, as elements of the invention of *the idea of progress*. But during the Enlightenment, progress *itself* was only one element in a large and contested field of ideas, perceptions, figurations, and constructions of the future and past. In contrast to the idea of progress, the more basic development in this period, recognizable as much in works of historiography, natural philosophy, philology and other fields as in explicitly progressive or futurological works, was a problem and a problematization of time.

Diderot's *Encyclopedia* makes an interesting and important study in this regard first because it figures so centrally in the conception of the Enlightenment put forward by the *philosophes*, and second because it may not be immediately evident how questions of time might influence the formulation of an encyclopedia, a work aimed, as Diderot puts it, "to collect all the knowledge that now lies scattered over the face of the earth."¹² It may be interesting all the more since, for Michel Foucault and the many historians and scholars influenced by him, the *Encyclopedia* figures so centrally as an artifact of an epistemological disposition to classify and tabulate, which either suppresses or ignores the dimension of time.¹³ In this version of the Enlightenment, language and knowledge meet in the form of the encyclopedia itself, as a great synchronic taxonomy of the world which transcends and contains any possible temporality. As Foucault puts it, characterizing the *épistémè* of the eighteenth century:

In so far as language can represent all representations it is with good reason the element of the universal. There must exist within it at least the possibility of a language that will gather into itself, between its words, the totality of the world, and, inversely, the world, as the totality of what is representable, must be able to become, in its totality, an Encyclopaedia.¹⁴

In the course of this paper I want to cast a somewhat different light on the eighteenth-century *Encyclopedia*, a work that has come to seem very familiar, perhaps too familiar to us. It seems to me that the *Encyclopedia* serves so often as a symbol of the order, stability, and universalism of the Enlightenment imagination, that it is sometimes difficult to remember or recognize how much this document speaks from and to a sense of time and the times. I want to argue that even if we recognize the *Encyclopedia* frequently expresses a longing for the synoptic, we should not lose sight of the fact that in Diderot's work this is always paired with an acute sense of time's presence and evanescence.

That the *Encyclopedia* heralded and interrogated a new kind of time is nothing one would have needed to tell an eighteenth-century observer. Contemporary readers of the *Encyclopedia* experienced it as a volatile and epoch-making text. From historians such as Robert Darnton, John Lough,

and Jacques Proust, we know that the *Encyclopedia* stirred lively controversy, and that a complicated drama of underground commerce and circulation began after the French censor withdrew permission for a work that appeared increasingly irreligious and materialist.¹⁵ We also know from contemporary sources that the *Encyclopedia* registered as much as *event* as it did as text. An eighteenth-century commentator named Jean-Baptiste Suard summed up his own reaction to the work as follows:

What a moment! and of what an era [the *Encyclopedia*] gave promise! . . . [I]t was . . . as though [its] wishes for the human race showed an almost divine force. . . [N]early drunk with so much hope for the progress of reason, [the *Encyclopedia*] prophesied a Jerusalem of philosophy that would last more than 1000 years.¹⁶

Diderot himself never adopts quite this millennial tone; indeed he tells us that he is uncertain about the stability of intellectual progress in the epoch that the *Encyclopedia* seems about to usher in, but as much as Suard, he understands the *Encyclopedia* as both the sign and the mechanism of a new kind of intellectual time.

One of the basic aims of the *Encyclopedia* is empiricist. Diderot and his original collaborator, d'Alembert, make much of the fact that in contrast to older works, the *Encyclopedia* would in important ways constitute a *primary* study of its objects. The contributors to the *Encyclopedia* would all be in some way familiar with the fields for which they were to take responsibility. The *Encyclopedia*, as they put it, would be the work of a *société de gens de lettres* and not just the scribbled summary appreciations of one or two closeted editors or the dusty accumulations of a royal academy. As the "Preliminary Discourse" to the *Encyclopedia* makes clear, the plan for the work involved legions of writers including philosophers of the most general talents such as Voltaire (who wrote the entry on "history" among others) and Rousseau (who contributed many articles on music), to writers with more specialized knowledge including scientists, teachers and men from all walks of professional life.

Diderot frames the work as a tool for a world in which "[one dares] to raise doubts about the infallibility of Aristotle and Plato," and in which "works that still enjoy the highest reputation . . . begin to lose some of their great prestige"—and may even be "forgotten entirely."¹⁷ The *Encyclopedia* is a manifesto for an explosion of the arrogance of canonical texts and for an active engagement in the material world. This aspect of the work is beautifully attested to by many rich and historically useful articles, and even more vividly by the work's broad and precise collection of plates illustrating the sciences, arts, and trades of the day, plates which in the words of Roland Barthes practice a kind of

autonomous “philosophy of the object.”¹⁸

But the problems that motivate the *Encyclopedia* and the strategies it deploys are more complex than its empiricist aspect suggests. The problem of the *Encyclopedia* is not just returning to the things themselves, but constructing a literary and intellectual mechanism capable of accounting for them in a way that will not be subject to immediate obsolescence or irrelevance. Diderot feels this problem acutely. To all appearances, in the eighteenth century the half-life of books is diminishing at an unaccountable rate. Works intended to serve generations outlive their usefulness in only ten or twenty years. Diderot writes, “[I]n every work destined for the general instruction of men, one must . . . resolve to work only for the generations to come because our moment passes and hardly will a great enterprise be completed before our generation exists no longer.”¹⁹ Moreover, a work that takes too many years to appear invariably suffers a literary stillbirth, becoming an artifact for the historian.

The fortunes of Pierre Bayle’s very important *Historical and Critical Dictionary* (1697) make a case in point. In only decades a work as substantial and as important to the *philosophes* as this had acquired the air of old age. “[I]f such has been the fate of Bayle, how much worse would have been the fate of an *Encyclopedia* executed during his time?” Diderot asks.²⁰ In the view of Diderot and d’Alembert, Bayle’s generation was still too much obliged to the memory of old ideas. A monument of criticism, Bayle’s *Historical Dictionary* nonetheless remained torn between the act of criticism and the conventional texts that it critiqued. Its very form brought quick obsolescence. Although its outward appearance was that of a dictionary much like Diderot’s own “dictionnaire raisonné,” Bayle’s work could not shake free of the old conventions of commentary. The *Encyclopedia* alphabetized a diverse list of objects, concepts, and names in a system that placed equal value in all of these potential objects of knowledge. Bayle’s *Dictionary* was a repertoire of old names. The very organization of the page in the work marks the hold of tradition. According to d’Alembert, the important parts of Bayle’s book are invariably found not in its body, but in the apparatus in the margins. D’Alembert writes, “Bayle’s dictionary is only improperly referred to as a historical dictionary; it is a philosophical and critical dictionary in which the text is only the pretext for the notes.”²¹ By contrast, the *Encyclopedia* would abandon the convention of notes, favoring the *renvois* or cross-reference where additional commentary on a particular issue was required. In this way, the *Encyclopedia* would elevate the work of criticism to the same epistemological status as the positive work of description and synthesis. This is part of its claim to modernity.

Diderot and his coeditor d’Alembert register the shock of the new in different ways. D’Alembert responds mainly to the blinding speed

with which books become obsolete. Diderot responds to the same development but also to the phenomenon of language change which appears to outstrip conventional means of accounting for it.²² The very mechanisms of knowing with which the *Encyclopedia* responds to its objects are themselves changing. Indeed, it is this reflexive aspect which most distinguishes this encyclopedia from its predecessors: Diderot’s *Encyclopedia* recognizes itself both as a symptom and an instrument of change.²³

Thus, while Diderot and d’Alembert argue that an encyclopedia such as their own had never been possible before the 1750s, by the time it had become possible, it could not be delayed another instant.²⁴ “An Encyclopedia,” writes Diderot, “should be begun, carried through, and finished within a certain interval.”²⁵ In the “Age of Louis XIV,” major philosophical, scientific, and linguistic works had taken decades to appear. The time of the Sun King expanded itself without limit. With vested interest in the extension of the time of its self-representation, absolutist bureaucracy had extended the moment of knowledge into an irrecoverable pause. The very delay instituted by academic bureaucracy had become a corruption of knowledge. “A sordid self-interest always asserts itself to prolong any work that a king has commissioned.”²⁶ What better monument to the interminableness of the academic institution than the 1694 *Dictionary of the Académie Française*? “[O]ur French academicians,” Diderot writes, “had toiled sixty years on their dictionary before having published its first edition!”²⁷ By the time it had been published as a whole, in the formerly antineological bastion of the Académie Française, a neological supplement had now to be prepared. Diderot writes,

If one should devote to a universal and systematic dictionary all the long years that the vast scope of its subject matter seems to require, it would come about, thanks to the revolutionary changes which are scarcely less rapid in the arts and sciences than in language, that this dictionary would be that of a century past, just as a dictionary of language composed slowly could only end up a list of words from an age already passed.²⁸

In all of these passages language appears as the very element of change. Revolutions in the sciences and in the arts follow after revolutions in language. Genius itself becomes possible only when the genius of language permits.²⁹

Diderot and d’Alembert imagine the *Encyclopedia* as a kind of time machine, a mechanism to release learning from the periodicity of the academies, the endless cycle of séances without progress. “Literary projects which great noblemen conceive,” Diderot writes, “are like the leaves that appear in the spring, grow dry in the autumn, and fall in a

heap in the depths of the forest where the sustenance they give to a few sterile plants is all the effect that they can be seen to produce.”³⁰ The opening pages of the article “Encyclopedia” are consumed by almost mechanical repetition of this argument against repetition and wasted time.³¹ Diderot conceives of the *société de gens de lettres* responsible for the *Encyclopedia* as a kind of counteracademy. In earlier times great works of synthesis were written by individuals and the production of works by groups tended to contribute to their tardiness and insipidness. Bayle wrote his *Dictionary* alone. The *Dictionary of the Académie Française* was written by committee. But as speed became more of an issue, the economies of time possible with a large group of collaborators became more important. The more workers, the faster the work.³²

According to Diderot, the institutional problem of timeliness multiplies almost beyond control in an age when sciences change so fast that the time between a scholarly work’s composition and publication might bring discoveries which would make it out of date. Diderot writes,

Opinions grow old and fade away just as do words; our interest in particular discoveries grows weaker day by day and then extinguishes itself. If the work is drawn out over time, we will get stuck on problems of the moment which have ceased to be at issue, and we will have said nothing about others whose time has come and gone.³³

This problem is not one that the *Encyclopedia* is entirely capable of avoiding. Diderot continues, “We ourselves have given evidence of this difficulty, as a quite significant period of time has passed between the date of this work and the moment of my writing.”³⁴ For Diderot, the delay necessitated by editing and publishing books is itself a matter of great concern. Even the act of writing implies the threat of receding time.³⁵

The technical issue of how to produce quickly a good encyclopedia is crucial to Diderot not only because he values intellectual progress in general, but also because he understands the *Encyclopedia* to be a document and an artifact of a “siècle philosophe.”³⁶ He confronts the problem of imagining a universal book in a moment, of defining his encyclopedia as a dynamic act, of telling the story in which it plays a role even by coming into existence. We live in a time, Diderot explains, when “the least common ideas of the century passed . . . become more and more common every day.”³⁷ Not two-thirds of the words in use in the past century, he speculates, remain in use now.³⁸ The vortex of change enters language itself. What were once the languages of experts, the most difficult and abstruse of words, are today common coin. He continues,

There is not a woman who has received some education who does not employ with discernment the whole range of expressions con-

secrated to painting, to sculpture, to architecture, and to belles lettres. How many children are there . . . who have learned to draw, who know geometry, who are musicians, to whom the language of the home is no more familiar than that of the arts. . . . The language, even the popular language, will come to change.³⁹

Diderot’s characterization of women’s speech is another indication that perceptions of language are changing. Molière’s caricatures of *les précieuses* are only the best known examples of the very common seventeenth-century association of women and neologism. As the passage above attests, by the time of the *Encyclopedia*, men of science, art, and industry came to imagine themselves as the primary sources of new expressions, and the project of neology (as opposed to neologism which became the derogatory term) took on new philosophical and political importance. As an account of language, the encyclopedia was an account of change, and as an account of change, of language.

For Diderot a contemporary encyclopedia must be time-bound, both in the sense that its production is subject to the constraints of time and that (regardless of universal intentions) it necessarily becomes a document of its own time. But that very fact forces us to write as much as possible into the future. Again, Diderot: “[I]n every work destined for the general instruction of men, one must . . . resolve to work only for the generations to come because our moment passes and hardly will a great enterprise be completed before our generation exists no longer.”⁴⁰

For Diderot, the principal difficulty associated with older encyclopedias has less to do with the truth of their content than with their formal inability to register and make navigable the rapids of time. In other words, the difficulty with older encyclopedias is that in the intellectual conditions of Enlightenment, they simply age too quickly:

Think of the progress that has been made . . . in the sciences and the arts! Think of the many truths that are unveiled today which were not dreamed of [a century ago]! True philosophy was in its cradle; the geometry of infinity was not yet in existence; experimental physics had scarcely appeared; dialectics did not exist; laws of sound criticism were entirely unknown.⁴¹

Certainly, in 1755, encyclopedias had existed for many years. Indeed, Diderot was aware of the great tradition of Renaissance encyclopedias. But today, Diderot asks, “What would these encyclopedias be for us?”⁴² The temporal condition of Enlightenment demands not only a new encyclopedia, but an encyclopedia of a new kind.

Diderot portrays his *Encyclopedia* as a transitional work relative to these orders of knowledge and progress. He originally proposed the

work in 1745 as a translation of a twenty-year-old encyclopedia by the Englishman Ephraim Chambers, called simply *Cyclopaedia*. But by the time that Diderot's *Encyclopedia* had begun to appear, it had metamorphosed almost beyond recognition.⁴³ The arena of the *Cyclopaedia*, Diderot writes, "expands under our feet."⁴⁴ According to Diderot the problem was not that Chambers's book was wrong, but that increasingly no book traditionally conceived could claim to be sufficient to the task of an encyclopedia. In a sense, it is the very bookness of the book that constitutes the problem, the fact that the book seals itself off against the world, explaining it, illustrating it, attempting to mirror it in structure, but finally reconstituting it as a dead object bound between two covers.⁴⁵

Understood in a certain way, we might think of this problem as an aspect of the condition of intellectual progress known as the Enlightenment. This is the condition that Diderot points to when he catalogs an explosion of novelties in philosophy, science and art, when he characterizes philosophy as having emerged from its "cradle." But Diderot's discussion of progress here is only one aspect of what he understands to be a broader phenomenon of accelerated intellectual production and change. This is Diderot, from the article "Encyclopedia," discussing the future of the book:

As long as the centuries continue to unfold, the number of books will grow continually, and one can predict that a time will come when it will be almost as difficult to learn anything from books as from the direct study of the whole universe. It will be almost as convenient to search for some bit of truth concealed in nature as it will be to find it hidden away in an immense multitude of bound volumes.⁴⁶

This vision of a kind of Borgesian Library of Babel occurs in the context of a discussion of what an encyclopedia is and does and why the present intellectual moment in particular demands such a work. The passage is somewhat surprising. On the one hand, Diderot is trumpeting some of the important intellectual advances of the day. On the other hand, he is diagnosing a condition of accelerated and accelerating intellectual production *which is anything but progressive*. He perceives the possibility of intellectual production accelerating beyond intelligibility.

In a somewhat dystopian mode, Diderot locates the *Encyclopedia* at a turning point in the history of textual production and culture. He identifies the Enlightenment with the maturity and perhaps the exhaustion of the print age. In the old scriptural economy, Diderot explains, there were few writers and many copyists. But, "if you look ahead to a future age," he continues, "and consider the state of literature after the printing press, which never rests [and which] has filled huge buildings with

books, you will find again a twofold division of labor." And some men

will . . . devote themselves to investigations which will be new, or which they will *believe* to be new. . . . The others, . . . incapable of producing anything of their own, will be busy night and day leafing through these books, taking out of them the fragments they consider worthy of being collected and preserved.⁴⁷

For Diderot, the distinctiveness of the *problem* of knowledge in the Enlightenment lies in its reflexive character. Diderot shifts the focus of epistemology to the concealment of truth within the realm of knowledge itself. As he bluntly puts it, "If we are even now ignorant of a part of what is contained in so many volumes . . . , [in the future, one] will know still less of what is contained in those same books, augmented as they will be by a hundred—a thousand—times as many more."⁴⁸

Thus, when Diderot writes that "an attempt at an encyclopedia could only belong to a philosophical age," he is up to something more complicated than promoting his own work or praising the philosophical advances of his day.⁴⁹ He is arguing that an encyclopedia of the sort that he proposes is both a symptom and necessary response to a condition of intellectual hyperactivity. The modern encyclopedia is not only inconceivable prior to the mid-eighteenth century, by the mid-eighteenth century a world without an encyclopedia has become unthinkable.

From a statistical point of view it has been well documented that in the mid-eighteenth century there were more books, more journals, more places to read, and more readers than ever before.⁵⁰ But the numbers do not capture the contemporary sense of vertigo. Practices and technologies of writing, print, and reading were associated with novelty, immediacy and change in a way that, from the point of view of our own "information age," must seem both very strange and very familiar. In Roger Chartier's account, the eighteenth-century bookshop appears the very picture of activity and anticipation. New forms of commerce and circulation appear including commercial lending libraries. The time of reading seems to accelerate, breaking the book into smaller pieces and redistributing it across assignments of time. In these days, comments one of Diderot's contemporaries, "There are works that excite such a ferment that the bookseller is obliged to cut the volume into parts in order to be able to satisfy the pressing demands of many readers; in this case you pay not by the day but by the hour."⁵¹

The *Encyclopedia* is fundamentally an artifact of this moment. It addresses this sense of accelerated time not only by providing the kind of digest mentioned earlier, but by posing the question, how can an account of knowledge comprehend and represent a process of intellectual becoming? How can an account of knowledge itself take on tempo-

ral form? Diderot's anxiety about the quickening of time is matched by his ambition for the *Encyclopedie*. A self-proclaimed manifesto of a "siècle philosophique," the *Encyclopedie* is in a special sense "historical." By virtue of its ability to make new, it creates a formal dilemma, how to remain in the present while accelerating the very process of becoming-past.

But why an encyclopedia? How does that form address the kind of temporal acceleration that Diderot perceives? Why an encyclopedia now? According to Diderot, an *Encyclopedie* is at once something more and something less than a book. More precisely, the *Encyclopedie* is what comes after books. Traditionally, an encyclopedia was understood to be a compendium. As Diderot notes, the etymology of the word, en-cyclo-pedia, suggests a compass or an encompassing of knowledge.⁵² But as we already know, Diderot understood the arena of the encyclopedia to be expanding under his feet. Diderot's encyclopedia was in this sense to be more than a book. Its ambitions were enormous, and over the course of a quarter of a century and 28 or more volumes (depending on how you count), the *Encyclopedie* described, explained, cataloged, narrated, analyzed, and depicted a breathtaking panorama of objects, ideas, and events.

At the same time Diderot's *Encyclopedie* was to be something less than a book, or less than a traditional encyclopedia. The *Encyclopedie* followed the form of another sort of work, the alphabetic dictionary: hence, the full title, *Encyclopedie, or a Rational Dictionary of the Sciences, Arts, and Trades*. The *Encyclopedie* constructed by Diderot and his collaborators disposes of the notion of a single and eternal order of knowledge, the very ordering that the term "encyclopedia" traditionally implied. It also dispenses with context and linearity. In the past, encyclopedias were usually organized in a thematic fashion, what Diderot called an "encyclopedic order," so their structure might mirror the fundamental categories of the universe of knowledge.⁵³

In order to loosen the hold of traditional categories, Diderot structured his encyclopedia as a *dictionary*, organizing the work by following the arbitrary order of the alphabet. This is not to say that in choosing "dictionary order" Diderot dispensed with the ambition to organize the universe of knowledge. It is rather to say that he insisted that such acts of ordering were just that, acts, products of a structuring imagination, and furthermore that there ought to be many ways of organizing this universe. This, he considered not only an intellectual principle but a compositional imperative in the accelerated condition of Enlightenment. The eighteenth-century linguistic turn appears to have more than just a taxonomic dimension.

The *Encyclopedie* is an *interface*. Diderot planned four basic interactive mechanisms to operate in the work. First, it could be accessed alphabetically, as an intellectual lexicon. Second, its articles could be

traversed from one to another by means of embedded cross-references or *links*. Third, the reader could begin by following either the genealogical or the rational divisions of the domains of knowledge offered in appendices to the work. Or, finally, one could begin with the plates which were themselves complexly cross-referenced with the text. Without abdicating the responsibility of conceptualizing relationships among the subjects treated, the *Encyclopedie* attempts to leave room for the active participation of its readers. D'Alembert's famous analogy between the *Encyclopedie* and a world map, which is sometimes taken to suggest the univocal and totalizing character of the work, is, in fact, intended to convey the arbitrariness of any given perspective on it. As d'Alembert puts it, "one can create as many different systems of human knowledge as there are world maps having different projections, and each one of these systems might even have some particular advantage possessed by none of the others."⁵⁴ The multiply-indexed structure of the *Encyclopedie* emphasizes the "projective" role of the reader and the readerliness of the encyclopedic text.⁵⁵

Alphabetical order, Diderot admits, is a kind of disorder. But according to Diderot (slyly evoking again an empiricist rhetoric), the disorder of the *Encyclopedie* is not so unlike the disorder one finds and sometimes appreciates in the world. He writes,

Often, alphabetical order produce[s] burlesque contrasts; an article on theology [is] relegated to the page across from the mechanical arts. . . . I insist on the liberty and the variety of this distribution.

He goes on,

In this respect, the construction of an Encyclopedia is much like the foundation of a city. One must not build all of the houses on exactly the same model even if one has found a general model, handsome in itself and suitable for any location. The uniformity of the buildings, bringing with it a uniformity in public passages would give to the whole city a sad and tiring appearance.⁵⁶

For Diderot, the qualities of "dictionary order" extend right up to chance, juxtaposition, and burlesque. The *dis-order* of the *Encyclopedie* demands an active intellectual engagement. It demands that reading be thought of as a constructive intellectual enterprise.

Thus Diderot defends the encyclopedic dictionary against the objections of traditionalists (which must seem familiar to us today) who claimed that making information accessible completely apart from context, completely apart from the necessity of reading long abstruse analytic or narrative works would "contribute to extinguishing the taste for

work and study."⁵⁷ In addition to giving the work a dynamic self-renewing quality, from even a formal perspective, the *Encyclopedia* would encourage an enlightened kind of reading. As Wilda Anderson has suggested in her excellent book on eighteenth-century scientific dictionaries, for the *philosophes* part of the critical effectiveness of a dictionary stems from the choice allowed the reader and the constant formal suggestion that every order of knowledge is in some way instrumental.⁵⁸ Structuring the *Encyclopedia* in this fashion not only provides it with the flexibility to survive changing ideas about the order and use of knowledge, it also gives it (in Diderot's famous words), "the character . . . of a good dictionary . . . which is to change the general way of thinking."⁵⁹

While it may be possible to regard the organizational apparatus of the *Encyclopedia* as static—formal, systematic and mechanical—it seems to me that such an approach drains from the work much of its interest and urgency. It is true that Diderot considered the *Encyclopedia* to be a kind of machine, but it seems to me that as historians we should be especially careful not to erase either the motivation for the invention nor the role of the mechanic in operating it. Diderot's mechanism demands an operator.

From the outset the *Encyclopedia* admits the *provisional* character of its structure. As we have seen, the work claims its authority on the basis of its ability to be new and to renew in the face of accelerating time. The progress of the reader through the work is envisioned as the motor of that renewal, a process that produces its own logic of progress. This logic interacts with but is not determined by a grand historical narrative of progress. This comes through most clearly perhaps in Diderot's and d'Alembert's presentation of the problem of progress itself. Consistent with the widely shared Enlightenment practice of "conjectural history," d'Alembert juxtaposes what he calls a "genealogical tableau" of the progress of the human mind with both an "encyclopedic tableau" and historical accounts in general. He notes that the organization of each is different, and their critical and positive values differ as well.

The genealogical tableau represents a grand narrative of progress; it is history *as it should have happened*. This is in contrast with any possible narrative of history that actually occurred. According to Diderot and d'Alembert, the interest of *either* narrative derives from its relation to the other. For the editors as for many of their contemporaries, the example of the Middle Ages serves as a constant reminder that progress of human understanding must be ever renewed and is without guarantee. The abstraction of conjectural history provides a critical key for understanding the actual history of the human mind, but never predicts or accounts for it directly. Histories constantly frustrate the story of linear progress that Reason would write for itself.⁶⁰ Thus, the *Encyclopedia* alternately nar-

rates itself in histories with different purposes, and provides the materials for still more writings and readings. Progress, for Diderot and d'Alembert, is necessarily an act. It is a constant process of re-narration, a process located at what Bronislaw Baczko has referred to as the *fringe* of utopia, a space of utopian aspiration without a utopian script.⁶¹

During the eighteenth century in Europe, certainties about the meaning and pace of time to a significant extent unraveled, and in turn, as Koselleck argues, imaginative demands on the future intensified. In my view, the case of the *Encyclopedia* bears this out. But it does so in perhaps unexpected ways. Koselleck and others such as Fredric Jameson have emphasized the formal and cultural difficulty of maintaining narratives without ends. But in some respects this is precisely what Diderot and d'Alembert set out to do. In place of the figural and proleptic imagination of Christian prophesy (in the end, this will have had meaning, the proleptic statement *par excellence*), Diderot and d'Alembert substitute an open and activist vision of the future of human knowledge (this will have had meaning once you have read it).

It is worth emphasizing that the *Encyclopedia* cannot be reduced to only this aspect. As a collective project, the *Encyclopedia* was one of the most complex works of its day, and the many issues that it raises deserve careful and individual attention. But it is equally worth emphasizing that to leave out of our account this element of the *Encyclopedia*, to treat the *Encyclopedia* as a totality rather than as a project, would be to miss a major element of the constructive and pedagogical dimensions of the work; it would also be to miss an important episode in the eighteenth-century struggle to reconceptualize past and future.

Looking backward, the success of Diderot's *Encyclopedia* is in so many ways remarkable. Centuries later the *Encyclopedia* still serves as a model for philosophical works of all sorts. It is still itself widely used in a modern edition. Students today are all familiar with the faces of the creators of the *Encyclopedia*. And schoolchildren even learn their ABC's from the names of these great men . . . Alembert, Blondel, Cahusac, Diderot, and so on.

This is what we learn from the narrator of a time-travel story written by Louis-Sébastien Mercier in 1771.⁶² In this novel, entitled *The Year 2440*, an eighteenth-century Frenchman, a contemporary of Diderot, falls asleep and is awakened miraculously some seven hundred years later. In the story the time traveler makes the acquaintance of a twenty-fifth-century philosopher who guides him on a tour through the astonishing cityscape of future-Paris. The time traveler marvels at a world in which streets are clean, government is accountable to the governed, and the uncomfortable hats of the eighteenth century have finally been replaced.

But not every artifact or memory of eighteenth-century France has

been eliminated. When the subject of education arises, the guide tells the traveler, "As soon as [our children] have reached the age of reason, we put in their hands your famous *Encyclopaedia*." To which the traveler responds, "You surprise me! The *Encyclopaedia* as a primer! Oh, what a leap you have taken toward the advanced sciences, and how ardently I desire to take instruction with you! Open your treasure chests to me, so that I may, at one fell swoop, enjoy the accumulated works of six centuries of glory!"⁶³

This is nothing less than an encyclopedist's dream, transport into the future (six centuries of intellectual glory at one fell swoop): mastery of time, that slipperiest and most troublesome of eighteenth-century problems.⁶⁴ With only the minor innovation of time travel, Mercier solves not only one of the most difficult of epistemological problems but, for the Enlightenment, one of the most timely. For better or for worse, in the *Encyclopaedia* Diderot was not blessed with the kind of fictional possibilities possessed by Mercier's narrator, and was forced to confront the same sense of an expanding future with the tools at hand: text, image, and print. His solution to these problems was to create a mechanism that resembled a book but also represented an attempt to move beyond it. Today, at a moment when posthistories of all sorts have been declared, when, to many, the book seems to have exhausted itself, and when novelities of various sorts are supposed the only constants, it may be interesting to think about the ways in which such formulations can be understood as historically particular, and perhaps also the extent to which, since the Enlightenment or the year 2440, they may not be new at all.

NOTES

1. Robert Darnton, *The Business of Enlightenment: A Publishing History of the Encyclopédie, 1775–1800* (Cambridge, MA, 1979), p. 4.
2. Outside intellectual history, this association has probably been most influential upon the subject of the French Revolution. See, for example, François Furet, *Interpreting the French Revolution*, trans. by Elborg Forster (Cambridge, MA, 1977); Lynn Hunt, *Politics, Culture and Class in the French Revolution* (Berkeley, 1984); Keith Michael Baker, *Inventing the French Revolution* (Cambridge, 1990). More directed studies include Michel de Certeau, Dominique Julia, and Jacques Revel, *Une Politique de la langue: La Révolution française et les patois* (Paris, 1975); Jacques Guilhaumou, *La Langue politique et la Révolution française: De l'événement à la raison linguistique* (Paris, 1989); and Sophia Rosenfeld, "A Revolution in Language: Words, Gestures, and the Politics of Signs in France, 1745–1804" (Ph.D. diss., Harvard University, 1996). Recent historiography of the American Revolution has taken a similar turn. See Michael Warner, *The Letters of the Republic: Publication and the Public Sphere in Eighteenth-Century America* (Cambridge, 1990); Jay Fliegelman, *Declaring Independence: Jefferson, Natural Language, & the Culture of Performance* (Stanford, 1993); Christopher Looby, *Voicing America: Language, Literary Form, and the Origins of the United States* (Chicago, 1996).
3. The most widely influential work in this regard is Michel Foucault's *The Order of Things: An Archaeology of the Human Sciences* (New York, 1973 [1966]); a great num-

ber of recent works on Foucault's arguments. Other essential works on the relationship between language and the philosophy of the Enlightenment include Noam Chomsky, *Cartesian Linguistics: A Chapter in the History of Rationalist Thought* (New York, 1966); Sylvain Auroux, *La Sémiotique des Encyclopédistes: Essai d'épistémologie historique des sciences du langage* (Paris, 1979); Daniel Droixhe, *La Linguistique et l'appel de l'histoire (1600–1800): Rationalisme et révolutions positivistes* (Geneva, 1978); and Hans Aarsleff, *From Locke to Saussure: Essays on the Study of Language and Intellectual History* (Minneapolis, 1982).

4. Etienne Bonnot de Condillac, *La Langue des calculs* in *Oeuvres de Condillac*, v. 23 (Paris, 1798), p. 1. On Condillac and the question of time, see Daniel Rosenberg, "Making Time: Language, History, and Origin in Enlightenment France and Britain," (Ph.D. diss., University of California, Berkeley, 1996), ch. 2. See also, Hans Aarsleff, *From Locke to Saussure*, Suzanne Gearhart, *The Open Boundary of History and Fiction: A Critical Approach to the French Enlightenment* (Princeton, 1984); and Jacques Derrida, *The Archeology of the Frivolous: Reading Condillac*, trans. John P. Leavey, Jr. (Lincoln, NB, 1980 [1973]).
5. Paolo Rossi, *The Dark Abyss of Time: The History of the Earth and the History of Nations From Hooke to Vico*, trans. Lydia C. Cochrane (Chicago, 1984), pp. 108–10. In the same chapter Rossi discusses Diderot's own claim to have "inserted" the idea of succession into the definition of nature. On the problem of time in various scientific fields during this period, see also, Stephen Toulmin and June Goodfield, *The Discovery of Time* (New York, 1965); Arthur O. Lovejoy, *The Great Chain of Being: A Study of the History of an Idea* (Cambridge, MA, 1936); François Jacob, *La Logique du vivant: Une histoire de l'hérédité* (Paris, 1970); Charles Coulston Gillispie, *Genesis and Geology: A Study in the Relations of Scientific Thought, Natural Theology, and Social Opinion in Great Britain, 1790–1850* (Cambridge, MA, 1951); Stephen Jay Gould, *Time's Arrow, Time's Cycle: Myth and Metaphor in the Discovery of Geological Time* (Cambridge, MA, 1987).
6. See Frank Manuel, *Isaac Newton, Historian* (Cambridge, MA, 1963).
7. Rossi, *Dark Abyss of Time*, p. 108.
8. J. B. Bury, *The Idea of Progress* (New York, 1932); Reinhart Koselleck, *Futures Past: On the Semantics of Historical Time*, trans. Keith Tribe (Cambridge, MA, 1985).
9. Koselleck, *Futures Past*, pp. 17–18.
10. See I. F. Clarke, *The Pattern of Expectation, 1644–2001* (London, 1979); Brian Aldiss, *Billion Year Spree: The History of Science Fiction* (London, 1973); and Bronislaw Baczkó, *Utopian Lights: The Evolution of the Idea of Social Progress*, trans. Judith L. Greenberg (New York, [1978]). On the relationship between the idea of progress and the science fiction novel, see Fredric Jameson, "Progress versus Utopia; or, Can We Imagine the Future?" in Brian Wallis, ed., *Art after Modernism: Rethinking Representation*. *New York: New Museum of Contemporary Art* (New York, 1984); and Fred Pfeil, "These Disintegrations I'm Looking Forward To: Science Fiction from New Wave to New Age" in *Another Tale to Tell: Politics and Narrative in Postmodern Culture* (London, 1990). On the development of the time-travel story in the nineteenth and twentieth centuries, see Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven, 1979); and Mark Rose, *Alien Encounters: Anatomy of Science Fiction* (Cambridge, MA, 1981).
11. Gotthold Ephraim Lessing from *Education of the Human Race* (1780), quoted in Koselleck, *Futures Past*, pp. 17–18. Koselleck writes, "The bearer of the modern philosophy of historical process was the citizen emancipated from absolutist subjection and the tutelage of the Church: the *prophète philosophe*, as he was once strikingly characterized in the eighteenth century. Present at the baptism of this prophetic philosopher in the role of godfather was a combination of political calculation and

- speculation on a future liberated from Christian religion.”
12. Denis Diderot, “Encyclopédie” [1755] in Denis Diderot and Jean le Rond d’Alembert, eds., *L’Encyclopédie ou dictionnaire raisonné des sciences, des arts et des métiers* (Paris, 1780; reprint as compact edition, New York, 1969), v. 1, p. 635. I have referred to the following edition for guidance in translation: Denis Diderot, *Rameau’s Nephew and Other Works*, trans. by Jacques Barzun and Ralph H. Bowen (New York, 1956).
 13. See Michel Foucault, *The Order of Things* and, equally, *The Birth of the Clinic: An Archaeology of Medical Perception*, trans. A. M. Sheridan Smith (New York, 1975 [1963]). Many readers have emphasized this aspect of Foucault’s argument more than Foucault himself, particularly in service of a contrast between eighteenth- and nineteenth-century epistemologies. See, for example, Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, MA, 1990), p. 56.
 14. Foucault, *The Order of Things*, pp. 85–86.
 15. Both Darnton and Proust give good orientations in this literature. See Darnton, *Business of Enlightenment*; Jacques Proust, *Diderot et l’Encyclopédie* (Paris, 1967); John Lough, *The Encyclopédie* (New York, 1971).
 16. P.-J. Garat, *Mémoires historiques sur la vie de M. Suard* (1820), quoted in Bronislaw Baczko, *Utopian Lights*, p. 31. On Suard, see Daniel Gordon, *Citizens without Sovereignty: Equality and Sociability in French Thought, 1670–1789* (Princeton, 1994), ch. 4.
 17. Diderot, “Encyclopédie,” p. 636a.
 18. Roland Barthes, “The Plates of the *Encyclopédie*” in *New Critical Essays*, trans. Richard Howard (Berkeley, 1990 [1972]), p. 23.
 19. Diderot, “Encyclopédie,” p. 637.
 20. *Ibid.*, p. 636a.
 21. Jean le Rond d’Alembert, “Dictionnaire” [1755] in Denis Diderot and Jean le Rond d’Alembert, eds., *L’Encyclopédie*, v. 1, p. 967.
 22. Concerns about language change had been voiced more and more often since the linguistic fashions of the late seventeenth century, and many neological dictionaries had appeared. In one of the best known, *La Dictionnaire néologique*, the notorious abbé Desfontaines had claimed that the language at court changed so quickly that it was necessary to write a primer for those in the provinces in order that they might understand and be understood at court. Molière had parodied the *préciosité* of neologism (by reflexively or unreflexively inventing the term *préciosité*). While the concerns of many of these works had more to do with fashion than science, the problem of language change was understood as pervasive. On the history of neology in eighteenth-century France, see Daniel Rosenberg, “Making Time,” ch. 6.
 23. In his most apocalyptic tone, Diderot argues that the moment of revolution is the privileged moment of the encyclopedia: “The most glorious moment for a work of this sort would be that which might come immediately in the wake of some catastrophe so great as to suspend the progress of science, interrupt the labors of craftsmen, and plunge a portion of our hemisphere into darkness once again. What gratitude would not be lavished by the generation that came after this time of troubles upon those men who had discerned the approach of disaster from afar, who had taken measures to ward off its worst ravages by collecting in a safe place the knowledge of past ages!” (author’s translation). Diderot, “Encyclopédie,” p. 637.
 24. D’Alembert, “Dictionnaire,” p. 967.
 25. Diderot, “Encyclopédie,” p. 636.
 26. *Ibid.*
 27. As much as the crown claimed to have an interest in fixing the standards of the

language, volumes of the *Dictionary of the Académie Française* appeared at a snail’s pace. In fact, at least one “immortal,” Furetière, had created a scandal by rebelling against the dictionary project and in short order issuing his own dictionary. See, especially, Ferdinand Brunot, *Histoire de la langue française des origines à 1900* (Paris, 1905–53), tome IV: *La langue classique (1660–1715)*.

28. Diderot, “Encyclopédie,” p. 636.
29. This claim echoes Condillac’s theory that genius only becomes possible at moments of linguistic exhaustion, and that it necessarily manifests itself as a way of speaking newly. Diderot makes a related point in the following passage when he describes temporalities of fashion and genius. *Ibid.*, p. 644a.
30. *Ibid.*, p. 636.
31. *Ibid.*
32. “[I]f you wish to have your work remain fresh and useful for a long time to come—by virtue of its being far in advance of the national spirit, which marches ceaselessly on—you must shorten your labors by multiplying the number of your collaborators” (author’s translation). *Ibid.*, p. 637. For the reason of promptness, Diderot recognizes that an encyclopedia can no longer be the work of one person. He writes, “When one comes to reflect upon the vast subject matter of an encyclopedia, the one thing that can be perceived distinctly is that it cannot be the work of a single man. For how could one man, in the short space of his lifetime, hope to know and describe the universal system of nature and of art, seeing that the numerous and erudite society of academicians of *La Crusca* has taken forty years to compose its dictionary, and that the members of our French Academy worked sixty years on their *Dictionary* before publishing its first edition!” (author’s translation). Again and again, Diderot and d’Alembert entwined themes of mortality and knowledge. *Ibid.*, p. 635. An interesting parallel can be drawn with Samuel Johnson’s *Dictionary* (1755). As Alvin Kernan has shown, while Johnson liked to portray himself as a solitary author, he in fact employed a great number of assistants, and the organization of the enterprise was in great measure conditioned by the logic of capitalist economies of scale. No such mythology haunted Diderot’s *Encyclopédie* which was explicitly meant to be a collaborative project. The composition of both works was governed by a perceived imperative of speed. See Alvin Kernan, *Printing Technology, Letters & Samuel Johnson* (Princeton, 1987). On the literary textures of time in Johnson and other seventeenth- and eighteenth-century British writers, see Stuart Sherman’s suggestive *Telling Time: Clocks, Diaries, and English Diurnal Form, 1660–1785*.
33. Diderot, “Encyclopédie,” p. 636a.
34. *Ibid.*
35. The perceived relationship between writing and deferral is not new to Diderot’s works. Jacques Derrida has traced the formula to Plato and has examined its implications across Western philosophy and literature. And in this respect Diderot could certainly be written into a Derridean frame. But we do this at the peril of losing perspective on the specific historical sense of this relationship for Diderot. Without objecting to the Derridean analysis from a philosophical point of view, we may from a historical point of view nonetheless observe that in Diderot’s view there is something novel about the problem of the relationship between writing and deferral. And for Diderot, recognizing the problem is precisely what makes one modern. An interesting parallel may be drawn in this respect with the sense of post-ness attributed to Derrida’s own position. See *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore, 1976 [1967]). On the “mode of temporality” of writing and publishing in the eighteenth century, see Carla Hesse, “Books in Time” in Geoff Nunberg, ed., *The Future of the Book* (Berkeley, 1996).
36. Diderot, “Encyclopédie,” p. 644a. On the idea of the century during the eighteenth

- century, see Daniel Milo, “. . . Et la Révolution ‘créa’ le siècle” in *Trahir le temps (histoire)* (Paris, 1991) and Bronislaw Baczko, *Utopian Lights*, pp. 80–81.
37. Diderot, “Encyclopédie,” p. 636a.
 38. *Ibid.*, p. 637.
 39. *Ibid.*, p. 636a.
 40. *Ibid.*, p. 637.
 41. D’Alembert and Diderot, *Discours préliminaire* in *idem.*, *Encyclopédie*, p. xxxiv. Translations modified from *Preliminary Discourse to the Encyclopedia of Diderot*, trans. Richard N. Schwab and Walter E. Rex (Indianapolis, 1963).
 42. *Ibid.*
 43. *Ibid.*, pp. xxxiv–xlv (esp. pp. xxxiv–xxxv). The usual account of this is drawn from Rousseau’s *Confessions*.
 44. *Ibid.*, p. xl.
 45. On the question of the end of the book, see esp. Geoffrey Nunberg, *Future of the Book*; Carla Hesse and Randolph Starn, eds., “Future Libraries,” (special issue) *Representations* 42 (spring 1993); George Landow, *Hypertext 2.0: The Convergence of Contemporary Critical Theory and Technology* (Baltimore, 1997); and Mark Poster, *The Second Media Age* (Oxford, 1995).
 46. Diderot, “Encyclopédie,” p. 644a.
 47. *Ibid.*
 48. *Ibid.* It is not unimportant in this regard that this is also the period of the birth of the modern review essay. Such reviews may be found, not least of all, in the *Journal Encyclopédique*. For this observation, I am grateful to Sophia Rosenfeld.
 49. Diderot, “Encyclopédie,” p. 644a.
 50. Among the many important works in this field, see esp. Lucien Febvre and Henri-Jean Martin, *L’Apparition du livre* (Paris, 1958); Gerald Graff, *The Legacies of Literacy: Continuities and Contradictions in Western Culture and Society* (Bloomington, IN, 1987); and Roger Chartier, *The Cultural Uses of Print in Early Modern France*, trans. Lydia G. Cochrane (Princeton, 1987).
 51. Louis-Sébastien Mercier from *Tableau de Paris* (1782–83), quoted in Roger Chartier, *The Cultural Origins of the French Revolution*, trans. Lydia G. Cochrane (Durham, NC, 1991), p. 70.
 52. Diderot, “Encyclopédie,” p. 636.
 53. This often meant the *trivium* and *quadrivium*. See, for example, Peter Sharatt, ed., *French Renaissance Studies, 1540–70: Humanism and the Encyclopedia*, (Edinburgh, 1976).
 54. D’Alembert and Diderot, *Discours préliminaire*, p. xv.
 55. On the literary character of these formal structures, see Roland Barthes, “Plates of the *Encyclopedia*”; James Creech, “‘Chasing after Advances’: Diderot’s Article ‘Encyclopedia.’” *Yale French Studies* 63 (1982): 183–97; Daniel Brewer, *The Discourse of Enlightenment in Eighteenth-Century France: Diderot and the Art of Philosophizing* (Cambridge, 1993); Jean Starobinski “Remarques sur l’encyclopédie,” *Revue de métaphysique et de morale* 75 (1970): 284–91.
 56. Diderot, “Encyclopédie,” p. 642.
 57. D’Alembert and Diderot, *Discours préliminaire*, p. xxxiv. See also, d’Alembert, “Dictionnaire,” p. 968. The editors point out that this approach would clear up obscurities created by the increasing specialization of knowledges. By breaking up hierarchical arrangements of subjects into generic entries that might be drawn upon by readers in many different fields, the *Encyclopedia* would work to counteract the compartmentalization of knowledge. Thus, a single entry on “analysis” referring likewise to grammar and chemistry makes a point that would more likely be lost if embedded in separate accounts of separate fields. It is interesting that Diderot also argues that if an encyclopedic arrangement had been chosen, it might

- have been difficult to convince scholars to work cooperatively on the project, as each would essentially have been writing an integral treatise and would see no particular reason not to publish it as such. Diderot’s insight may be borne out by the number of spinoff works that the later *Encyclopédie méthodique* produced. On the other hand, unlike the *Encyclopédie*, the *Encyclopédie méthodique* was capable of swallowing books whole as was the case for Charles de Brosses’s *Du Culte des dieux fétiches* (1760), for example. The criticism of encyclopedias to which Diderot responds here is similar to criticisms made of new technologies and forms of information access from writing to CD-ROM. On Plato’s critique of writing, see Jacques Derrida’s “Plato’s Pharmacy” in *Dissemination*, trans. Barbara Johnson (Chicago, 1981 [1972]).
58. Wilda Anderson argues that the dictionary “presents at least two systems of judgment . . . the institutionalized or accepted way of viewing the world is presented explicitly in each dissertation, but the totality is fragmented by the arbitrary structure of the alphabetical ordering. . . . The system of cross-references provides at least one other implicit judgment on the explicit world-view: the network of connections and oppositions brings into contact ideas which would never before have been considered in terms of each other.” Wilda Anderson, *Between the Library and the Laboratory: The Language of Chemistry in Eighteenth-Century France* (Baltimore, 1984), p. 36.
 59. Diderot, “Encyclopédie,” p. 642a. Ernst Cassirer contextualizes this statement in his discussion of the role of agency in the philosophy of the Enlightenment. See chapter one of his *The Philosophy of the Enlightenment*, trans. Fritz C. A. Koelln and James P. Pettegrove (Princeton, 1951 [1932]). On the theory of the *renvois*, Diderot continues: “Cross references to things clarify the subject; they indicate its close connections with other subjects that touch it directly as well as its more remote connections with still other matters that might otherwise be thought irrelevant; and they suggest common elements and analogous principles. They also put added stress on elements of internal consistency within groups of facts, they elaborate upon the connections that each special branch of knowledge has with its parent tree, and they give to the whole *Encyclopedia* that unity so favorable to the establishment of truth and to its propagation” (author’s translation). Diderot, “Encyclopédie,” pp. 642a. Diderot develops d’Alembert’s contrast among kinds of encyclopedic arrangement into a kind of tropology of the reference. Cross-references do more than create an economy of definition and a fabric of shared concepts. They confirm and refute inferences that may be drawn from articles, they allow for implication, and even satire. Diderot writes, “Finally, there is a kind of cross reference—it can refer either to words or to things—which I should like to call satirical or epigrammatic. Such, for example, is the one to be found in one of our articles where, at the end of a pompous eulogy, one reads: *see* CAPUCHON. The comic word, *capuchon* [monk’s hood], together with what the reader will find under the heading CAPUCHON, can easily lead him to suspect that the pompous eulogy was meant ironically, and that it is wise the read the article with the utmost precaution and with attention to the careful weighing of every word.” (author’s translation). *Ibid.*, p. 643.
 60. D’Alembert and Diderot, *Discours préliminaire*, p. xx. For the editors of the *Encyclopedia* the specter of the decline of civilization and the loss of learning is always present. No *stage* of history, including a dark age, recedes to an unrepeatably past. And the *Encyclopédie*, envisioned as a document and a mechanism of historical progress, is imagined and justified under the sign of historical loss. Diderot writes, “May the Encyclopedia become a sanctuary, where the knowledge of man is protected from time and from revolutions. . . . Therefore, let us do for centuries to come what we regret that past centuries did not do for ours. We daresay that if the

ancients had carried through [an] encyclopedia, as they carried through so many other great things, and if that manuscript alone had escaped from the famous Library of Alexandria, it would have been capable of consoling us for the loss of the other." (author's translation). *Ibid.*, pp. xxxviii–xxxix.

61. Baczko emphasizes that in addition to the "utopia in its classic paradigmatic forms," the Enlightenment gave rise to an increase "on the fringes of utopia" of alternative imaginations. Baczko, *Utopian Lights*, p. 20. Thanks to Omar Metawally for his insights about Baczko.
62. Louis-Sébastien Mercier, *L'An deux mille quatre cent quarante, rêve s'il en fut jamais* (1771), translated in excerpt in Robert Darnton, *Forbidden Bestsellers of Pre-Revolutionary France* (New York, 1995), pp. 300–36.
63. *Ibid.*, p. 315.
64. Indeed, Mercier flags this with his subtitle, "A Dream If Ever There Was One."