

The Eighteenth Century

Theory and Interpretation

VOLUME 56	FALL 2015	NUMBER 3
Gender, Neutrality, and the Nursing Father in Pratt's <i>Emma Corbett</i> <i>Trevor McMichael</i>		277
Clarissa's Conjectural History: The Novel and the Novice <i>Stephanie Insley Hershinow</i>		295
Clarissa's Political Theology and the Alternative Modernity of God, Death, and Writing <i>Spencer Jackson</i>		319
"Ye soft illusions, dear deceits, arise!": Apostrophe as Suture in "Eloisa to Abelard" <i>Rebecca Roma Stoll</i>		341
The Enlightenment Index <i>Brad Pasanek and Chad Wellmon</i>		357
The Threat and Allure of Methodism <i>Michael Behrens</i>		381
Si Vulgus Vult Decipi, Decipiatur <i>Marcus Walsh</i>		387
How to Collect Art and Influence People <i>Julia Douthwaite</i>		395
What Was Enlightenment? <i>Alvin Snider</i>		401
Notes on Contributors		407

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The Enlightenment Index

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It is so easy to be immature. If I have a book that has understanding for me, . . . surely I do not need to trouble myself.

—Immanuel Kant, “An Answer to the Question ‘What is Enlightenment?’”¹

Thus, in a book I find a train of thinking, which has the marks of knowledge and judgment. I ask how it was produced? It is printed in a book. This does not satisfy me, because the book has no knowledge nor reason. I am told that a printer printed it, and a compositor set the types. Neither does this satisfy me. These causes perhaps knew very little of the subject. There must be a prior cause of the composition.

—Thomas Reid, *Essays on the Intellectual Powers of Man*²

The main figures that populate our historical accounts of the Enlightenment are human—be they enemies of Enlightenment, such as the priest or the tyrant, or defenders like the *philosophe* or *Aufklärer*.³ But in Kant’s essay, “What is Enlightenment?” (1784), the first figure, identified ahead of the pastor “who has a conscience for me” and the “doctor who judges my diet for me,” is the book [*das Buch*]: “it is so easy to be immature if I have a book that has understanding for me [*das für mich Verstand hat*].”⁴ Compare Kant’s formulation to a similarly odd formulation from Thomas Reid, in the second epigraph that begins this essay. Writing in Scotland the year after the publication of Kant’s essay, Reid claims that an author’s train of thought is originally “printed, so to speak, in his mind.”⁵ *Composition* by an author, insists Reid, precedes *composition* (the setting of type) by a compositor, and yet Reid’s assertion of authorial precedence is still informed by the vocabulary of printing.

Although much has been written on the subject, “print culture” remains a

puzzling hybrid term, difficult to analyze into its cultural and technological components.⁶ For both Kant and Reid, print posed a first threat to the process of enlightenment. It was an enemy of Enlightenment culture. Books and other personified forms of print threatened to dispossess humans of their rational capacities. If Reid warns against taking the book as a hypostatization of knowledge and reason, Kant identifies the book, as Bruno Latour might put it, as an historical actor.⁷ Both eighteenth-century philosophers exhort their readers—paradoxically, in print—to assert themselves *against* the book, suggesting that the failure to emerge from “self-incurred immaturity” is not only a philosophical problem but also a bibliographical one.⁸

In so reading Kant and Reid, this essay imagines an exercise that would follow all the links from title to author and back again in order to establish the bibliographical scene. It is a short trip, for example, from Kant to Reid: in his *Prolegomena zu einer jeden künftigen Metaphysik* (1783), Kant criticizes Reid’s “Common Sense” critique of David Hume before going on to rebuke those readers who have skimmed his own books and not thought through his (or Hume’s) arguments.⁹ Marking such cross-references, shifting between Kant’s notion of the book and Reid’s assertions of the priority of an author’s train of thought, our essay sketches a history of the Enlightenment media environment. We assemble a limited collection of citation and reference in order to understand the historical conditions in which Reid’s metaphor and Kant’s oddly formulated concern—that books have “understanding for us”—were meaningful.

We see books and other objects of print constituting what one interlocutor in Novalis’s *Dialogues* (1798) described as the Enlightenment’s *Bildungskette* (in which the Great Chain of Being is figured as a Great Chain of Books with each book as a *Glied* or link).¹⁰ Heuristically we name this presumed comprehensive structure of print the “Enlightenment Index.” Although “index” is often narrowly defined as an alphabetical guide to the contents of a single text, we use the term to refer to an increasingly interrelated web of citations and links. And while contemporary historians debate the nationality of “the Enlightenment,” whether it was headquartered in Paris, had continental or British origins, or if multiple Enlightenments were located in competing locations, we refer the question of Enlightenment *literally*—to the printed page.¹¹

In what follows we describe the material form of the Index. We explain how footnotes, foldout sheets, catalogues, and review magazines gave shape to the Index, and we present Carl Linnaeus’s published taxonomy as an exemplary organizing node in the Index. As the expansion of print augured modern, alphabetical disorder, we read the encyclopedic excesses of big books as symptoms of that expanding order’s precarious nature. The print forms and technologies surveyed here, along with their human counterparts (i.e., the authors and publishers), are characterized as agents co-constitutive of an order that was supposed to manage bibliographic excess by bibliographic means. As our heuristic, the Index functions in two ways: it refers to proliferating empiri-

cal traces on particular pages as well as to the ideal of a completely assembled network of all such pages and cross-references. Our argument may also be understood in terms of periodization: while a tension between real and ideal obtains, we operate in terms of an Enlightenment media environment. Because the Enlightenment pursued a complete account of all that has been printed, its Index is both a material reality and a functional ideal, albeit an ever-incomplete one, for navigating that reality. It was Romanticism that ultimately repudiated the Index as an ideal and promoted competing practices of indexicality to control and transcend the excesses of print.¹²

The article proceeds as follows: the first section introduces our argument in relation to recent attempts to reconsider the Enlightenment as a historical period; the second and third sections describe the multi-faceted growth in print over the course of the first half of the eighteenth century; a fourth section argues that this growth was paralleled by the emergence of what we have termed “the Enlightenment Index”; the next sections describe the growing perception among late eighteenth-century writers that books were appearing to exhibit an agency or vitality all their own; and a discussion of Romanticism and periodization concludes and restates the argument. As this essay summarizes and advances a research project that aims to give a more detailed description of Enlightenment indexicality than can be provided here, examples are drawn from well-known “high Enlightenment” texts and much of the history is provided only in broad strokes.¹³

THIS IS ENLIGHTENMENT

In their 2010 collection *This is Enlightenment*, Clifford Siskin and William Warner define the Enlightenment as “an event in the history of mediation.”¹⁴ In treating the Enlightenment as an event to be described primarily in bibliographical terms, we follow Siskin and Warner, but for the purposes of our investigation narrow the scope of what counts as mediation.¹⁵ In our emphatically book-historical account, the particularity of the Enlightenment lies in a logic that is inseparable from its material embodiment as books, journals, pamphlets, newspapers, and encyclopedias. Reverse the terms of Siskin and Warner’s title and the Enlightenment *is* indexical, involving the deictics *this*, *there*, *see*, *here*, *in this issue*, *on that date*. The Enlightenment points less to ideas, authors, philosophers, or social organizations than from one page to another.

Such an understanding of mediation presumes that “Authors do not write books.”¹⁶ The inverse of this claim, which reverses Reid’s insistence that authors write books, presumes an immediacy between a composition and its author. To characterize the Enlightenment as bibliographic is to insist upon the complexity of two interacting agents—human authors and books.¹⁷ The book is an agent of change. Its distinctive agency is narrated in Jonathan Swift’s *Battle of the Books* (1704) and explained in the bookseller’s prefatory address: “I must

warn the Reader to beware of applying to Persons what is here meant only of Books . . . So, when *Virgil* is mentioned, we are not to understand the Person of a famous Poet . . . but only certain Sheets of Paper, bound up in Leather."¹⁸ Swift's line of satire, taking aim at modern "bookmaking" and "index-learning," runs through the period. As Moses Mendelssohn complained in his answer to the 1784 question "What is Enlightenment?," eighteenth-century books could speak and had even acquired a language of their own—a *Büchersprache*.¹⁹

Compare the Enlightenment book to the book of Renaissance humanism. Scholars from the fifteenth to the seventeenth centuries, acutely conscious of the "trauma suffered through the loss of ancient learning" during the middle ages, sought to safeguard information by stockpiling and organizing it.²⁰ As Anthony Grafton argues, these scholars read texts as "closed windows which proper treatment could restore to transparency," revealing the historical place and time of their authors.²¹ While early modern books were seen primarily as storage devices for preventing another cultural catastrophe or windows into a distant ancient world, Enlightenment books remediated ancient authors and put contemporary authors in contact, controversially, one with another. Through cross-references and links, Ancients and Moderns converse *in print*, a medium which was presumed to have its own temporality.

So when Diderot advertised the usefulness of the *Encyclopédie* (1751–72) in a moment of catastrophe, he argued that preservative collection was not enough; the knowledge collected must be linked together and organized in a corporate effort that transcends the individual author.²² An encyclopedia is not the work of a single person: it exceeds individual effort and outlives the corporation that produces it. In his entry "Encyclopedia," Diderot cites both the Jesuit *Dictionnaire de Trévoux* (1704–71) and Francis Bacon. Marshaling Bacon against the pessimistic Jesuits, Diderot suggests that a passage from Bacon's writings "seems to be addressed especially to them."²³ In the atemporal logic of the Index, Bacon can anticipate and refute the compilers of the *Trévoux*, just as well as any contemporary figure. The *Encyclopédie* collects and digests extracts and citations from ancients and moderns (it is an "*Ouvrage recueilli des meilleurs Auteurs*").²⁴ In the eighteenth century, the Renaissance Republic of Letters—that loose network of humanist correspondents—was gradually refabricated as a network of bibliographic elements: authors, titles, and pages.

II. BIBLIOGRAPHIC GROWTH

Functioning indexically, the footnotes and cross-references of the eighteenth century identify sources and point to competing works.²⁵ They do not appeal to a central (traditionally religious) text to ground their authority; instead, they point to series of texts that, in turn, point beyond themselves. Authority accrues, in large part, from concatenation. The footnote participates in the Enlightenment as but one of a range of indexical forms, including in-text citations, head-

notes, marginal notes, and appendices, all of which structure the Enlightenment Index.²⁶ To be clear, we are insisting on something that Grafton's history of the footnote only intimates: cross-references are not simply matters of evidence; they are the sinews that connect and coordinate an ever-expanding system of print. Paratextual elements are the bibliographic features that make print culture matter, but they also imply a greater network of reference that exceeds any particular instantiation or node within the system.

The bibliographic technologies that facilitated the Enlightenment Index predate 1700. Indexes were already selling points for printed texts in the sixteenth century, footnotes and citations have a history that goes back to at least medieval manuscript culture, and reference books of all sorts have their precedents in early modern print texts, which, in turn, have precedents in medieval manuscript culture.²⁷ In the first half of the eighteenth century, however, these established technologies both spread remarkably and assumed a different function in the context of other important bibliographic changes. Indeed, the indexical logic of the Enlightenment was conditioned by bibliographic change: the manufacture of larger sheets of paper, the increased use of figures and illustrations, innovative graphic designs that incorporated layers of marginalia, the rise of multivolume printing, and the multiplication of cross-references that coordinated distinct volumes by the specification of edition and page. It is in relation to these initial material developments that a new way of thinking about print and its various technologies emerged.

As books varied in size and increased in number in the first decades of the eighteenth century, they were progressively cross-referenced in more complex ways. When the size of the standard sheet increased, new oversized charts, maps, and diagrams were printed on "double elephant," "imperial," and "double super royal" sized sheets of paper.²⁸ But the availability of these large sheets of paper also prompted a turn to other, smaller formats like octavo, which in turn facilitated the production of multivolume sets.²⁹ The increase in the number and length of multivolume works heralded greater indexicality as citations marked volume, book, chapter, and paragraph. New trade practices enlisted an army of compilers, cataloguers, anthologizers, translators, critics, hacks and *écrivains* to produce new universal, comprehensive works as well as newly extracted and abridged versions of existing works.³⁰ By the eighteenth century a unified work did not reliably coincide with an individual volume. A work, insofar as it was to be imagined unified and whole, was to be assembled from constitutive textual and paratextual elements.

III. THE FOLDOUT

In this section and the next we contrast two ways of interacting with the book—and thus, more broadly, the Index: unfolding pages or turning them. The first, more synoptic, involves disclosing a single tipped-in sheet and straining against

the edges and binding of the book—apprehending the unfolded sheet's contents all at once. The second, more diachronic, involves moving from page to page, following citations. Both operations are exemplified in one of the Enlightenment's "biggest" texts, Linnaeus's *Systema Naturae*. The system was first published in 1735 on the front and back of six folio sheets. The original *Systema* included eleven pages of observations and grids and in its first issue employed some of the largest sheets of paper to circulate in eighteenth-century print culture. But it went through thirteen editions by 1788, expanding from 11 to over 2,000 pages of description and reference.

Linnaeus's *Systema*, in its various editions, operated at the limits of the print medium. The oversized sheets of the first edition of *Systema Naturae* may have even exceeded binding. The copy of the *Systema* at the New York Public Library appears to have been kept folded for years (the untrimmed pages are still creased) and may not have been bound until the nineteenth century. Presumably, some copies of the system were stored in rolls as depicted in the famous images of Linnaeus in his Lapland dress, with a roll of folio sheets in the background. Large loose sheets, unrolled or unfolded, could be arranged so that the complete gridded system might be taken in all at once. Set out on the surface of a table, the sheets afford a comprehensive view of the system of nature and invite the reader to arrange and rearrange the kingdoms of nature. As a synoptic tabulation, they also synthesize and stand for all the assorted reference works, letters from correspondents, notebooks, and loose slips of paper on which Linnaeus's individual examples were recorded and organized.

Throughout his career Linnaeus strained against fixed, codicological knowledge, interleaving blank pages in personal copies of his publications to accommodate annotations and new examples.³¹ The mature Linnaeus kept numerous sheets, in effect, index cards, in a cupboard, continuously sorting and re-sorting examples by species, genera, and sexual system.³² Like the librarians of the later eighteenth century, Linnaeus abandoned bound catalogues for loose cards. His folded, extra-large sheets and his loose cards figure the expansion of bibliographic relations beyond the bounds of the codex.

The increasing number of interleaved or foldout pages in eighteenth-century books are another sign of increasing indexicality. In Isaac Newton's *Opticks* (1704), for example, four separate bundles of foldout sheets are bound into the volume. These illustrations make visible the rays of light in numbered figures that foldout as a third leaf to the right of the recto page (see Fig. 1). In-text citations reference illustrations of the refracted and reflected rays studied in the complicated experiments. The geometrical diagrams exceed Newton's prose description as well as the bindings. When folded out, the illustrations appear as a third page, outside the margins, to the right of the recto pages of the *Opticks*. Whole sheets fold out of Ephraim Chambers's *Cyclopaedia* (1728): plates dedicated to astronomy, architecture, anatomy, fortifications, geometry, letters, and optics. Likewise, the *Système Figuré* in Diderot and D'Alembert's

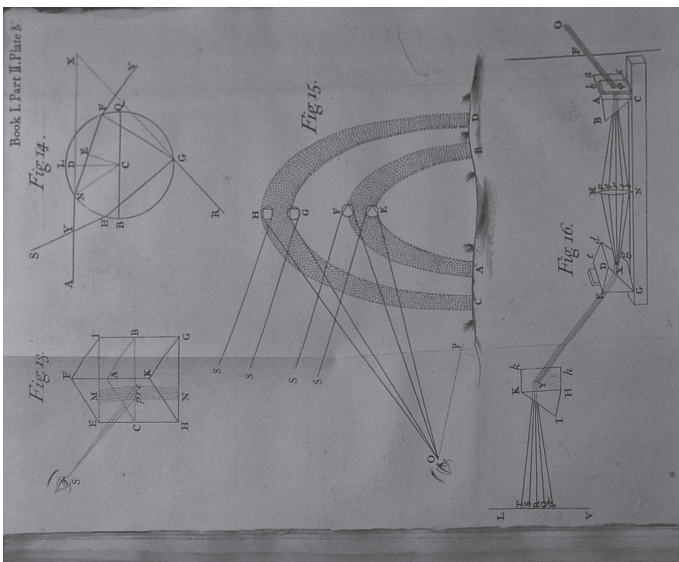
[128] move from the point B, continually till it come to I
to will the Angle AAX which will increase and still continue to
contain; and the Arc QF and Angle AAX will increase
and biggest; when ND shall be to CN as the rays AX and Gg
in which case NF will be to ND as 3 R to 4 Kk.
Angle AVS which will be to ND as 3 R to 4 Kk
will decrease, and the rays AN and HS continue to
ND is CN as 3 RR to 4 Rk, in which case
NE will be to ND as 3 K to 4 Rk, in which case
the next emergent ray (that is, the incident ray AV
three relations) continues with the emergent ray AS
will come to its limit, then ND is to CN as 3 RR
to 1 / 5 RR, in which case NE will be to ND as 4 R to
1 Kk, and the Angle which the ray next after that emer-
gent, trains with the incident, four relations, con-
tains with the incident, till it come to its limit, when
ND is to CN as 3 RR to 4 Kk, in which case
NE will be to ND as 3 R to 4 Kk, to no further
the numbers 3, 4, 5, 6, 7, being gathered by com-
mon addition of the terms of the series, which practical progredie
is 3, 5, 7, 9, 11, 13. The truth of all this Mathematicians will
easily examine.

Now it is to be observed, that as when the Sun comes to his Tropicks, days increafe and decreafe but a little for a great while together; so when by increafe the distance CD , these Angles come to their limits, they vary their quantity but very little for some time together, and therefore a far greater number of the rays which fall upon all the points N in the Quadrant ABL , shall emerge in the limits of these Angles, than in any other inclinations. And further it is

[129] to be observed, that the rays which differ in reingibility will have different limits of their Angles of emergence, and by consequence according to their different degrees of reingibility emerge more copiously in different Angles, and being separated from one another by different Colours. And wint those rays which appear each in their proper Colours. And wint those rays which are easily gathered from the foregoing Angles may be easily separated by computation.

Then, by computation, the leaf Angle AYS is found to be 108 and 81, and therefore by the first ray the greatest Angle AXR will be found to be 42 degrees and 2 minutes, and the leaf Angle AYS, in the most refrangible ray, will be found to be 50 degrees and 57 minutes. And in the computation the greatest Angle AXR will be found to be 49 degrees and 17 minutes, and the leaf Angle AYS to be 42 degrees and 7 minutes.

Fig. 15.

[illegible]

Encyclopédie, when unfolded, exceeds the boards of the volume in which it is included. Like Linnaeus's system of nature, the *Système Figuré* represents the *Encyclopédie*'s synoptic encircling of knowledge; a folio sheet bound lengthwise into a folio volume, the *Système* must be unfolded to be read and then absorbed in a single view.³³

IV. THE INDEX

The Enlightenment "Index" can be glimpsed in the various artifacts discussed above, but perhaps the best synecdoche is an actual eighteenth-century index (see Fig. 2). For Roger Lund, "the index and its related forms—dictionaries, concordances, digests, translations and compendia—serve as convenient symbols" for the transformation of all knowledge into print. "In the course of the eighteenth century," continues Lund, "readers would encounter new indexes of almost everything."³⁴ Printed indexes, those alphabetical lists in the backs of books, became standard in multivolume collected works, scientific treatises, travel writing, and editions of the Bible. Isaac Watts, a half sheet from his *Psalms* pictured above, encourages the reader of any book without an index to make one for it as he reads.³⁵ Even the rise of the novel was marked by such indexes: Samuel Johnson advised Samuel Richardson to provide indexes to his long novels to aid readers in the management of epistolary prolixity.³⁶

Headwords, footnotes, and indexes favored by compilers of dictionaries and encyclopedias transformed other forms of literature as well, shaping works as various as Alexander Pope's *Dunciad Variorum* (1729) and Voltaire's *Dictionnaire philosophique* (1764). Stand-alone concordances and general indexes of popular journalism were published, and with these the Index, as the imagined interconnection of bibliographic objects, continued to incorporate new pages.³⁷ Still, it must be remembered that our use of the term "Index" names less an actual map of some real print universe than indicates the historical consciousness of the complex and comprehensive interrelation of printed things—what Novalis had figured as the great chain of books in which every book was imagined to be a *Glied* connected to the next.³⁸

Johnson, studying the lettered spines of books in a library, announced, "knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it."³⁹ The finding-aid genre included the virtual libraries called *bibliotheca*, which were defined by their indexical function.⁴⁰ At first these listings of books were published or displayed at book fairs. Over time they began to include short reviews and summaries intended to guide the collector, scholar and amateur in their choice and reading of books. Related were the scholarly review journals that emerged in the last decades of the seventeenth century and first flourished in the first decades of the eighteenth. Periodicals like *Journal des sçavans* in Paris, *Philosophical Transactions* in London and *Acta Eruditorum* in Leipzig, all established between 1670 and 1682, were

PSALM 148. Paraphrased. L. M.

WATER RESOURCES

As by an the earth-born face

Let the firm earth, and rolling sea,

Otherwise it must be sung to the usual tune of the
Long Metre.

PSALM CXLVIII. 367

3652 PSALM CXLVII.

1 With hoary front he threw's the ground;
His hail defends with dreadful sound:
His icy bands the rivers held,
And terror arms his wintry cold.

2 He bids the warmer breezes blow,
The ice diffuses, the waters flow;
But he hath nobler works and ways,
To call his people to his praise.

3 Through all our fiercer his laws are shown;
His gospel through the nations known,
He hath not thus reveal'd his word
To every land—Praise ye the Lord.

He sends his showers of blessings down,
To cheer the plains below :
He makes the grafts the mountains crown,
And corn in vallies grow.
He gives the grazing ox his meat,
He hears the ravens cry.
But man, who tastes his finest wheat,
Should raise his honors high

100

/s/ _____

well.

dedicated to reviewing books.⁴¹ And in December 1755, in England, the *Critical Review* and the *Monthly Review* both began offering review summaries of new publications (the *Monthly Review* boasted of its “Index” of “Remarkable Passages”).⁴² Looking back in 1783 on the rise of indexing periodicals, the entry “Ephemeriden” in the *Deutsche Encyklopädie* reported that the titles of newspapers and monthly journals alone “could fill an entire book.”⁴³

Books filled with titles complemented review journals assembled by teams of largely anonymous authors who were, consciously or not, contributing to the assembly of the Enlightenment Index. *The Critical Review* advertised itself as authored by “A Society of Gentleman” and *The Monthly Review* was the work of “Several Hands.” By the 1730s multi-authored, collaborative efforts had already become common; consortia of booksellers shared and managed financial risk by publishing multi-volume works—encyclopedic dictionaries, histories, biographies, and novels—serially.⁴⁴ These serialization strategies and new divisions of labor accelerated the book trade.⁴⁵ After the efforts of Pierre Bayle and Ephraim Chambers, modern multi-authored encyclopedias emerged that persistently redacted and recomposed previous encyclopedic works. From 1751 to 1777 Diderot and D’Alembert’s “society of men of letters and skilled workmen” worked in concert to publish the definitive multi-volume work of the century.⁴⁶ The *Encyclopédie* included more than 70,000 articles, written by more than 130 authors.⁴⁷ A new era was ushered in, in which reference works continuously and serially expanded. Most of these projects were brought to some form of conclusion. Johann Heinrich Zedler’s *Universal-Lexicon*, begun in 1732, ran to 68 volumes. Diderot and D’Alembert’s work grew to 35 volumes, terminating in 1780 in a two-volume index.

As John Bender and Michael Marrinan have suggested, the paradigmatic example of indexing and webbing may be the mid-century *renvois* made use of in the *Encyclopédie*.⁴⁸ Diderot even defines “encyclopedia” as *enchaînement* or “interlinking” in a footnote to the 1750 *Prospectus de l’Encyclopédie*. This footnote, an asterisk attached to the title term—thus: “ENCYCLOPÉDIE,*”—performs and defines, relocating a reader’s gaze from the top right of the first page to the bottom left. Whereas the foldout exceeds the binding, expanding the work, such footnotes or *renvois* keeps a reader within the work (assembling articles, connecting volume to volume). “The co-ordination of articles” facilitated by the *renvois* give the multivolume *Encyclopédie* that “unity so favorable to the establishment of truth and to its propagation.”⁴⁹

These mediations exemplified a confidence in print and contribute to the construction of the Index, but also signal, for many eighteenth-century writers, that the emerging bibliographic order was coming to rival the natural order. Linnaeus was one of the first to recognize the existence of this new bibliographic order and take advantage of it. Starting with its tenth edition (1758), the *Systema Naturae* began not with the classification of natural objects but with the classification of its nine previous editions (see Fig. 3).⁵⁰ And by this point in

its development the Linnaean method had become so thoroughly bibliographic that one of the final enumerations in its taxonomy was *Literaria*: a reference list of citations that trails the main description of the identified species and provides page and plate numbers in books previously published by Linnaeus and others (see Fig. 4). By locating the tenth edition relative to other editions and locating individual species in the printed pages of natural history, Linnaeus accounts for the location of his books within the broader field of books. Linnaeus, of course, was participating in a form of knowledge that Bacon had anticipated but did not come into its own until the end of the seventeenth and beginning of the eighteenth centuries: *historia literaria*, the bibliographic analogue to *historia naturalis*.⁵¹

V. BIBLIOGRAPHIC VITALITY

The traditional metaphor of “the book of nature” would seem to prompt the scientist to turn from his books to look freshly upon the natural world.⁵² As argued above, Linnaeus, the paradigmatic Enlightenment scientist, brought bibliographic codes to bear on the natural world, but his book metaphors complicated distinctions between nature’s book and the inherited texts of the ancients. (The Linnaean method is equally interested in the botanist’s leaves and the folio leaves of the bibliographer.) Indeed, by the middle of the eighteenth century, books were seen by many as a second nature: both early modern and Enlightenment authors write of the book of nature, but the two realms—natural and bibliographic—became, over the course of the eighteenth century, more and more indistinguishable as books came to assume, or were ascribed, all the productive capacities of nature.

The tree of knowledge in Chambers’s *Cyclopaedia* and the more elaborate *Système Figuré* in the *Encyclopédie* displayed human knowledge diagrammatically on a single page that served as a portrait of an individual knower. Yet even as these images (drawn from Porphyry, Raymond Lull, and Bacon) arrange the faculties of memory, reason, and imagination on a full foldout leaf, they turn arboreal, branching and budding. Genealogy and encyclopedism remain in tension and cannot be represented diagrammatically. The metaphors won’t mix.⁵³ Chambers explicitly described his *Cyclopaedia* as a work “disproportionate to a single Person’s Experience.”⁵⁴ And when mapped, as in the work of Gilles Blanchard and Mark Olsen, the sum of all the *Encyclopédie*’s *renvois* emerges as an internally coherent, seemingly self-organizing system that complicates and contradicts the hierarchies of the *Système Figuré*.⁵⁵ Beyond the hierarchies of root and branch, networks of cross-references spread like crab grass. The cross-references were not grounded in the faculties of a cognizing subject but seem to ground or organize themselves in anticipation of the modern disciplines.

The proliferation of footnotes and editions, like so many adventitious buds and spreading roots recalls the metaphor of a “vegetating library” from Hume’s

RATIO EDITIONIS.

SYSTEMA NATURÆ iteratis vicibus prodiit.

1. Leydæ 1735 Folio imper. pag. 12. a me per J. F. GRONOVIVM.
Conspectus tantum operis & quasi Mappa Geogr.
2. Holmiæ 1740 Octavo. pag. 80. a me ipso revifum.
Auctum Animalium nomenclaturis, characteribus.
3. Halæ 1740 Quart. oblong. pag. 70. per J. J. LANGEN.
Latino-germanice, cæterum idem cum 1.
4. Parisiis 1740 Octavo. pag. 108. t. 1. per B. JUSSIEUM.
Adjecta nomina Gallica. idem cum 2.
5. Halæ 1747 Octavo. pag. 88. per M. G. AGNETHLER.
Nomina Germanica, cæterum idem cum 2.
6. Holmiæ 1748 Octavo. pag. 232. t. 8. auctum a me ipso.
Characteres essent. Vegetabilium. Species Anim. & Lapid.
7. Lipsiæ 1748 Octavo. pag. 232. t. 8. per Typographum.
Nomina Germanica, cæterum idem cum 6.
8. Holmiæ 1753 Octav. p. 136. Vegetabilia per J. J. HAARTMAN.
At regnum Lapideum Scaræ 8:vo per MÖLLER.
9. Leydæ 1756 Octavo. pag. 226. per GRONOVIVM.
Paucissima de Avibus, Piscibus. idem cum 6.
10. Holmiæ hac editione, longe auctius factum a me ipso:
Species animalium omnium mihi cognitorum cum Differentiis, Synonymis, Locis, nominibus Trivialibus.
Methodus Animalium ex novis observatis reformata.
Piscium imprimis nova methodus cum Auctorum observatis radiis pinnarum.
Plantarum reformati characteres, emendatæ differentię variæ.
Lapidum plures species, observationes, & omnium Nom. Trivialia.
Observationes in Regna Naturæ novæ, cum introductione in Naturam.

A

COL-

Fig. 3: Ten editions taxonomized, in Carl Linnaeus, *Systema Naturae*, 10th ed. (Holmiæ, 1758–59). Albert and Shirley Small Special Collections Library, University of Virginia.

AMPHIBIA NANTES. Squalus.

Clus. exot. 136. Pristis f. Serra piscis.
 Will. icht. 61. Raj. pisc. 24. Pristis f. Serra piscis.
 Habitat in Europa.

116. CHIMÆRA. *Spiracula* solitaria sub collo.
Chimera Oris labium superius bipartitum.
 Dentes primores incisores, bini
 supra infraque.

monstro-1. C. rostro subtus plicis pertus.
 1a. Mus. Ad. Fr. 1. p. 53. t. 25. Chimæra.
 Clus. exot. 136. t. 137. Genus Galei.
 Will. icht. 57. Galeus acanthias clusii.
 Raj. pisc. 23. Galeus acanthias.
 Habitat in mari Atlantico.

Callo-2. C. rostro subtus labro inflexo lævi.
 synchus Gron. mus. 59. n. 130. t. 4. Callorynchus.
 Fresier. itin. 1. p. 211. t. 17. f. 4. Pejegallo.
 Habitat in mari Æthiopico.

117. LOPHIUS. *Spiracula* solitaria, pone brachia.
Lophius Pinnae pectorales brachiis infi-
 dentes.

piscato-1. L. depressus, capite rotundato.
 rius. Art. gen. 63. syn. 87. Lophius ore cirroso.
 1a. Scan. 327. Lophius ore cirroso.
 Toad-fish, Mus. Ad. Fr. 55. Lophius ore cirroso.
 Frog-fish, Gron. mus. 1. p. 57. Lophius ore cirroso.
 Charl. onom. 199. t. 201. Rana piscatrix.
 Sea Devil, Olear. mus. 37. t. 23. f. 4. Rana piscatrix.
 Habit. in Oceano Europæo, sub lapidum fornicibus.
 Corn. Loph. Pinna D. 10. P. 24. V. 5. A. 9. C. 8.
 Caput corpore majus. Piscatur tentaculis binis capitis
 tamquam linea.

Vesperti-2. L. depressus, capite rostrato.
 1io. Art. syn. 88. Lophius fronte unicorni.
 Mus. Ad. Fr. 1. p. 55. Lophius fronte unicorni.

Gm.

Fig. 4: Taxonomy's grounding in bibliography. *Systema Naturae*. Albert and Shirley Small Special Collections Library, University of Virginia.

Dialogues Concerning Natural Religion (1779).⁵⁶ Cleanthes, the character who represents the argument from design, offers a new description of nature as book, asking us to suppose that “books are natural productions which perpetuate themselves in the same manner with animals and vegetables, by descent and propagation.” For Cleanthes, “the propagation of an *Iliad* or *Aeneid* is an easier supposition than that of any plant or animal.”⁵⁷ Like the order of nature, the bibliographic order was described as epigenetic. Bibliographic order, the design and production of books, was indeed the more functional term in an analogy with nature. Books themselves were often described in the vitalist vocabularies of late eighteenth-century life science. Things came alive in eighteenth-century it-narratives, and traditional notions of the agency of an intending subject could hardly account for the new throng of non-human actors.⁵⁸ In confluences of textual and biological generation, books figured as mushroom growth.⁵⁹ The “Grub” of Grub Street was a kind of maggot or worm; the printshop, a scene of monstrous fecundity, seethed with parthogenetic and spontaneous generation. Already in 1728, Pope in his *Dunciad* fixed the metaphors: “maggots half-form’d . . . crawl upon poetic feet,” while traditional genres interbreed to beget “a jumbled race.”⁶⁰ Periodicals were ephemerids, mayflies that live only one day. As the novel rose, it was increasingly described in Linnaean terms as a new “order,” “species,” “kind,” “race,” or “tribe.”⁶¹

Whereas in Hume’s library of vegetating books there may still be a possibility of cultivation and husbandry—that is, books could be maintained by a bibliographic or print culture—in Diderot’s entry on “Encyclopedia” in the *Encyclopédie*, there were indications that the growth of books had begun to rival nature itself:

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 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 volumes.⁶²

Looking into the future, Diderot anticipates that the printing press, which “never rests” and has filled “huge buildings with books,” would produce a second nature, a printed, bound world of its own—a Library of Babel. In this vision of a print-filled future, both the natural world and the world of books become opaque and closed in upon themselves, separate realms of inquiry and action. The assumed complementarity of the *Codex naturae* and the book is broken by the propagation of print.

VI. HYPERTROPHY AND SATURATION

Over the course of the last third of the eighteenth century, nature and print appeared to many writers as not just distinct but competing realms. The human capacity to imagine the Index as a comprehensive totality was continually chal-

lenged as more and different types of books were printed. These broader cultural perceptions paralleled an explosion of print production over the last three decades of the century. In Britain imprints increased annually from around a roughly 2,000 a year from 1700 to 1740 to almost 4,000 in 1780 and over 6,000 by the century's end.⁶³ Total sales of English newspapers, likewise, doubled between 1750 and 1790. In Germany, the catalogue of the most important book fair in Leipzig grew from 755 titles in 1740, to 1144 titles in 1770 and to 2569 in 1800.⁶⁴

A number of late eighteenth-century authors worried that nature would disappear altogether, buried beneath piles of print. As one German commentator put it in 1782, "today one lives and works in the world of books [*Bücherwelt*], and so few books actually lead us back to the real world."⁶⁵ By the end of the century, encyclopedic projects began to collapse under their own weight. Like Walter Shandy's incomplete *Tristapaedia*, or like Laurence Sterne's *Tristram Shandy* itself (serialized in nine volumes published between 1759 to 1767, it had promised to run to forty volumes and include a map in the twentieth), the encircling dreams of Diderot and D'Alembert came to frustration in the hypertrophic books of the late eighteenth century.

Friedrich Martini's *Allgemeine Geschichte der Natur in alphabetischer Ordnung* began as a translation of Valmont de Bomare's *Dictionnaire raisonné universel d'histoire naturelle*. The fate of Martini's text, however, exemplifies the hypertrophy of late eighteenth-century German encyclopedics in general. Whereas Bomare's *Dictionnaire* covered the entire alphabet in 15 volumes, Martini managed over a period from 1774–93 to produce 11 volumes that ended with the letter 'C.' One reviewer noted in 1790 that "since the appearance of the first volume 15 years have past and two letters have yet to be completed. If this continues, there will be over 100 volumes and the last one will appear sometime in the middle of the 20th century."⁶⁶ And Martini's wasn't the only German encyclopedic project to collapse in this way. In 1788 a group of German scholars began work on the *Deutsche Enzyklopädie, oder Allgemeines Real-Wörterbuch aller Künste und Wissenschaften*. The project ceased publication in 1804 at the letter "K."

For many scholars and writers, knowledge could no longer be encircled within traditional encyclopedic or printed forms. Eighteenth-century readers complained that they were being crushed beneath new titles even as reformers promised, as John Locke had put it at the beginning of the period here surveyed, to remove some "Rubbish" and clear "the Ground a little."⁶⁷ The new forms emerged, promoting order while adding to the heap. The *Encyclopedia Metropolitana* (1817–45) experimented with non-alphabetical orders of knowledge, while in Germany encyclopedias had become so complex and uncontrollable that only a new science of encyclopedias could save them. In 1784 the University of Mainz established a Chair in Encyclopedics. In 1798 Novalis imagined an *Enzyklopädistik*—a transcendental encyclopedics that would "present [*darstellen*] and trace relationships, similarities, identities and effects among

the sciences."⁶⁸ Doing so, Novalis writes of a system of *renvois* that would overcome the fetters of print through a transcendental *enchaînement* of knowledge.

Late eighteenth-century writers feared that the saturation of print would overwhelm them.⁶⁹ In 1796 J. G. Herder wrote that the printing of books transformed the modern human being into a "printed letter."⁷⁰ Printing created not just books but an abstract world of disembodied printed voices, a bibliogony or "Babel" in which books seemed to reproduce themselves. By the 1790s ever-intensifying anxieties gave way to full-blown pathology. As one German publisher put it, readers had been overtaken by the "plague of German literature."⁷¹ Lost in this print vertigo, modern human beings had become infected by "book madness" [*Bücherwut*], or the delusion that books constituted their own world. Herder's critical history of print is an indictment of an Enlightenment delusion that books were possessed of their own agency. For Herder, books themselves began to "scream"; and they grew infectious as they asserted themselves against the lives of humans. Novalis wrote that the Enlightenment promise of encyclopedic or universally linked knowledge was a function of the modern age's fatal "habituation to a printed nature."⁷² Modern-day readers were affected by a *Bücherseuche*, a pathology that would one day make us see "nothing but books, no longer things."⁷³ The metaphors figure a breakdown of boundaries in the new age of print. These writers imagined books as pathogenic agents circulating among an unsuspecting reading public. For many the Index had become a threat to human agency.

In Germany the anxiety was especially acute, but in England, too, "bibliomania" or book-madness was much publicized.⁷⁴ In the preface to *Lyrical Ballads* (1800), William Wordsworth foreshortened the quarrel of ancient and modern writing, worrying about the survival of Shakespeare and Milton:

The invaluable works of our elder writers, I had almost said the works of Shakespeare and Milton, are driven into neglect by frantic novels, sickly and stupid German Tragedies, and deluges of idle and extravagant stories in verse.—When I think upon this degrading thirst after outrageous stimulation, I am almost ashamed to have spoken of the feeble endeavour made in these volumes to counteract it.⁷⁵

Wordsworth diagnoses a drug culture of "outrageous stimulation." The print market is noisy, a "hubbub of words." The overproduction of books is figured as deluge. While inveighing against the accumulation of men in cities, Wordsworth also abhors the crowding of verse with recycled snippets from John Dryden, Pope, and Thomas Gray. In his preface, genres are personified: it is novels that have become frantic and tragedies sickly. Like his German contemporaries, Wordsworth would counteract the "language of books" [*Büchersprache*] with the "language of men." Wary of mechanical phraseology and poetic diction, Wordsworth insists on persons rather than personifications.

In one of a pair of poems on books and nature ("Expostulation and Reply"

and “The Tables Turned: On the Same Subject”), Wordsworth exhorts his interlocutor to “quit your books, / Or surely you’ll grow double”—that is doubled over, but also, by way of pun, made double by the multiplicative powers of print.⁷⁶ As Wordsworth’s verse echoes the doubled world of books and nature imagined by Diderot, it is fitting that the poems are themselves of a pair. The poet seems required to transmit his message twice. His preface, appendices, and his poem’s subtitle (“On the Same Subject”) are standard elements of the bibliographic culture he decries, and the “Table” too, a synonym for “Index,” suggests by way of punning that which would be turned back. Even the deluge metaphor is itself readymade, pre-circulated—a droplet in the greater flood to which it contributes. The diluvian language is supersaturated with complaint: in Pope’s *Dunciad* a footnote describes how “a deluge of authors cover’d the land”; in Jean-Jacques Rousseau’s first *Discourse* (1750), the figure of Socrates reborn denounces the “mass of books by which we are flooded [*dont on nous inonde de toutes parts*].”⁷⁷ The floods of books roll on, and the late eighteenth-century reader is at sea, suffering from degraded thirst: “Water, water everywhere, / Ne any drop to drink.”⁷⁸

VII. ANXIETY AND ROMANTICISM

As authors and readers became conscious of the indexed Enlightenment media environment, they developed new anxieties about the authority that seemed to be accruing to books. These anxieties inform forceful assertions of poetic genius associated with Romanticism and the modern author function. Individual authors feared that they would be drowned in a marketplace awash in print; even the survivors would be extracted and redacted, picked of their flowers by anthologists, their words dispersed and attenuated by a web of footnotes and cross-references. The vitality of books led to new forms of self-consciousness, including Kant’s realization that books have understanding *for us*. “Dare to know,” exhorts Kant, and at a moment when books seemed to know more than humans.

It is no accident that those authors who cried out most loudly against books—Rousseau, Herder, Kant, Wordsworth, Novalis—were the same who exemplified the paradigmatic Romantic author function. And yet, paradoxically, late eighteenth-century lamentations only put more second-nature organic metaphors into circulation. Even as the Romantic author attempts to denaturalize and discipline print, he inadvertently adds to it. Early in the eighteenth century, the bibliographic sphere was recognized as an objective, material realm with its own internal logic and organization, but in the inundated final decades of the century, book plagues and floods figured second-order nature as a threat to human agency, one that might obscure nature, obviate the cognizing subject, and become impervious to all human interventions.

References to “the world of books” or *le monde des livres*—in German,

Bücherwesen or *Bücherwelt*—become more common as books seemed to gain independence from authors, readers, and printers. The modern nominalizations *Author*, *Literature*, *Criticism*, and *Canon* belong to a new disciplinarity, serving as managerial functions in accounts of the *human* agency that the new print culture had come to threaten. That is, whereas the term “literature” in the eighteenth century generally denoted “printed matter,” late eighteenth-century writers saw “Literature” as a human endeavor, a way of confining print to a manageable domain.⁷⁹ In the last third of the century, the battle of the books was no longer a war between books ancient and modern but between *books* and *people*. The new methods of Literature and Criticism seemed a way of seizing territory in the foreign realm of books.

The hectic disciplining of print by critics, the collection of an author’s “beauties” in anthologies and his table-talk in *ana*, and the promotion of the capital-A Author may be understood as Counter-Enlightenment impulses that continued to expand the Enlightenment Index dialectically.⁸⁰ The self-reflexivity of the Enlightenment bibliography—in which ever more books were printed about books, while authors wrote with increasing frequency about their anxieties about books—displayed a consciousness of the very Index that leveled books and authors. In any index, names and titles appeared side by side with precedence determined only by the arbitrary logic of the alphabet.

Following Andrew Piper’s recent work, we might describe this consciousness of the agency of books as the nightmare from which Bibliographic Romanticism would wake. If the Enlightenment was predicated on indexicality as a condition of possibility, Romanticism, in contrast, was a response to its failures. Whereas the former imagines an Index that might structure the humanistic Republic of Letters by means of textual technologies, the latter understands this project of remediation as alienating and impracticable. Enlightenment books were interanimated by a bibliographic deixis that Romanticism refused.⁸¹

In the eighteenth century more and more writers described books as pre-existing and exceeding human efforts to manage them. And this is a key difference between an Enlightenment bibliography, the humanist one that preceded it, and the Romantic bibliography that followed. For the early-modern humanist, print and its technologies were a means for retrieving and thus safeguarding knowledge from catastrophe. For the Enlightenment, the Index is a transcendental *as if* that does not just collect but coordinates books and persons in the timeless homogeneous medium of print: a “standardized” and “fixed” order, to recur to Elizabeth Eisenstein’s descriptive terms. For Romanticism, in final contrast, unconditioned human agency—the Author—is asserted *against* the perceived surplus of a printed literature that must be made to admit and include his own works.

Perhaps more than any other author of the period, William Blake’s publication practices were meant to escape what he perceived as the homogenizing effects and abstractions of print production. In *The Marriage of Heaven and Hell*

(first printed in 1790, with unique copies dated to 1794, 1795, 1818, and 1827, and one 1790 copy repainted *circa* 1821), Blake explicitly satirized the dialectic of *Codex naturae*: “Thus Swedenborg boasts that what he writes is new; tho’ it is only the Contents or Index of already publish’d books.”⁸² Blake’s illuminated printings confound standard publication: his books, each more distinct and original than a uniform title would imply, are thus not readily assimilable into the “Index.” Comparing pages at the online Blake Archive dramatizes the difficulty of locating the line quoted above: reference requires the editorial work of Richard Bentley, David Erdman, and Geoffrey Keynes and the collation of more than ten objects.⁸³

Where the Enlightenment confidence in print would connect books and, by extension of this techno-anthropology, people, the Romantic author function personalizes as well as depersonifies the book.⁸⁴ William Hazlitt claims to revisit the same twenty or thirty volumes, recalling with each rereading feelings evoked by previous readings. When he figures these remembered readings as “links in the chain of our conscious being,” Hazlitt’s metaphor subverts and interiorizes Enlightenment ideas of a *Bildungskette* or *enchaînement* of human knowledge.⁸⁵ The Romantic cites not page but place of purchase, not date of publication but time of reading; he exchanges books for nature, turning from the atemporal realm of print—the Index—to station himself in his own historical present or phenomenological presence.

To speak or write of Enlightenment is to summon the language of books. In sum, the Enlightenment is *this*: a web of footnotes, cross-references or *renvois*, indexes, and excerpts that collect, relate, and coordinate an entire field of books and periodicals. Recall the pointing fingers printed in broadsheets and the margins of a variety of Enlightenment books: the eighteenth century is “crowded with indices.”⁸⁶ In this essay we have offered an account, in broadest outline, of the period and its aftermath in order to show how human and technical agency are mediated through bibliographic materiality and how, from out of these historical mediations, the human is constantly remade and remediated.⁸⁷ For the eighteenth century, the Index was always an ideal, and today it may be one again: what Kevin Kelly has referred to in *The New York Times* as a single “liquid library” of all knowledge is precisely what Eighteenth-Century Collections Online (ECCO) and Google Books promise.⁸⁸ Following Latour, who complains that the Enlightenment “has never had the anthropology it deserved,” our account would recognize agents both human and bibliographical, and pursue its anthropology by way of bibliography.⁸⁹ The Enlightenment Index calls for an accounting in a continuation of the Enlightenment project by new technological means. If we take seriously the bibliographic Enlightenment, the task, as literary, intellectual, and cultural historians, is to reassemble its Index.

NOTES

We presented an early version of this argument at the 2010 American Society for Eighteenth-Century Studies (ASECS) in Albuquerque and are very grateful to Clifford Siskin and William Warner for including us in their panel discussion of *This is Enlightenment*. Many helpful suggestions made by generous readers much improved this essay. We particularly want to thank Marshall Brown, James Chandler, Matthew Garrett, Christina Lupton, Jerome McGann, Andrew Piper, Sophie Rosenfeld, Jonathan Sachs, Cliff Siskin, and our readers at *The Eighteenth Century: Theory and Interpretation*.</UNN>

1. Immanuel Kant, "Beantwortung der Frage: Was ist Aufklärung?," in *Gesammelte Schriften*, ed. Königlich-preussischen Akademie der Wissenschaften, 29 vols. (Berlin, 1910), 8:35.

2. Thomas Reid, *Essays on the Intellectual Powers of Man* (Edinburgh, 1785), 414.

3. Consider Peter Gay's *philosophes*, Robert Darnton's men of letters, or Jonathan Israel's radical philosophers. See Gay, *The Enlightenment: The Rise of Modern Paganism* (New York, 1995); Robert Darnton, *The Great Cat Massacre and Other Episodes in French Cultural History* (New York, 1984); and Jonathan I. Israel, *The Radical Enlightenment: Philosophy and the Making of Modernity 1650–1750* (Oxford, 2001). The Enlightenment is repopulated by Dorinda Outram's series of debates and debaters, with eighteenth-century women securing a place in historiography in Sarah Knott and Barbara Taylor's *Women, Gender, and Enlightenment* (New York, 2005).

4. Kant, "Was ist Aufklärung?," 8:35.

5. Reid, 414–15.

6. See Jonathan Kramnick on the way the phrase "print culture" would hold "together two distinct and incommensurate entities" ("Response: Some Thoughts on Print Culture and the Emotions," in "Technologies of Emotion," ed. Laura Mandell, special issue, *The Eighteenth Century: Theory and Interpretation*, 50, nos. 2–3 [Summer/Fall 2009]: 263–67, 264). See also Adrian Johns's revision and qualification of Elizabeth Eisenstein's characterization of the "fixity" of print technology and its logic of standardization (*The Nature of the Book: Print and Knowledge in the Making* [I, 1998], 10, 36).

7. Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, 1993).

8. Kant, "Was ist Aufklärung?" 8:35.

9. Kant, *Prolegomena zu einer jeden künftigen Metaphysik* (Riga, 1783), 10, 15.

10. Friedrich von Hardenberg, *Schriften. Die Werke Friedrich von Hardenbergs*, ed. Paul Kluckhohn and Richard Samuel, 6 vols. (Darmstadt, 1960–1988), 2:661.

11. For a summary of these efforts, see Dan Edelstein, *The Enlightenment: A Genealogy* (Chicago, 2010), 9–14.

12. Our argument may be read as prelude to Andrew Piper's *Dreaming in Books: The Making of the Bibliographic Imagination in the Romantic Age* (Chicago, 2009).

13. In the first of two separate, as yet unpublished studies, we will close read the editorial apparatus in the first four volumes of the *Berlinische Monatsschrift* and graph the web of cross-reference in which Kant's essay on Enlightenment was first published. In a second study, we will assemble, computationally, over 100,000 footnotes drawn from titles in the ECCO–TCP text collection and provide a visualization of what we have been calling "the Enlightenment Index."

14. Clifford Siskin and William Warner, "Introduction," in *This is Enlightenment* (Chicago, 2010) 1–36, 1.

15. We take seriously John Bender's oral remarks at the *This is Enlightenment* panel at the 2010 ASECS meeting. After enumerating the books, authors, post offices, roads, and clubs covered by Siskin and Warner's sweeping conception of media, Bender asked incredulously, "What isn't mediation?" Compare Edelstein's complaint: "To locate the

singularity of the Enlightenment, we must also consider *what* was mediated, not just *how* it was," (11). Edelstein argues further, that "to partake in the Enlightenment . . . took an awareness, by oneself and others, that a particular action belonged to a set of practices considered enlightened," (13). We agree that the Enlightenment was both a self-aware narrative and a collection of texts and practices but find Edelstein gives precedence to the narrative and mentions only in passing its material embodiment in print. The "narrative of Enlightenment" was inextricable from its dissemination in print. We would recruit Edelstein's argument by insisting that eighteenth-century readers, scholars, writers, and publishers were increasingly aware that they were participating in something we now call "the Enlightenment," because they were introducing new pages to the Index. Again, on our account, the Enlightenment refers not to an epistemic shift but rather to an intensified awareness of and confidence in the potential of print to coordinate a cosmopolitan republic of letters.

16. Roger Chartier and J. A. González, "Laborers and Voyagers: From the Text to the Reader Author(s)," *Diacritics* 22, no. 2 (Summer, 1992): 49–61, 53. In attempting a "sociology of texts," we draw on the recent convergence of a range of fields—from book history and bibliography to sociology and literary theory. Michael Suarez, for one, has named this convergence "Critical Bibliography" ("Historiographical Problems and Possibilities in Book History and National Histories of the Book," *Studies in Bibliography* 56 [2003–04]: 140–70).

17. See Lorraine Daston on the "echo chamber" that was the Enlightenment ("Afterword," in *The Sciences in Enlightened Europe*, ed. William Clark [Chicago, 1999], 495–502).

18. Jonathan Swift, "The Bookseller to the Reader," in *A Tale of a Tub* (London, 1704).

19. Moses Mendelssohn, "Ueber die Frage: was heißt aufklären?," in *Was ist Aufklärung*, ed. Ehrhard Bahr (Stuttgart, 1998), 3–8, 3.

20. Ann Blair, *Too Much to Know* (New Haven, 2010), 12.

21. Anthony Grafton, *Defenders of the Text* (Cambridge, 1991), 1.

22. That "print cultures" are the collective and corporate effort of publishers, printers, authors, and readers is argued by Johns in *The Nature of the Book*. See also Johns on the diffusion and dissemination of Enlightenment "through multiple reappropriations" ("The Piratical Enlightenment," in *This is Enlightenment*, 301–22, 303).

23. Denis Diderot, "Encyclopedia," in *Rameau's Nephew and Other Works*, trans. J. Barzun and R. H. Bowen. (Indianapolis, 1964), 277–308, 277.

24. "Avertissement des Editeurs," *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers, etc.*, ed. Diderot and Jean le Rond D'Alembert, vol. 3, ARTFL Encyclopédie Project, ed. Robert Morrissey (Chicago, 2011), <http://encyclopedia.uchicago.edu>.

25. We depart from Grafton's *The Footnote: A Curious History* (Cambridge, Mass., 1997), 111–14. Grafton's description of early modern practice is useful by way of contrast: "[Classical scholars] bent on correcting every error, explicating every literary device, and identifying every thing or custom that cropped up in a classical text had mounted every major piece of Greek or Latin prose or verse in a baroque setting of exegesis and debate" (114–15).

26. G. Thomas Tanselle, "The Footnote Demarginalized," *Raritan* 18, no. 2 (1998): 137–45.

27. Blair, *Too Much to Know*, 53; and Eisenstein, *The Printing Revolution in Early Modern Europe*, 2nd ed. (Cambridge, 1983), 70–73. See also Blair, "Annotating and Indexing Natural Philosophy," in *Books and the Sciences in History*, ed. Marina Frasca-Spada and Nick Jardine (Cambridge, 2000), 69–89; Grafton, *The Footnote: A Curious History*; and Helmut Zedelmaier, ed., *Praktiken der Gelehrsamkeit in der frühen Neuzeit*, (Tübingen, 2001).

28. Eighteenth-century quartos rival seventeenth-century folios in size. See Philip Gaskell, *A New Introduction to Bibliography* (Winchester, 1995), 68.

29. D. F. McKenzie, "Typography and Meaning," in *Making Meaning: "Printers of the Mind" and Other Essays* (Amherst, 2002), 198–236, 228.

30. See Roger Chartier, *The Order of Books*, trans. Lydia G. Cochrane (Stanford, 1992), 69; and Roger D. Lund, "The Eel of Science: Index Learning, Scriblierian Satire, and the Rise of Information Culture," *Eighteenth-Century Life* 22, no. 2 (May 1998): 18–42, 32.

31. Steffan Müller-Wille and Sara Scharf, "Indexing Nature: Carl Linnaeus (1707–1778) and his Fact-Gathering Strategies," *Working Papers on the Nature of Evidence* 36, no. 8 (January 2009): 1–39, 8.

32. Müller-Wille, "Collection and Collation: Theory and Practice of Linnaean Botany," *Studies in History and Philosophy of Biological and Biomedical Sciences* 38 (January 2007): 541–62, 558.

33. The foldout reveals that the boards and bindings of individual volumes do not fully enclose their own content. On tipped-in plates and the Derridean pun on "hors-texte," see Peter D. McDonald, "Ideas of the Book and Histories of Literature: After Theory?," *PMLA* 121, no. 1 (2006): 214–28, 222–23.

34. Lund, 21. See also Bradin Cormack and Carla Mazzio, *Book Use, Book Theory: 1500–1700* (Chicago, 2005), 65–66.

35. Isaac Watts writes "if a book has no *Index* to it, or good *Table of Contents*, 'tis very useful to make one as you are reading it" (*The Improvement of the Mind*, 2nd ed. [London, 1743], 65–66.).

36. Janine Barchas, *Graphic Design, Print Culture, and the Eighteenth-Century Novel* (Cambridge, 2003), 211, and 200–17.

37. See *A General Index to the Spectators, Tatlers and Guardians* (London, 1757), or Samuel Ayscough's general indexes for the *Gentleman's Magazine* and the *Monthly Review*, published in 1786 and 1789, respectively. Ayscough, known as the prince of index makers, may be best remembered for producing the first Shakespeare concordance, his *Index to the Remarkable Passages and Words Made Use of by Shakespeare* (London, 1790).

38. Hardenberg, *Schriften*, 2:661.

39. James Boswell, *The Life of Samuel Johnson*, 2 vols. (London, 1791), 1:487.

40. See David McKitterick, *The Foundations of Scholarship: Libraries and Collecting, 1650–1750* (Los Angeles, 1985); Chartier, *The Order of Books*.

41. See Thomas Habel, *Gelehrte Journale und Zeitungen der Aufklärung* (Bremen, 2007), 47n.

42. Frank Donoghue, *The Fame Machine: Book Reviewing and Eighteenth-Century Literary Careers* (Stanford, 1996), 16–55.

43. "Ephemeriden," in *Deutsche Encyclopädie, oder Allgemeines Real-Wörterbuch aller Künste und Wissenschaften*, 23 vols. (1783), 8:500.

44. Karen O'Brien, "The History Market in Eighteenth-Century England," in *Books and Their Readers in Eighteenth-Century England: New Essays*, ed. Isabel Rivers (London, 2001), 107.

45. R. M. Wiles, *Serial Publication in England before 1750* (Cambridge, 1957), 2.

46. Diderot, "Encyclopedia," 283. D'Alembert, *Preliminary Discourse to the Encyclopédie of Diderot*, trans. Walter E. Rex (Chicago, 1995), 3. [

47. Multi-authored works themselves digested many authors, both ancient and modern. The *Encyclopédie* cites at least 1,200 different authorities. Edelstein makes much of the fact that the various contributors to the *Encyclopédie* tended to cite Ancients more than Moderns, but the more important point may be that the relentless number of references (there are over 60,000 *renvois*) assemble an imagined network over which the *Encyclopédie* would preside and into which it inserts itself (48–51).

48. See Bender and Michael Marrinan, *The Culture of Diagram* (Stanford, 2010), 8–11.

49. Diderot, "Encyclopedia," 310.

50. The tenth edition (1758) describes itself as "*Holmiae hac editione, longe auctius factum a me ipso.*"

51. On the history of *historia literaria*, see Rudolf Blum, "Bibliographia. eine wort- und begriffsgeschichtliche Untersuchung," *Archiv für Geschichte des Buchwesens* 10 (1970):

1067–69. See also *Historia Literaria: Neuordnungen des Wissens im 17. und 18. Jahrhundert*, ed. Frank Grunert (Berlin, 2007).

52. Eisenstein, *Printing Revolution*, 209–85.

53. Robert Darnton, “Philosophers Trim the Tree of Knowledge: The Epistemological Strategy of the *Encyclopédie*,” in *The Great Cat Massacre* (New York, 1984), 191–214.

54. Siskin and Warner, 16.

55. Using the electronic version of the *Encyclopédie* developed by ARTFL at the University of Chicago, Blanchard and Olsen have developed a visual “road map” of the *renvois*’ structure that offers a stunning visual representation all their complex interrelationships. See their “Le système de renvois dans l’*Encyclopédie*: Une cartographie des structures de connaissances au XVIII siècle,” in *Recherches sur Diderot et sur l’Encyclopédie* vol. 31–32 (April 2002): 45–70.

56. David Hume, *Dialogues Concerning Natural Religion* (Indianapolis, 1998). Although the dialogues were first published posthumously in 1779, Hume began work on them as early as 1751. In the epigraph to this essay from Reid, Hume’s vegetating library (along with Swift’s “Philosopher of Laputa”) seems a source of anxiety. Reid asks incredulously, “if a good period or sentence was ever produced without having had any judgment previously employed about it, why not an *Iliad* or *Eneid*?” (414). Vegetating footnotes also feature in Grafton, *Footnote*, 111.

57. Hume, 24.

58. For an account that, like ours, finds its way between bibliography and media theory, see Christina Lupton, *Knowing Books: The Consciousness of Mediation in Eighteenth-Century Britain* (Philadelphia, 2011).

59. See Paula McDowell on textual and biological generation in *The Women of Grub Street: Press, Politics, and Gender in the London Literary Marketplace 1678–1730* (Oxford, 1998), 249–51.

60. See David L. Vander Meulen, *Pope’s Dunciad of 1728: A History and Facsimile* (Charlottesville, 1991), 1:49–50, 1:58.

61. James Raven, “Publishing and Bookselling, 1660–1780,” in *The Cambridge History of English Literature*, ed. John Richetti (Cambridge, 2005), 11–36, 27.

62. Diderot, “Encyclopedia,” 314.

63. Michael Suarez, “Towards a Bibliometric Analysis of the Surviving Record,” *The Cambridge History of the Book in Britain*, ed. Suarez and Michael Turner, 6 vols. (Cambridge, 2009), 5:43.

64. See Rudolf Jentzsch, *Der deutsch-lateinische Büchermarkt nach den Leipziger Ostermeßkatalogen von 1740, 1770 und 1800 in seiner Gliederung und Wandlung* (Leipzig, 1912). See also Reinhard Wittmann, *Geschichte des deutschen Buchhandels: Ein* (Munich, 1991), 111.

65. Karl P. Moritz, “Vorschlag zu einem Magazin einer Erfahrungs-Seelenkunde,” in *Deutsches Museum* (Leipzig, 1782), 1:297.

66. Quoted in Willi Goetschel, Catriona Macleod, and Emery Snyder, “The *Deutsche Encyclopädie*,” *Notable Encyclopedias of the Late Eighteenth Century: Eleven Successors of the Encyclopedia*, ed. Frank A. Kafker (Oxford, 1994), 257–333, 305. For an extended discussion of the argument here and in the following two paragraphs, see Chad Wellmon, “Touching Books: Diderot, Novalis and the Encyclopedia of the Future,” *Representations* 114, no. 1 (2011): 65–102.

67. John Locke, *An Essay Concerning Human Understanding* [1689], ed. Peter Nidditch (Oxford, 1975), 10.

68. Hardenberg, *Schriften*, 4:253; 2:280. See Wellmon, “Touching Books.”

69. For some of these reactions, see Rudolf Schenda, *Volk ohne Buch: Studien zur Sozialgeschichte der populären Lesestoffe 1710–1910* (Frankfurt am Main, 1970), 40–90.

70. Johann Gottfried Herder, *Briefe zur Beförderung der Humanität* [1796], 2 vols. (Berlin, 1971), 2:92–93.

71. J. G. Heinzmann, *die Pest der deutschen Literatur: Appel an meine Nation Aufklärung*

und Aufklärer; Gelehrsamkeit und Schriftsteller; Büchermanufacturisten, Rezensenten, Buchhändler; moderne Philosophen und Menschenerzieher; auch mancherley anderes was Menschenfreyheit und Menschenrechte betrifft (Bern, 1795).

72. Hardenberg, *Schriften*, 2:662.

73. Hardenberg, *Schriften*, 2:663.

74. Deidre Shauna Lynch, "'Wedded to Books': Bibliomania and the Romantic Essayists," in *Romantic Circles Praxis Series*, ed. Ina Ferris (February 2004), <http://www.rc.umd.edu/praxis/libraries/lynch/lynch.html>. See also Ferris, "Book Fancy: Bibliomania and the Literary Word," *Keats-Shelley Journal* 58 (2009): 33–52.

75. Wordsworth, "Preface," *Lyrical Ballads* [1798], 2nd ed., ed. W. J. B. Owen (Oxford, 1969), 160.

76. Wordsworth, "The Tables Turned," *Lyrical Ballads* 104, ll. 3–4.

77. Jean-Jacques Rousseau, *The First and Second Discourses*, trans. R. D. and J. R. Masters (New York, 1964), 44.

78. Samuel Taylor Coleridge, "The Rime of the Ancyent Marinere," in *Lyrical Ballads* (Briston and London, 1798), 13.

79. See Siskin, "More is Different: Literary Change in the Mid and Late Eighteenth Century," in *The Cambridge History of English Literature, 795–823*. Compare the "Baconian" literary history offered in Robin Valenza's *Literature, Language, and the Rise of the Intellectual Disciplines in Britain, 1680–1820* (Cambridge, 2009), 26.

80. See Leah Price, *The Anthology and the Rise of the Novel* (Cambridge, 2000).

81. Eric Lindstrom claims that Wordsworth's "Tintern Abbey" "suffuses deixis with subjectivity" (*Romantic Fiat: Demystification and Enchantment in Lyric Poetry* [New York, 2011], 57).

82. William Blake, "Plate 21," *The Poetry and Prose of William Blake*, ed. David V. Erdman (Garden City, 1965), 41. The Blake Archive makes vivid the problem of citation.

83. See Morris Eaves, Robert N. Essick, and Joseph Viscomi, eds. *The William Blake Archive* (November 1996). Compare copies of plate 21 at <http://blakearchive.org>.

84. Peter Sloterdijk, "Regeln für den Menschenpark," *Die Zeit*, 16 September 1999.

85. William Hazlitt, "On Reading Old Books," *The Plain Speaker*, 2 vols. (London, 1826), 2:66.

86. Samuel Richardson, *Clarissa; or, the History of a Young Lady* [1747–48], ed. Angus Ross (London, 1985), 743.

87. Compare W. T. J. Mitchell and B. N. Hansen's reformulation of Friedrich Kittler's infamous claim that media "determine our situation": the print media *were* the situation, they did not *determine* the situation, (*Critical Terms for Media Studies* [Chicago, 2010], xxii).

88. Kevin Kelly, "Scan This Book," *New York Times* (14 May 2006). See Peter Stallybrass, "Against Thinking," Responses to Ed Folsom's "Database as Genre: The Epic Transformation of the Archives," *PMLA*, 122, no. 5 (October 2007): 1571–79; and Ann Moss, *Printed Commonplace-Books and the Structuring of Renaissance Thought* (Oxford, 1996).

89. Latour, 193.