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Knowledge and the Systematic Reader: The Past and Present of Encyclopedic Learning

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Abstract

Though digital media have unquestionably affected the features and functions of modern encyclopedias, such works also continue to be shaped by factors thoroughly conventional by the end of the historical Enlightenment. As William Smellie, editor of the first *Encyclopædia Britannica* (1768-71) wrote, "utility ought to be the principal intention of every publication. Wherever this intention does not plainly appear, neither the books nor their authors have the smallest claim to the approbation of mankind." The "instructional designers" and "user-experience specialists" of the online *Britannica* are the inheritors of all those authors and editors who before and after Smellie's time devised different plans and methods intended to maximize the utility of their works. The definition of utility and with it the nature of encyclopedic knowledge continues to change both because of and despite technological difference; if digitization has in some ways advanced the ideals of Enlightenment encyclopedias, then it has in other ways allowed for the re-inscription of certain flaws and limitations that encyclopedias like the *Britannica* were specifically designed to overcome. By examining not only what one might read in the encyclopedia but also the ways in which one might read it, this article demonstrates the extent to which the notion of encyclopedic utility depends on historical context.

Keywords: Systematic reading, encyclopedism, encyclopedias, *Encyclopædia Britannica*, Enlightenment, knowledge production, history of reading

Introduction

Since its inception in 1768, the owners of the *Encyclopædia Britannica* have included printers and engravers, bookbinders, bankers, publishers, philanthropists, and one former United States senator. Its chief editors have been, among other things, apothecaries, clergymen, geologists, journalists, academics, and philosophers. Conceived by Colin Macfarquhar and Andrew Bell as a national intellectual monument and answer to the French *Encyclopédie*, the first printed editions were sold out of Macfarquhar's offices on Nicolson Street in the Old Town of Edinburgh. Now, the international headquarters occupy a large, redbrick building in downtown Chicago, and the company prints no new editions at all.

These headquarters and their virtual counterpart at Britannica.com appropriately reflect a history of generic, ideological, and technological change. The shelves along the lobby's north wall contain a selection of print products including a limited edition of the fifteenth and final 32-volume set as well as a replica of the three-volume first edition completed in 1771. The two literally bookend the working *Britannica*'s historical materiality; the gilt edges of the former and faux-foxing of the latter equally mark them as nostalgia or "prestige" purchases divorced from modern encyclopedic knowledge production. The sets also sit side-by-side in a section of the *Britannica* online store dedicated to books, atlases, and almanacs. Clicking to "learn more" about the limited edition, however, leads only to a 404 error (Educational Learning Books 2013). The past is present, but the link is broken.

At the same time, the quotations from notable *Britannica* authors and editors adorning the lobby's south wall promote a sense of institutional continuity. The opening words of William Smellie's preface to the first edition, placed towards the top left, articulate a philosophy that to this day remains central to the encyclopedic project. "Utility," according to Smellie, "ought to be the principal intention of every publication" (Smellie 1771: v). The company may have moved beyond print to become a "pioneer in digital education," but they still claim to create their new knowledge products as they have "*for many years*…by collaborating with experts, scholars, educators, instructional designers, and user-experience specialists; by subjecting their work to rigorous editorial review; and by combining it all into learning products that are useful, reliable, and enjoyable" (Britannica Today 2013). This description would not have been out of place in Smellie's time. The final phrase recalls Horace's oft-stated belief that literature must be *dulce et utile*, and just as it did in the first *Britannica*, usefulness has pride of place.

Though digital media have certainly affected its features and functions, then, the contemporary encyclopedia also continues to be shaped by factors conventional by the end of the historical Enlightenment. The "instructional designers" and "user-experience specialists" of the online *Britannica* are the inheritors of all those authors and editors who for centuries devised different plans and methods

intended to maximize the utility of their works. As Jutta Haider and Olof Sundin observe, "a line can be drawn through the centuries from various earlier manifestations of the Enlightenment ideal up to today's online encyclopaedias," but "on the other hand, there is the position of these sites existing within the networked space of the Internet" (Haider and Sundin 2010). The definition of utility and with it the nature of encyclopedic knowledge continues to change both because of and despite that technological difference. If digitization has in some ways advanced the ideals of Enlightenment encyclopedias, then it has in other ways allowed for the re-inscription of certain flaws and limitations that encyclopedias like the *Britannica* were specifically designed to overcome. By examining not only what one might read in the encyclopedia but also the ways in which one might read it, this article will demonstrate the extent to which the notion of encyclopedic utility depends on historical context.

Forms and Functions

The transition from the seventeenth to the early eighteenth century marked the beginning of a long-standing shift in the ambitions and design of the encyclopedic project. "Before and during the seventeenth century," Richard Yeo writes, "the original Greek concept of encyclopedia was available, though it had become highly unstable, oscillating between the ideas of fundamental training and near universal knowledge" (Yeo 2007: 49). The distance between the two ideas left ample room in the literary marketplace for works that despite vastly different features and functions equally trafficked in encyclopedic knowledge. Relatively inexpensive vernacular guidebooks supposedly complete in a few hundred (or fewer) pages in quarto often made similar promises about providing access to the round of education as did much larger Latin works composed of multiple folios.[1] The differences of presumed educational attainment, price, and marketability as well as organization, breadth, and depth that ran across the spectrum of such works represent a relatively stable set of generic threads that encyclopedists have spent generations periodically unraveling and then winding back together.

Issues of scope and arrangement have played a particularly large part in shaping encyclopedic texts. Print technology created numerous opportunities for generic growth and variation as the limitations of materiality sometimes set the encyclopedic project at odds with itself. Encyclopedias, as Jeff Loveland observes, generally grew in length from 1690 to 1840 as "conceptions of [them] as repositories of indefinite extent became more widespread" and nationalistic associations made size a sign of prestige (Loveland 2012: 233-34). Interminably long production times, necessarily high prices, and the possibility of overwhelming rather than enlightening readers, however, could impede the efficient dissemination of knowledge. Encyclopedists, therefore, often had as much reason to contract their works as expand them, and the same year in which the proprietors of the *Britanni-*

ca embarked upon their largest encyclopedia to date (the eighteen-volume third edition, produced from 1788-1796) also saw the publication of the three-volume *New Royal Encyclopædia* – in essence a plagiarized *Britannica* that improbably claimed on the title page of its second edition to comprehend "all the material information that is contained in Chambers' *Cyclopædia*, the *Encyclopædia Britannica*, and the French *Encyclopèdie*" (Hall 1791).

Brevity, though, could also diminish utility. John Barrow's *A New and Universal Dictionary of Arts and Sciences* (1751), for example, claimed to comprehend all the parts of all the branches of knowledge in the space of a single volume. The 576 folio pages of his dictionary predictably left out a great deal of valuable information – so much so that the supplement published by the proprietors three years later outdistanced the original by nearly 200 pages. This "supplement" expanded some entries, updated others, and introduced entirely new ones initially omitted. Together, the two volumes supposedly created one complete work, but the single encyclopedia now came with a burdensome double-alphabet; readers had to move back and forth between duplicate entries in each volume whenever cued by a "*dict*." annexed to articles in the supplement. The still small space of even two large volumes, moreover, continued to demand an exclusionary hierarchy. "As it has been our principal view to render this work useful to the reader," Barrow explains, "those branches of learning, which are of more immediate use in life, are more largely treated of than those of mere curiosity." With space at a premium, Barrow gave priority to the mechanical arts (Barrow 1754: 13).

The *New Royal Encyclopædia* likewise sacrificed content and functionality, but it did so in different ways. Though copied largely verbatim from the second *Britannica*, the *New Royal*'s system of acoustics is only half as long; it excludes, among other details, a conjecture regarding the tones produced by the bass-strings of a harpsichord as well as what the *Britannica* identified as "curious" descriptions of Joseph Priestley's experiments "concerning the tone of electrical discharges" ("Acoustics" 1778: 1.61). Nor are its systems and treatises the only truncated elements: though several "detached" parts of knowledge not included in the *Britannica* have been added, more have been excised. The second edition of the *New Royal* does not even retain all of the entries provided in the first. Gone, for example, are the "abacay," a Philippine parrot; the "abacot," an ancient English royal cap of state; and "abadir," a Carthaginian title for first-order gods and the name given to the stone swallowed by Cronus in place of Zeus. A further nine entries between "abaddon" and "abarticulation" vanish between the first and second editions without explanation; presumably they and many others fell by the wayside in order to make room for materials deemed more important. The editors also greatly reduced the number of paragraph breaks and the amount of whitespace throughout the whole, and while these measures too may have helped to control overall length, the many unbroken blocks of text both strain the eye and obscure organizational logic. Minimized margins, furthermore, leave no room for

the headings, minor illustrations, and plate references of the original treatises. To those who spent more time looking for information than learning it because of these space-saving and therefore cost-cutting measures, the shorter, more affordable work may actually have been the less useful.

At least, though, members of the middling classes could hope to overcome the minimum bar of entry. At four guineas, Yeo notes, Chambers' *Cyclopædia* (1728) would have cost the average family about a month's income, and the £12 asked for the first full *Britannica* forty years later made it a luxury item as well (Yeo 2001: 50-51). At roughly £3, the *New Royal* was still not inexpensive, but compared to a price of £19 for the second *Britannica* it was something of a bargain. The editors of the *New Royal* quite sensibly put its relative affordability – "near ten guineas cheaper" than the cheapest of its competitors – at the top of a list enumerating its particular advantages.[2] In their cost, style, and content, then, the major encyclopedias of the Enlightenment might have targeted the higher strata of society, but some saw potential value (and profit) in extending a more limited brand of encyclopedic learning to those of lesser means.

The promise of broader appeal featured regularly in eighteenth-century title pages and prefaces and remained an important part of an alternative encyclopedic tradition in the nineteenth century. Barrow, for his part, claimed to render all the arts and sciences "easy and familiar to the meanest capacities," and not long after, Benjamin Martin began issuing numbers of his *General Magazine of Arts and Sciences* (1755-1765), by which he hoped to make his subscribers proficient in all the useful arts and sciences at the rate of sixpence for one half-sheet upon a science per month (Martin 1755: 1.iv-vi). Though Martin's particular plan was not widely imitated, publishers on occasion continued to look to the periodical as a means by which knowledge of the arts and sciences could be circulated widely and inexpensively. Even as Victorian encyclopedists and dictionary-makers developed "more scientific and rigorous practices," titles such as the *British Penny Magazine* (1826-1845) sought "to provide moral, cheap and, crucially, useful literature through 'the imparting useful information to all classes of the community'" (Weller 2008: 201). Aimed largely at the working classes, the illustrated magazine cost a penny per number and came with footnotes and cross-references that "created an encyclopaedic feel" and encouraged subscribers to bind each year's issues together and keep them as single reference works. Meanwhile, the 127 parts of the seventh *Britannica* issued monthly over roughly the same period (1827-1842) cost six shillings apiece for a combined total of just over £38.

All of these tensions persist within and across digital domains. Though far less than the $1400 formerly asked for the printed edition, the $69.95 annual membership fee for individual access to *Britannica Online* still costs $69.95 more than access to *Wikipedia* – or, to give it its full name, *Wikipedia: The Free Encyclopedia*. Both organizations (as well as independent observers) have contested the extent to which price does or does not bear on quality. Both also serve, or seek to

serve, a wider readership than did the flagship encyclopedias of the Enlightenment. *Britannica* continues to market different versions of its encyclopedias to different age groups: the premium site is aimed at educated adults while other online editions address the needs of children, secondary, and post-secondary students. Though the English *Wikipedia* acknowledges the variation of its audience and divides readers into three grades (general, knowledgeable, and expert), it does not maintain multiple versions of its own content; indeed, the style guidelines suggest that articles "should be understandable to the widest possible audience. For most articles, this means understandable to a general audience." In the case of particularly technical content, the guidelines further encourage authors to "write one level down"– that is, they should "consider the typical level where the topic is studied (for example, high school, college, or graduate school) and write the article for readers who are at the previous level" (Wikipedia contributors 2013). No single encyclopedia, in short, can be all things to all readers; authors, editors, and institutions still operate within certain conceptual and practical constraints that drove the development and generic variation of encyclopedias in the eighteenth and nineteenth centuries.

Ironically, the *absence* of some of those constraints has also given new life to old arguments about encyclopedic utility. Physical size – once a major consideration for encyclopedists – no longer matters. This frees online encyclopedias to do, comprehend, or in other ways be more than could their printed predecessors, but it also results in a high potential for mission creep. The editors of *Wikipedia* have therefore defined and now attempt to maintain somewhat stricter generic boundaries than did many of their Enlightenment counterparts. "*Wikipedia* is not a paper encyclopedia," begins the first section of an article dedicated to explaining what *Wikipedia* is not. "There is no practical limit to the number of topics *Wikipedia* can cover or the total amount of content. However, there is an important distinction between what *can* be done, and what should be done" (Wikipedia contributors 2014). Ten entries under the subheading of "encyclopedic content" on the same page list some eighteen genres and functions from which the project seeks to distinguish itself; of these, nearly half were once either fully integrated parts of the genre or experimental features introduced and abandoned over the course of its development in the eighteenth and nineteenth centuries. Original research appeared in later editions of the *Britannica*; Diderot and D'Alembert used the *Encyclopèdie* to advance controversial political, economic, and religious ideologies; Benjamin Martin included news of the moment with the monthly installments of his *General Magazine of Arts and Sciences* (1755-1765); and Dennis de Coetlogon insisted that with the help of his treatise on surgery in *An Universal History of Arts and Sciences* ("and some Practice"), aspiring pupils could master the art (De Coetlogon 1745: 5). According to "What Wikipedia Is Not," though, *Wikipedia* is not a publisher of original thought, a soapbox, a newspaper, an instructional manual, or a textbook.

Wikipedia policy, then, still (loosely) defines the encyclopedic as something less than universal both despite and because of its freedom from the material realm. Though the content of the current English-language *Wikipedia* would occupy roughly sixty times the space of the last printed *Britannica* and dwarfs even the most expansive Western encyclopedias of the last four centuries, the setting of limits nevertheless remains crucial to the encyclopedic enterprise. Smellie's insistence that a universal dictionary of arts and sciences need not trouble itself with history and biography – subjects that *could* be comprehended by the *Britannica* but that in his opinion already had adequate housing in separate collections – is part of the same debate that now goes on between *Wikipedia*'s associations of Deletionists and Inclusionists. Smellie left the *Britannica* in part because the proprietors demanded the inclusion of materials he deemed beyond the scope and purpose of a universal dictionary of arts and sciences; many *Wikipedia* editors are now no less willing to stand upon similar principles. The occasionally vitriolic contest between the two associations hinges in large part upon the potential and the potential dangers of the new medium: while the Inclusionists advocate for "building the world's largest and most complete professional encyclopedia," the Deletionists wish to maintain "a quality encyclopedia containing as little junk as possible" (Meta contributors 2013; 2014). That the category of "junk" should comprehend overtly promotional entries, unverifiable information, or significantly subpar composition seems uncontroversial, but their assertion that subjects lacking in sufficient "general interest" or "notability" have no place in a "quality" encyclopedia regardless of a lack of size restrictions reveals an irresolvable ambiguity that inheres and has always inhered in the encyclopedic project: the distinction between all there is to know and all that is worth knowing.

The editors of the *Britannica* likewise remain wary of the dangers posed by digital technology to what they define as the purpose of the encyclopedia. Theodore Pappas, the company's Chief Development Officer and Executive Editor, similarly describes these dangers in terms of genre. "We do updates every day," he explains, "but we are conscious of not converting the encyclopedia into a newspaper or blog [in which] you would lose the narrative flow of an entry because you have simply tacked on a new sentence every week" (Pappas, 2013 informal interview, 13 June).[3] Pappas' association of generic integrity with "narrative flow" reflects a defining distinction between knowledge production and information gathering; in order to maintain the integrity of the encyclopedia as such, the editors have elected to combat or compromise with the sometimes counterproductively high periodicity enabled by the new medium (and perhaps expected or demanded by its users) via a continued emphasis on the collection of "evergreen" information and its integration into synthesized treatments of significant individuals, entities, or events. On 26 June 2013, for instance, the United States Supreme Court ruled section three of the Defense of Marriage Act (DOMA) unconstitutional under the Due Process Clause of the Fifth Amendment. Within hours, the

case (United States v. Windsor) had its own brief entry, but the ruling also quickly became part of longer treatments of "marriage law" and "same-sex marriage," both of which place the court's decision in broader religious, social, political, and international contexts.[4] Rather than merely updating the site to record a moment in history, the editors moved to reflect the ruling as an historical moment.

The front page of the digital *Britannica* nevertheless does acknowledge the immediacy of the modern information environment that it necessarily occupies and must constantly confront. The editors' efforts to avoid the conversion of the encyclopedia into a newspaper or blog have to some extent resulted in their conversion of the blog and newspaper into encyclopedic paratexts or paragenres. A link to the *Britannica Blog* prominently occupies the third position on the right-hand side of the top bar of the academic edition's homepage – just after "home" and "browse." A team of *Britannica* editors manages a wide range of entries and responses that ideally strive towards rationality and "aggregate" objectivity but are not thoroughly checked for factual accuracy; the blog encourages discussions of topical issues in addition to more conventionally encyclopedic fare, and its writers have supposedly been given "a lot of freedom" with respect to the substance and tone of their posts. In other words, the blog frees the encyclopedist from modern encyclopedic conventions while simultaneously providing opportunities to network established encyclopedic content with records of personal experiences, current events, and external research sources. One editor's first-person account of a recent trip to two small towns in "Tornado Alley" contains links to *Britannica* articles on tornadoes, the Great Plains, the Arctic Ocean, and the Gulf of Mexico in addition to the National Oceanic and Atmospheric Administration's Storm Prediction Center website, a separate Center page on tornado safety, and a scholarly article on microphysics and tornadogenesis. Another post marks the fiftieth anniversary of the 1963 March on Washington by showcasing a selection of images of the original event taken from the *Britannica*'s media collection.

Links to articles from the *New York Times* and *BBC News* in the right-hand column of the homepage serve a similar function. These links more straightforwardly alert users to the encyclopedia's engagement with matters of the moment and tacitly suggest subjects for further inquiry within the database.[5] This strategy, as suggested above, is not exactly new; the weekly publication of *The Penny Magazine* often allowed it to choose subjects reflective of recent events. The issue for February 3, 1838, for example, opens with a five-column article on the orangutan that begins by informing readers of the Zoological Society's acquisition of a new living specimen "within the last few weeks" (*The Penny Magazine* 1838: 41). Digital media, though, have allowed the major encyclopedias to keep abreast of newsworthy events and to do so much more rapidly. On occasion, the items in the *Britannica Online* news article feed will actually align with those in an additional front-page section featuring new and recently updated entries. Such alignments advertise the encyclopedia's synchrony with current events (which enhanc-

es encyclopedic utility) while reifying generic distinctions and hierarchical primacy. The selection of the new or newly revised encyclopedia entries is placed above and apart from the links to news articles, and though the former may contain subjects in common with the latter they are typically interspersed among others lacking any apparent connection. The news stories, moreover, refresh frequently while the selection of encyclopedia entries changes not more than once a day. Together, the two elements suggest the role of the news in generating encyclopedic content and the ways in which the *Britannica* situates that news in the broader context of durable "encyclopedic" knowledge.

Both *Britannica* and *Wikipedia*, then, maintain the encyclopedia's conventionally curatorial disposition towards information management and knowledge production. The fundamental function of the encyclopedia is still the distillation of the "useful" from what would otherwise be an overwhelming deluge of information. The two projects, though, apply very different and sometimes internally inconsistent standards of usefulness the disparities of which are amplified by the practical limitlessness of "size" in a virtual space as well as the fact of restricted versus open editorial arbitrage. *Wikipedia*'s collaborative model allows for a more amorphous definition of utility that may be said to better or at least more directly reflect the wide and changeable interests of its users; it might therefore seem the more democratic, progressive, or modern of the two encyclopedic projects. The realities of current Wikipedian editorial demographics, however, to some degree complicate such an assessment. In at least one respect, *Wikipedia* cleaves very closely to a much older convention of encyclopedic knowledge production: as of April 2012, 90 per cent of its editors were male. As Sue Gardner, Executive Director of the Wikimedia Foundation, writes, it "shouldn't surprise anyone that [Wikipedia] would fall victim to the same gender-related errors and biases as the society that produces it" (Gardner 2013). With only 9 per cent of its editors self-identifying as female, any agenda collectively pursued or any emergent sense of what constitutes "useful knowledge" must be influenced by this disparity.

Ironically, women were absolutely crucial to what Pappas sees as the *Britannica*'s pre-digital version of user-generated feedback and content production. Beginning in 1936, purchasers of the full encyclopedia received a number of coupons each one of which entitled them to a typed, cross-referenced, and bound report on a subject of their choosing. By the 1960s, the *Britannica* Library Research Service – then the largest private research service in the world and since 1947 under the direction of Virginia Stenberg, a graduate of Smith College – employed over seventy college-educated women charged with visiting libraries and research institutions across the country in order to answer the queries submitted. In 1968, the Charleston *News and Courier* reported that Stenberg and her "answer girls" (then as now, contributing to the encyclopedia did not always defend against sexism) received 175 000 requests each year; during peak periods, subscribers sent as many as a thousand per day (McCormack 1968: 2-C). These queries and reports,

Pappas explains, helped the editors determine what subjects needed additional coverage in the encyclopedia proper.

Britannica received and responded to these coupons until the early 1990s. An encyclopedia, though, must "evolve with the times," and in 2008 the company made user-generated content and editorial suggestions part of its mission to make *Britannica Online* "a welcoming community for scholars, experts, and lay contributors" ("Britannica's New Site" 2008). A strict editorial hierarchy remains in place, however, and according to the submission guidelines, relatively few user contributions will meet their standards – standards that apply to subject as well as content (Submission Guidelines 2014). The *Britannica* is thus more open now than in the past, but it continues in general to follow the agenda set by Tytler and Macfarquhar at the end of the eighteenth century: professionals and experts ultimately decide what does and does not constitute the "core knowledge" needed "to understand the world around us, past and present" (Pappas 2013). *Wikipedia*'s standards are, in terms of subject matter, much looser, but as I have indicated not everything can have a place in even the world's largest encyclopedia. An off-site archive of deleted pages reveals that the editors drew the line at a New York band called The French Kings, a magazine published for twelve years in Oxford, Mississippi entitled *Southvine*, and the birth of a beagle named "Dallas Southard" in Benson, North Carolina.[6] In the event that "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"– a moment described by Diderot as "the most glorious" for an encyclopedia (Diderot 2001: 290) – neither *Wikipedia* nor the *Britannica* would recall any of these to human memory.

Given the traditional function of the encyclopedia as a storehouse of civilizational knowledge, the *Britannica*'s far more narrowly defined criteria for notability are a matter of potentially historic importance. "An encyclopedia," James Creech writes, "must fix the totality of knowledge in one moment, like an image of the national mind that will itself become a stable measure by which future progress can be gauged" (Creech 1982: 189). Though ongoing updates mean the *Britannica* is rarely if ever absolutely fixed, it will continue to provide what Chambers in his *Cyclopædia* called a "survey of the Republick of Learning" and the "boundary that circumscribes our present Prospect" (Chambers 1728: n.p.). The Library of Congress, which holds every printed edition of the *Britannica* produced since 1768, has agreed to accept an annual donation to its archives in the form of a digital snapshot of the *Britannica* database as it stands on the first day of January in every year going forward. This initiative will maintain and make available to posterity an "unbroken record" that bridges the encyclopedia's print and digital forms (Pappas 2013).

Building that bridge and extending it into the future, though, will require the keepers of encyclopedic knowledge to continually overcome the challenges of digital preservation. As the final report of the Blue Ribbon Task Force on Sustain-

able Digital Preservation and Access put it, "without preservation, there is no access," and the technological, institutional, and economic obstacles to the long-term sustainability of digital information remain significant. The move of the *Britannica* from print to digital entails a shift from what the task force describes as a fundamentally linear preservation model focused on physical conservation to a recurrent model in which the merits of preservation must be reevaluated in accordance with technical developments and the persistent threat of obsolescence (Blue Ribbon Task Force on Sustainable Digital Preservation and Access 2010: 25, 29).[7] The digital encyclopedia, in other words, is itself more susceptible to data loss or wholesale irretrievability as a result of the same processes of information evaluation and prioritization that are its own core functions in any medium. Just as new editions or updates pronounce some information obsolete or insignificant by declining to carry it forward, so too might entire encyclopedias be deemed not worthy of re-mediation.

Obsolescence and data loss have of course long governed the dynamics of encyclopedia production. Although several factors (including availability, cost, and reputation) could and did extend the lives of "old" encyclopedias beyond their time – many eighteenth-century readers continued to prefer early editions of Chambers' *Cyclopædia* to other, newer universal dictionaries –time inevitably degraded utility. Access to antiquated dictionaries could be had with relative ease, but rarely if ever do the prefaces or dedications to eighteenth or early nineteenth-century encyclopedias suggest that such access was desirable.

If digitization has on the one hand largely resolved one aspect of conventional encyclopedic obsolescence – perpetual updates obviate the need for successive editions, so the encyclopedia never need be out of date again (at least not for very long) – then on the other hand it has necessarily re-problematized issues of long-term, higher-order obsolescence related to potentially unstable or asymmetrical stakeholder interest. The priorities of archivists and audiences cannot always be anticipated, and a later Pepys might not deem having access to a thirty, forty, or hundred-year-old digital encyclopedia worth his time's equivalent of 38 shillings. Indeed, any single encyclopedia from some near or distant future's past might not by itself merit the time, effort, or cost of preservation, digital or otherwise. In continuing to hold every printed edition of the *Britannica*, and furthermore agreeing to accept digital versions as well, the Library of Congress has on behalf of the American government and nation implicitly conferred on such individual editions the "permanent" value once optimistically proffered by static works like *A New and Complete Dictionary*, insofar as those editions are part of a larger and dynamic series that has and always will have been preserved in its entirety.

Systematic Readers, Systematic Reading

That value results in part from a method of reading encyclopedias made possible only by the passage of time. Diachronic systematic readings of the encyclopedia have the potential to reveal the derivations of concepts or cultural phenomena in a limited informational context. In "Suicide on My Mind, *Britannica* on My Table," for example, American thanatologist Edwin Shneidman traces the concept of "suicide" from its description as "self-murder" in the second *Britannica* (1777-1784) through each of the fourteen articles on the subject in every edition up to and including the fifteenth.[8] The record that emerges reveals not only the history of suicide but also a meta-history of the changing means and methods by which the act and its epiphenomena are explained. The second edition is overtly religious, legalistic, and condemnatory whereas the morally neutral treatment of the eighth edition (1852-1860) is informed more by social science; the ninth edition (1875-1899) shifts the focus from ethics to statistics, and Shneidman's own contribution to the fourteenth edition in 1973 eschews statistics absolutely in favor of recognizing suicide "as a response to individual human suffering, a tragedy that befalls real people" (Shneidman 1998). Just as Shneidman's audit found new value in the "old" knowledge contained by the first, second, eighth, and ninth editions, so too might future readers find similar value in the outdated digital installments held by the Library of Congress.

The permanence of this value is and will paradoxically remain contingent on as-of-yet unmade determinations regarding encyclopedic utility, but the benefits of digital re-mediation are such that this kind of systematic reading has already become simpler to perform and may become even more effective, and therefore more useful, as the number of artifacts available for scholarly inquiry increases. "There is no better mirror of the evolution of knowledge in the western world from the western perspective than looking at the *Britannica*," Pappas explains. "Simply because we're no longer publishing the print set doesn't mean we're not cognizant of that." The expanding digital mirror may help to illuminate trends within that evolution otherwise difficult to detect. Schneidman anticipates such potential in the conclusion of his essay:

> There might be something to learn from similar *Britannica* surveys of other socially sensitive tag words. One might look, from 1768 (or whenever the word first appears) to the present date, at Addiction, Adultery, Childhood, Homosexuality, Insanity, and so forth. Scholars in different fields could suggest candidates for the word list. Put together, these would yield a lexicographic history of the past two centuries that might give some fresh insights into the evolution of our cultural trends (Shneidman 1998).

Schneidman conducted his systematic reading of the *Britannica* entirely, or almost entirely, in print, and so could not extend his own "tag word" search much beyond the articles specifically dedicated to suicide; additional relevant information may have appeared in places he (or the indexers) did think to look for it or

could not spare the time to seek. Digitization and the search technologies that come with it, though, have the capacity to spare the reader an impractical if not impossible effort by instantly locating every occurrence of a desired word in each of the hundreds of encyclopedic volumes or installments produced and archived over time.

The encyclopedia itself long has been a method of information management, and even in the eighteenth century numerous authors and editors insisted that only their new methods could make the large amounts of information comprehended by even a single universal dictionary truly useful. Enlightenment encyclopedists worked on much smaller scales and via much different methods than do those of the 21st century, but like the latter they too were motivated in part by the human limitations of short lives and shorter memories. The early editions of the *Britannica* claimed to have broken with the organizational conventions enshrined by Chambers's *Cyclopædia* and the French *Encyclopédie* for precisely such reasons. These encyclopedias organized all the terms of knowledge under their own alphabetized entries; readers would locate a desired subject or term and then rely upon extensive systems of cross-references to delineate the relevant pathways across the entire work (Sullivan 1990: 315-59). The method defined the essential form and function of the universal dictionary for close to half a century.

According to the proprietors of the *Britannica*, though, such dictionaries left every art and science "scattered under a variety of words; by which means, besides the labour of hunting for science through such a labyrinth, it is absolutely impossible for the reader, after all, to obtain a distinct view of any subject" (Proposals for Printing 1768: n.p.). The preface to the second edition insisted that any compendium that left knowledge so "dilacerated, dissected, and disseminated, without regard to connection, or systematic combination" was more aptly described as "a collection of Miscellanies than a Dictionary of Arts and Sciences," and the third edition called using letters of the alphabet as organizational categories an "antiphilosophical" method that rendered a text like the *Cyclopædia* merely "a book of threads and patches" (*Encyclopædia Britannica* 1778: 1.iv; 1797, 1.viii). The cross-references, in other words, did not work – or at least, they did not work in accordance with what the proprietors of the *Britannica* understood as the right relationship between reading and human knowledge acquisition.

The first *Britannica* therefore made categories out of the arts and sciences themselves. William Smellie wrote extended "Systems" and "Treatises" of individual subjects and supplemented them with full explanations of the "detached" parts of knowledge. He designed these more comprehensive treatments to counteract the "lack of intrinsic logic" in alphabetical arrangement by gathering beneath single headings all those terms that would otherwise be scattered across the entire work (Kafker 1994: 151). His treatise on astronomy, for instance, spans some 66 pages while its two-page counterpart in the *Cyclopædia* refers readers to nearly forty other short entries across both of its two volumes. Smellie's systems

and treatises represent the defining featural change of the modern encyclopedia in the late eighteenth century and prioritize a more intensive encyclopedic reading than previous organizational methods apparently allowed. The editors of the second edition explain:

> The systematic reader will be fully and regularly informed, by referring to the general name of the Science he wishes to explore; whilst the proficient who wishes to refresh and strengthen his memory in any particular part, may find the same by turning to the Alphabet, which, having general references, serves as an index to the Systems and Treatises, whilst others, who are willing to content themselves with partial and detached views of subjects, will find them explained under articles, by which they are denominated (*Encyclopædia Britannica* 1778: 1.iv).

This passage divides encyclopedic reading and readers into three kinds, the last of which are described in somewhat dismissive terms while the first are labeled with a term of some contemporary novelty. According to *Eighteenth Century Collections Online* (ECCO), the "systematic writer" had been part of eighteenth-century literary discourse at least since 1753; the above selection from the second *Britannica*, however, is the first in which the database records the appearance of a "systematic reader" – in this case, one who reads a given system as written and in its entirety. While such readers certainly already existed, the phrase here naturalizes the practice to the encyclopedia as a means by which one could gain the "full" understanding of a subject that following cross-references failed to facilitate.

Though in the early eighteenth century "index-learning" inspired the ire of authors like Alexander Pope and Jonathan Swift, to whom it connoted "knowledge tenuously held, only superficially grasped…not only intellectually suspect but also potentially dangerous" (Swift lambasted it in *A Tale of a Tub* as a method by which one could avoid "the Fatigue of *Reading* or of *Thinking*"), systematic writing and reading of the kind embraced by the *Britannica* as an alternative also did not go without objection (Swift 1973: 337-38; Valenza 2009: 219). The anonymous author of *A Compendium of Physic, and Surgery*, for instance, warned that, "dry systematic writers, are often as disgustful, as they are voluminous, and deter the young student by their prolixity" (*A Compendium* 1769: vi). Oliver Goldsmith similarly disparaged them as those "whose only boast it is *to leave nothing out*" (Goldsmith 1764: 1.12). When George Selby Howard set about compiling the *New Royal Cyclopædia, and Encyclopædia* (not to be confused with Hall's *New Royal Encyclopædia*), he apparently took such lessons to heart. Selby acknowledged in his preface that "too many references should be carefully avoided, in order to save unnecessary trouble" but simultaneously insisted that an encyclopedia should just "as carefully avoid being absurdly systematic, which would hinder the reader from obtaining an immediate explanation, when wanted, of any particular term or subject in a complete system, and oblige him to read the whole system through" (Howard 1788: 1.iv). The usefulness of the extended treatise or system, then, also had its limits; the successful encyclopedist had to find a middle way

between the Scylla of superficial learning and the Charybdis of uninterrupted (or uninterruptable) explication.

Systems and systematic reading remained a major part the *Britannica* for centuries. The encyclopedia, or rather one of the pirates who printed "American" editions in violation of the rights given to the publishing firms of Charles Scribner's Sons, Samuel L. Hall, and Little, Brown and Company by the Edinburgh publishing company A & C Black, continued to specifically encourage systematic reading at the turn of the twentieth century. That encouragement, though, came with an acknowledgement that readers now generally conceived of encyclopedic utility in terms of occasional reference. Along with their illicit version of the landmark ninth edition (the "Scholarly Edition"), the Werner Company of Chicago printed several editions of James Baldwin's *A Guide to Systematic Readings in the Encyclopædia Britannica*. In the introduction to the work, Baldwin presents as a recent realization what had once been widely understood: "[the encyclopedia] has usually been regarded as a repository of general information, to be kept ready at hand for consultation as occasion should demand. But while this is the ordinary use of the *Britannica*, it has been found that it possesses a broader function, and that it may be utilized in such manner as to perform the office of a great educational agent." Baldwin then attempts to redraw the line dividing dictionaries from encyclopedias. Occasional reference, Baldwin writes, "is the proper and only way in which to use a dictionary. But the *Encyclopædia Britannica* is a great deal more than a dictionary, and is capable of imparting more knowledge and more enjoyment than all the dictionaries in the world" (Baldwin 1899: iii, ix-x). The guide thus seeks to re-establish a practice excluded by a narrowed perception of encyclopedic functionality and argues to define the genre by use rather than content or pre-set organization.

The text that follows re-organizes the *Britannica* to produce systematic courses of readings intended for "the young people," "the student," and "The Busy World." The first two largely follow familiar disciplinary divisions; Baldwin sets the young people general courses in history, biography, science, and sport whereas the student can choose from a wider and more specific set of subjects ranging from astronomy to zoology and biology to mathematics. He even offers a course designed for the "desultory reader" whose curiosity he presumes can be awakened by articles about eccentric inventions, strange natural specimens, or exciting historical events. As suggested by the inclusion of entries describing funeral rites, embalming practices, mummies, tombs, and suttee (a Hindu custom in which a widow burned herself upon the pyre of her late husband), even a morbid curiosity would suffice. Courses for adults in the "busy world" are organized by trade or profession; Baldwin charts a different path for the architect, for instance, than he does for the soldier, miner, or machinist. None of these courses, however, proceeds in an order determined by the encyclopedia itself. The student of philosophy begins with the introductory paragraphs on ethics in volume eight and then must

read selections from another 68 articles distributed across sixteen volumes and the supplement. The preliminary reading recommended to the inventor, meanwhile, includes the chronological table of great inventions and discoveries in volume five, a five-page history of patents in volume 28, and the list of patent laws in force across Europe and the Unites States included in the supplement.

Baldwin's systematic readings, then, are not those authored or authorized by the encyclopedia per se; insofar as they are organized by an outside figure rather than the expert contributors and professional editors of the *Britannica*, they have more in common with Schneidman's diachronic reading of all the articles on suicide. Though both led their readers through reams of printed pages, the users of twenty-first century online encyclopedia users might nevertheless recognize them as something akin to their own journeys down what are colloquially referred to as "wiki-holes" or "wiki-trails." Loosely defined as the spontaneous and self-perpetuating process of reading an extended series of encyclopedia articles by clicking on embedded links in an order determined more by curiosity than purpose, falling down a wiki-hole or following a wiki-trail lacks the proscription of Baldwin's guide or the determinacy of Schneidman's thanatology. The hours-long sessions, however, do involve a species of intensive investigation and the agential creation of systematic readings no more necessarily disjointed than any of those not deliberately crafted by authors as coherent and self-contained single articles. Such readings do not always achieve an ideal or even discernible systematicity, but as they unfold they do have the potential to generate emergent (if highly idiosyncratic) categories or organizations bound by the cognition of the individual. Links reify relation, and while following them might seem like a reversion to searching for knowledge scattered under a variety of words – by which means, as noted above, the proprietors of the first *Britannica* believed a distinct view of any subject was lost – they allow readers to discover new views and subjects in conjunction with rather than only by order of the actual encyclopedia.

Though removed in many respects from Smellie's original systems and treatises as well as from each other, the plans and practices examined above all find ways of using the encyclopedia not necessarily anticipated by its editors and authors. The "systematic reader" of the nineteenth, twentieth, or twenty-first century is not the same as that identified by the second *Britannica* in 1778, but systematic readings of the encyclopedia have persisted. Technological change has altered the techniques, outcomes, and perhaps even the point of systematic reading, but it remains a legible if less recognizable part of the encyclopedic tradition.

Conclusion

The Enlightenment, then, has left what seems to be an indelible mark on even the digital encyclopedia. Indeed, much of the critical language now circulating around and about digital or online texts in general contains clear echoes of Enlightenment

discourse about print encyclopedias and encyclopedic learning. Bertrand Gervais, for example, describes the beginning of Stuart Moulthrop's *Hegirascope*, a hypertext fiction "of about 175 pages traversed by more than 700 links," as including the following warning to the reader: "you are now entering a labyrinth where you will not only be clueless as to where you are at any given point, but your own progression will be decided by the work itself" (Moulthrop, cited in Gervais 2008: 183-84). Readers of the work, Gervais writes, are "pressed into the position of Theseus…we hope to acquire enough knowledge to get a clear view of the work itself through our exploration of its maze, thereby possibly arriving at Daedulus's perspective." Leaving readers lost in a labyrinth and at the mercy of cross-references is precisely what the editors of the early *Britannica* wished to avoid, and a clear (or rather "distinct") view of knowledge is exactly what they hoped their systems and treatises would provide. In the same collection, meanwhile, Christian Vandendrope makes a direct connection between the reading revolution of the eighteenth century, which elevated "extensive reading" and "foster[ed] the production of big encyclopedias" like the *Cyclopædia* and *Encyclopédie*, to the fragmentary and action-oriented browsing of the typical internet user (Vandendorpe 2008: 204).[9]

The other part of the story, however – the emphasis and reinstallation by the *Britannica* of a limited kind of intensive or "systematic" reading within the encyclopedic tradition – is perhaps too easily obscured by the shadow cast back on the eighteenth century by the digital age. Roger Chartier has characterized surfing the web as "segmented, fragmented, discontinuous" and suggests that the "fragmented structure" of encyclopedic texts corresponds to that type of reading. It did and did not, does and does not. In the larger context of its whole life since the late seventeenth century, the modern encyclopedia only briefly aspired to be among those genres "the appreciation of which implies familiarity with the work in its entirety and a perception of the text as an original and coherent creation" (Chartier 2004: 151-52). Even though the first *Britannica* formally abandoned the idea that all knowledge could be represented and comprehended as a cohesive totality, though, it maintained that individual arts and sciences deserved extensive, self-contained explanation and focused consideration. Several of Smellie's treatises took up hundreds of columns; Baldwin extolled the comprehensiveness of the 84-page general article on horticulture in volume 12 of the ninth edition; and though the overwhelming majority of articles in the Micropædia of the fifteenth edition contained fewer than 750 words, the longest of the *Macropædia* went on for 310 pages.

Digital remediation has, for all that, definitely brought with it a kind of generic devolution. "There is a greater tendency now," according to Pappas, "to want to break up larger articles…because there is a need for the succinct dictionary-type synopses of things." Pappas even conceives of the *Britannica* in terms of encyclopedic coverage and knowledge production in terms more appropriate to the uni-

versal dictionaries of old. "It's cross-references," he explains. A given article might only contain a paragraph, "but you are linking off to 20 000 types of X, 20 000 words on the history of Y." These words suggest, however, that within the re-fragmented encyclopedia, the potential for sustained reading and in-depth learning still exists. Rather than reading systems or treatises pre-written by single experts, readers in search of a fuller understanding will follow the links and fashion their own. Others, as always, will content themselves with partial views. "When you think about it," Pappas suggests, "it's kind of back to the future."

I do not wish to suggest, therefore, that the digital encyclopedia has not brought significant changes to the encyclopedic project and the forms of knowledge it might generate; it has and will almost certainly continue to so. In 1998, with the first CD-ROM edition of the *Britannica* only four years old and the introduction of Google Print still six years away, even Schneidman likely did not anticipate the algorithmic analysis of hundreds or hundreds of thousands of digitized texts or databases that might have made his work both faster and far more comprehensive. The "distant reading" of encyclopedias – whether within editions, across them, or in the context of numberless other documents – would on the one hand be a novel approach, but it would on the other be only a logical extension of the method with which Schneidman experimented.[10] It would also be only another in a long series of different kinds of reading designed to maximize the usefulness of the work by making manageable what would otherwise be an overwhelming amount of information. Wherever such an intention "does not plainly appear," as Smellie put it in the second sentence of the first *Britannica*, "neither the books nor their authors have the smallest claim to the approbation of mankind" (Smellie 1768: v).

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Notes

1 See, for example, Henry Peachham's *The Compleat Gentleman* (1622) and Johann Heinrich Alsted's *Encyclopædia septem tomis distincta* (1630). Though the former over the course of 40 years expanded from some 200 to roughly 450 pages in octavo, it was still of very modest size compared to Alsted's single edition of 2400 pages in folio.

[2] The list in the second edition of 1791 gives the prices of the *Cyclopædia* and (presumably) the second edition *Britannica* at £13 and £19, respectively. The first edition (1788) lists this price advantage in the second position, but the promise of a bargain still leads: the proprietors promise at least one copperplate free with every number (Hall 1788: n.p.).

[3] On 21 May 2013, Tom Panelas, Director of Communications at Encyclopedia Britannica, Inc., responded to my email inquiry regarding the possibility of speaking to a data editor about statistical information (average article length, optimal page load times, web traffic, etc.). I provided a description of my interests and a link to *Culture Unbound*, at which point Mr. Panelas forwarded my request to Mr. Pappas. We met at Britannica global headquarters at approximately 9:15AM CST on 13 June 2013. He provided a brief tour of the lobby and second floor, where a display houses several original *Britannica* plates. At his suggestion, the informal interview took place over coffee at the Merchandise Mart, an art-deco architectural landmark roughly one block away from Britannica HQ. The interview lasted from approximately 9:30-10:15AM CST and was recorded, with permission, on a SONY ICD-BX132 digital voice recorder (without external microphone). Unless otherwise noted, all quotations from Pappas are from my subsequent transcription of that recording.

[4] "Same-sex marriage" was updated to reflect the finding of the Supreme Court within four hours of the ruling on June 26th; "marriage law" was not updated until the late afternoon or evening of the following day (the page histories of *Britannica* articles do not reflect the exact times at which changes were made). *SCOTUSblog* and the *Wall Street Journal* posted the ruling to their liveblogs of the proceedings at 9:02AM CDT; the Wikipedia entry on DOMA was updated at 9:05AM CDT (Live Blog: 2013). The approximate times of *Britannica*'s updates were garnered from my own observations of both pages as the events unfolded.

[5] During the last weeks of August, for example, the news media dedicated extensive coverage to the events then unfolding in Syria; at 12:55PM CST on August 30th, the first two of three articles listed beneath each source referred to such events. The subsection on "foreign engagement and domestic chance since 1990" in the *Britannica*'s entry on Syrian history had already been revised on August 29th to reflect reports of suspected chemical weapons attacks outside of Damascus and the denouncement of said weapons by officials of the British, French, and United States governments.

[6] The no-longer operational *Deletionpedia* archives over 62,000 pages deleted from the English-language Wikipedia between February and September 2008; *Speedy Deletion Wiki* contains over 181,000 pages that have been or "are in danger" of being deleted, including those it has imported from Deletionpedia (*Speedy Deletion Wiki* 2014).

[7] Blue Ribbon Task Force on Sustainable Digital Preservation and Access was convened in 2007 and produced several reports, the last in early 2010. The task force received funding from the National Science Foundation and the Mellon Foundation, in partnership with the Library of Congress, the Joint Information Systems Committee of the United Kingdom, the Council on Library and Information Resources, and the National Archives and Records Administration.

[8] Shneidman himself contributed seven pages on "Suicide" to volume 21 of the fourteenth edition *Britannica* produced in 1973; by that time he had co-founded the Los Angeles Suicide Prevention Center, founded the American Association of Suicidology and its peer-reviewed academic journal, *Suicide and Life Threatening Behavior,* and become the first Professor of Thanatology at UCLA.

[9] For the reading revolution, see esp. Rolf Engelsing, *Der Burger als Leser. Lesergeschichte in Deutschland 1500-1800* (1974).

[10] The phrase "distant reading" first appeared in an essay by Franco Moretti (Moretti 2000: 54-68). The essay also appears in Moretti's recently published collection, *Distant Reading* (2013): London: Verso.

References

A Compendium of Physic, and Surgery: For the Use of Young Practitioners (1769). London.

Alsted, Johann Heinrich (1630): Encyclopædia septem tomis distincta, 4 vols., *Herbornæ Nassoviorum*.

Baldwin, James (1899): *A Guide to Systematic Readings in the Encyclopædia Britannica*, Chicago: Werner Company.

Barrow, John (1751): *A New and Universal Dictionary of Arts and Sciences*, London.

Barrow, John (1754): *A Supplement to the New and Universal Dictionary of Arts and Sciences*, London.

Blue Ribbon Task Force on Sustainable Digital Preservation and Access (2010): *Sustainable Economics for a Digital Planet: Ensuring Long-Term Access to Digital Information*, http://brtf.sdsc.edu/biblio/BRTF_Final_Report.pdf (accessed 10 July 2013).

Britannica Today, *Encyclopædia Britannica, Inc.*, http://corporate.britannica.com/about/today/ (accessed 08 July 13).

Chambers, Ephraim (1728): *Cyclopædia*, London.

Chartier, Roger (2004): "Languages, Books, and Reading from the Printed Word to the Digital Text", Teresa Lavender Fagan (trans), *Critical Inquiry*, 31, 133-52.

Creech, James (1982): "'Chasing after Advances': Diderot's Article 'Encyclopedia'", *Yale French Studies*, 63: 183-97.

De Coetlogon, Dennis (1745): *An Universal History of Arts and Sciences*, London.

Deletionpedia, http://deletionpedia.dbatley.com/w/index.php?title=Main_Page&oldid=1403798 (accessed 18 February 2014).

Diderot, Denis (1956): "The Encyclopædia", *Rameau's Nephew and Other Works*, Indianapolis: Hackett Publishing, 277-308.

Educational Learning Books and Encyclopedias, The Britannica Store: http://www.britannica.com/store/educational-learning-books.html, (accessed 08 July 2013).

Engelsing, Rolf (1974): *Der Burger als Leser. Lesergeschichte in Deutschland 1500-1800*, Stuttgart: J. B. Metzlersche and A. E. Poeschel.

Gardner, Sue (2013): "What's Missing from the Media Discussions of Wikipedia Categories and Sexism", *Wikimedia Blog*, http://blog.wikimedia.org/2013/05/01/of-wikipedia-categories-and-sexism/ (accessed 06 January 2014).

Gervais, Bertrand (2008): "Is There a Text on This Screen? Reading in an Era of Hypertextuality", Susan Schreibman & Ray Siemens (eds): *A Companion to Digital Literary Studies*, Oxford: Blackwell, 183-202.

Goldsmith, Oliver (1764): *An History of England, in a Series of Letters from a Nobleman to His Son*, 2 vols., London.

Haider, Jutta & Olof Sundin (2010): "Beyond the Legacy of the Enlightenment? Online Encyclopaedias as Digital Heterotopias", *First Monday*, 15:1, http://firstmonday.org/article/viewArticle/2744/2428 (accessed 08 July 2013).

Hall, William Henry (1791): *The New Royal Encyclopedia*, Thomas Lloyd (ed), 2nd ed.: London.

Howard, George Selby (ed) (1788): *The New Royal Cyclopædia, and Encyclopædia, or Complete, Modern and Universal Dictionary of Arts and Sciences*, 3 vols., London.

Hume, Robert D. (2006): "The Economics of Culture in London 1660-1740", *The Huntington Library Quarterly*, 69:4, 487-533.

Kafker, Frank (1994): "Smellie's Edition of the *Encyclopædia Britannica*", Frank Kafker (ed): *Notable Encyclopedias of the Late 18th Century: Eleven Successors of the Encyclopédie*, Oxford: Voltaire Foundation, 145-82.

Live Blog (2013): Supreme Court to Rule on Gay Marriage, *Washington Wire - WSJ*: http://blogs.wsj.com/washwire/2013/06/26/live-blog-supreme-court-to-rule-on-gay-marriage/ (accessed 27 June 2013).

Loveland, Jeff (2012): "Why Encyclopedias Got Bigger…and Smaller", *Information and Culture*, 47:2, 233-54.

Macfarquhar, Colin & George Gleig (eds) (1797): *Encyclopædia Britannica*, 3rd ed., 20 vols., Edinburgh.

McCormack, Patricia (1968): "Inquisitive Sorts Keep Girls Busy", *The News and Courier*, 10 October 1968, 2-C.

Meta Contributors (2013): "Association of Deletionist Wikipedians", *Meta, discussion about Wikimedia projects*, 17 December 2013: http://meta.wikimedia.org/w/index.php?title=Association_of_Deletionist_Wikipedians&oldid=6764342, (accessed 06 January 2014).

Meta Contributors (2014): "Association of Inclusionist Wikipedians", *Meta, Discussion about Wikimedia Projects*, 3 January 2014: http://meta.wikimedia.org/w/index.php?title=Association_of_Inclusionist_Wikipedians&oldid=6939662, (accessed 06 January14).

Moretti, Franco (2000): "*Conjectures on World Literature*", *New Left Review*, 1, 54-68.

Peacham, Henry (1622): *The Compleat Gentleman*, London.

The Penny Magazine of the Society for the Diffusion of Useful Knowledge (1838): "The Orang-outan", 3 February 1838, 41-4.

Proposals for Printing, by Subscription, a Work, Intitled, Encyclopædia Britannica; or, A New and Complete Dictionary of Arts and Sciences (1768): Edinburgh.

Shackleton, Robert (1984): "The Encyclopædic Spirit", Paul J. Korshin & Robert R. Allen (eds): *Greene Centennial Studies: Essays Presented to Donald Greene*, Charlottesville: University of Virginia Press, 377-90.

Shneidman, Edwin (1998): 'Suicide on My Mind, *Britannica* on My Table', *The American Scholar*, 67:4, 93-104.

Smellie, William (ed) (1771): *Encyclopædia Britannica*, 1st ed., 3 vols., Edinburgh.

Speedy Deletion Wiki, http://speedydeletion.wikia.com/wiki/Speedy_deletion_Wiki (accessed 18 February 2014).

Submission Guidelines, *Encyclopædia Britannica, Inc.*, http://corporate.britannica.com/submission.html#article (accessed 18 February 2014).

Sullivan, Lawrence (1990): "Circumscribing Knowledge: Encyclopedias in Historical Perspective", *The Journal of Religion*, 70:3, 315-59.

Swift, Jonathan (1973): "A Tale of a Tub", Robert A. Greenberg and William B. Piper (eds): *The Writings of Jonathan Swift*, New York: Norton.

Tytler, James (ed) (1778): "Acoustics", *Encyclopædia Britannica*, 2nd ed., 10 vols., Edinburgh, 1:56-6

Valenza, Robin (2009): "How Literature Becomes Knowledge: A Case Study", *ELH* 76, 215-45.

Vandendorpe, Christian (2008): "Reading on Screen: the New Media Sphere", Ray Siemens and Susan Schreibman (eds): *A Companion to Digital Literary Studies*, Oxford: Blackwell, 203-15.

Weller, Toni (2008): "Preserving Knowledge Through Popular Victorian Periodicals: An Examination of *The Penny Magazine* and *the Illustrated London News*, 1842-1843", *Library History*, 24:3, 200-207.

Wikipedia Contributors (2013): "Make Technical Articles Understandable", *Wikipedia, the Free Encyclopedia*, 30 September 2013: http://en.wikipedia.org/w/index.php?title=Wikipedia:Make_technical_articles_understandable&oldid=575181081, (accessed 14 November 2013).

Wikipedia Contributors (2014): "What Wikipedia is Not", *Wikipedia, the Free Encyclopedia*, 6 January 2014:

http://en.wikipedia.org/w/index.php?title=Wikipedia:What_Wikipedia_is_not&oldid=589429742 (accessed 06 January 2014).

Yeo, Richard (2001): *Encyclopedic Visions: Scientific Dictionaries and Enlightenment Culture*, Cambridge: Cambridge University Press.

Yeo, Richard (2007): 'Lost Encyclopedias: Before and after the Enlightenment', *Book History* 10: 47-68.