

7 Encyclopedic Anxiety

Over time, the average quality of Wikipedia articles rises, but Wikipedians' standards rise more quickly.

—OpenToppedBus's First Law

The higher the standards that Wikipedia aims for, the more that Wikipedia will appear sub-standard to the outside world.

—OpenToppedBus's Corollary

Wikipedia, and the collaborative way in which it is produced, is at the center of a heated debate. Much as reference works might inspire passionate dedication in their contributors, they also, seemingly, can inspire passionate disparagement. In 2004 Michael Gorman, former president of the American Library Association, wrote an op-ed criticizing Google and its book-scanning project; he was surprised by the negative online response to his piece, but this only prompted him to redouble his attack a few years later. In 2007 he focused on blogs and Wikipedia, decrying the effects of the "digital tsunami" on learning. In a blog essay entitled "Jabberwiki" Gorman lauded Sanger's abandonment of Wikipedia for the more expert-friendly Citizendium and criticized those who continue to contribute to, or even use, Wikipedia:

Despite Sanger's apostasy from the central tenet of the Wikipedia faith and his establishment of a resource based on expertise, the remaining faithful continue to add to, and the intellectually lazy to use, the fundamentally flawed resource, much to the chagrin of many professors and schoolteachers. Many professors have forbidden its use in papers. Even most of the terminally trendy plead with their students to use other resources. . . . A few endorse Wikipedia heartily. This mystifies me. Education is not a matter of popularity or of convenience—it is a matter of learning, of knowledge gained the hard way, and of respect for the human record. A professor

who encourages the use of Wikipedia is the intellectual equivalent of a dietician who recommends a steady diet of Big Macs with everything.¹

While he may be more strident than others, Gorman is not alone. As seen in the epigraph that begins this chapter, Wikipedians themselves are aware of the vertigo resulting from increasing quality being outpaced by expectations. What was once thought to be an adequate article, even when expanded and improved, might be marked as a stub today. As noted in the “corollary,” this vertigo is further exaggerated in the “outside world’s” view of Wikipedia progress.²

In this chapter I review some of the criticism Wikipedia faces related to the themes of collaborative practice, universal vision, encyclopedic impulse, and technological inspiration. However, I frame contemporary criticism by way of a historical argument: Wikipedia, like other reference works before it, has triggered larger social anxieties about technological and social change. This prompts the question of whether Wikipedia is representative of new forms of content production that are changing the role of the individual, the character of cultural products, and the authority and viability of established cultural institutions. Each element of this concern also prompts arguments about whether such changes are genuine or hype and, if genuine, positive or negative. But before I engage these specific arguments, it is worthwhile to understand why reference works prompt such arguments.

The Normativeness of the Reference Work

Many reference controversies revolve around the extent to which reference works are seen as *normative*, that is, in some way condoning their subjects and sources. For example, shouldn’t a national dictionary shun popular slang or words borrowed from other languages?

When the French Academy commenced compiling a national dictionary in the seventeenth century, it was with the sense that the language had reached perfection and should therefore be authoritatively “fixed,” as if set in stone. However, the utilitarian value of a vernacular dictionary could not be denied: Furetière’s competing dictionary contained words not approved of by the scholars and it sold well in the black market.³ Samuel Johnson also thought he might be able to preserve the purity of English, despite warnings that the French dictionary took forty years to complete.⁴ However, once the difficult task of compiling a dictionary was complete, he

apologized in its preface to those “who have been persuaded to think well of my design, [and] require that it should fix our language”; this pretense with which he had “flattered” himself was in fact an “expectation which neither reason nor experience could justify” as no lexicographer can secure his language “from corruption and decay” and “clear the world at once from folly, vanity, and affectation.”⁵

While there is still some debate over the extent to which dictionaries should be “prescriptive,”⁶ few, beside the French Academy, would purposely exclude commonly used words out of a desire to withhold implicit approbation. However, encyclopedists have been more willing to associate the scope of their subject, and its treatment, with a larger social program. One reason for this difference between dictionaries and encyclopedias might simply be space. It is within the realm of a lexicographer to include every word of interest, even if it requires twenty volumes in the case of the *OED* (*Oxford English Dictionary*), or a magnifying lens in the case of the *OED*'s compact edition. Encyclopedias, if they are to fit on one or two shelves of a library stack, must limit their scope. This then requires judgment about what to include in a given work, which entails asking what is essential, worthwhile, and appropriate to know. On the axis of material constraints then, Wikipedia is situated much more like paper dictionaries than encyclopedias given its near-infinite number of pages. (Granted, Wikipedians still argue about inclusionism versus deletionism,⁷ but even a deletionist's scope is far more permissive than even the largest print encyclopedia.)

Another probable reason reference works are thought to be normative is that they were marketed as resources for children. Information historian Foster Stockwell concludes, “The implication was that any parent who failed to buy an encyclopedia for the youngster was depriving a child of the opportunity of doing well in school, and, ultimately, in life.” Between 1940 and 1970 some sales techniques were so aggressive as to be outlawed and various encyclopedias were fined for violating Federal Trade Commission orders. Yet, despite the scholarly intentions of their compilers, the marketing departments of reference work publishers convincingly made their pitch and the public came to see encyclopedias as an authoritative source for instruction, such that, “when children go to their parents for help they will, as often as not, be directed to the encyclopedia shelf.”⁸ This issue is reflected today in arguments about Wikipedia's age appropriateness: is it “child safe”? The English-language Wikipedia has generally resisted

content discrimination on the basis of anything other than informative content, though how to deal with potentially offensive subjects is often discussed (e.g., pedophilia and hate speech). The Wikimedia Foundation addresses concerns about age appropriateness partly through the provision of a Simple English Wikipedia for use by children.⁹

Other wiki-based projects face a similar issue. The very handy wikiHow provides accessible information on how to do various tasks yourself; yet, just because a page describes how to do something, does that mean one should do it? (An article on wikiHow about *how to do* something compared to an article on Wikipedia *about* something seems to have a greater force.) wikiHow makes no claim that every article is an endorsement, but it also avoids content that would be considered “inappropriate for our family audience,”¹⁰ a threshold the larger Wikipedia does not accommodate. Despite these intentions, and any disclaimers, some people nonetheless see Wikipedia as representative and permissive of changes not to their liking. In the history of reference work production, Wikipedia is not alone.

This question of an implied morality in a reference work is present in Herbert Morton’s fascinating *The Story of Webster’s Third: Philip Gove’s Controversial Dictionary and Its Critics*.¹¹ Perhaps the primary reason for the controversy associated with this dictionary was that it appeared at a time of social tumult. A simplistic rendering of the 1960s was that progressives were seeking to shake up that which conservatives held dear. Yet, those working on the *Third* were not a band of revolutionaries. For example, Gove made a number of editorial decisions so as to improve the dictionary. And while lexicographers might professionally differ with some of his choices, such as the difficult pronunciation guide or the sometimes awkward technique of writing the definition as a single sentence, these were lexicographic decisions. It was the social context that largely defined the tenor of the controversy.

My reading of Morton, and one I think is relevant to Wikipedia as well, is that critics were alarmed at the social change occurring around them and attacked *Webster’s Third* as an exemplar and proxy. For example, Wilson Follet, an authority on word usage, published an article in the *Atlantic Monthly* entitled “Sabotage in Springfield” wherein he described the *Third* as “a scandal and disaster,” which “plumes itself on its faults and parades assiduously cultivated sins as virtues.”¹² Scholar Jacques Barzun thought it extraordinary, and worth bragging about, that for the first time in his

experience the editorial board of the distinguished *American Scholar* was able to unanimously condemn a work and know where each board member “stood on the issue that the work presented to the public,” even though “none of those present had given the new dictionary more than a casual glance.”¹³ In fact, an exhortation I encountered as a schoolboy of “ain’t ain’t a word” was a prominent topic of national debate after the *Third’s* publication.¹⁴ Yet, as Morton details, while some of these criticisms resulted from Merriam’s ill-considered press materials proclaiming it to be “truth,” “unquestionable fact,” and the “supreme authority,” much of the reaction was also predicated on ignorance and a reaction against “the so-called permissiveness of American culture in the 1960s.”¹⁵ The extent to which Wikipedia makes claims of veracity or greatness is part of the debate I will discuss.

Bias: Progressive and Conservative

In 2008 the front page of Conservapedia, an ideological competitor of Wikipedia, recommended its “article of the year” to readers so they might “Discover what Wikipedia, the public school systems, and the liberal media don’t want you to know about atheism.”¹⁶ This reference to the “Atheism” article clearly indicates Conservapedia’s intention of opposing a perceived liberal and materialistic bias in Wikipedia. Indeed, its “Examples of Bias in Wikipedia” article lists 160 instances.¹⁷ And Conservapedia is but one of the first of many ideological user-generated encyclopedias likely to be started—though many soon fall into disuse. (The facetious headline of an article in the *Register* recommends that if you find “Conservapedia too pinko? Try Metapedia.”¹⁸ Metapedia’s stated purpose is to serve as an encyclopedia “for pro-European activists,”¹⁹ recalling the much discussed “neo-Nazi” attack/fork of Wikipedia.) Because reference works are popular, used by children, and understood as representing what is known, we should not be surprised to see these works at the center of larger social controversies.

And because of visionaries like Otlet and Wells one might mistakenly infer that reference works are necessarily progressive. While this has often been the case, particularly since the Enlightenment, it need not be so. In the history of reference works one is more likely to find opposing forces, cycles of predominance, and surprises. As an example of the diversity of purpose for reference works, historian Tom McArthur claims the Greeks

wanted to know everything so as to think better, the Romans to act better, and the Christians to glorify God and redeem their sins.²⁰ As evidence of the latter Johann Zedler wrote in his eighteenth-century encyclopedia, the *Universal-Lexicon*: “the purpose of the study of science . . . is nothing more nor less than to combat atheism, and to prove the divine nature of things.”²¹ In Conservapedia’s “Atheism” article of the year, we see the cycle has completed a turn.

Of course, it is the French *Encyclopédie* with which progressivism is famously associated. In its “Encyclopedia” article, Diderot wrote that a good encyclopedia ought to have “the power to change men’s common way of thinking.”²² Such a notion was considered dangerous by the French nobility, Pope Clement XIII, and an editor of *Britannica*, a clergyman by the name of George Gleig. In the dedication of the 1800 *Britannica* supplement, Gleig wrote to his monarch: “The French *Encyclopédie* has been accused, and justly accused, of having disseminated far and wide the seeds of anarchy and atheism. If the *Encyclopædia Britannica* shall in any degree counteract the tendency of that pestiferous work, even these two volumes will not be wholly unworthy of Your Majesty’s attention.”²³ Wikipedia is often thought to be anarchic as well, or at least to be an experiment in anarchism—and the recurrent motif of concern about atheism is remarkable. However, ironically, *Britannica*’s image as a conservative stalwart is contradicted by one of its more recent editors, Charles Van Doren; Jimmy Wales is fond of citing the former editor at *Britannica* as saying that “because the world is radically new, the ideal encyclopedia should be radical, too. It should stop being safe—in politics, and philosophy, and science.”²⁴ The fact that Van Doren worked at *Britannica* after resigning from Columbia University because of his participation in the television quiz show scandals of the 1950s is a further irony given the present arguments about new media and the authority of knowledge production.²⁵

Accusations of bias are surprising in their specificity and passion, and prior to Wikipedia, *Britannica* received the brunt of attention. Herman Kogan’s *The Great EB: The Story of the Encyclopædia Britannica* addresses many accusations of bias, particularly by and between Protestants, Catholics, Britons, Americans, and Soviets.²⁶ Harvey Einbinder’s *The Myth of the Britannica* is actually an extensive criticism itself though he also describes Christian Scientist and Jehovah’s Witness concerns in addition to Catholic controversies.²⁷ Over a century ago Thaddeus Oglesby collected criticisms

he had raised against *Britannica* in a book entitled: *Some Truths of History: A Vindication of the South against the Encyclopædia Britannica and Other Maligners*.²⁸ (However, contrary to Oglesby's opinion, Gillian Thomas notes that the *Britannica* seems overly favorable to the South given its portrayal of lynching as a form of controlling "disorderly Negro politicians" by "protective societies of whites."²⁹) More recently, Michel McCarthy wrote of *Britannica's* complaint department including their receipt of an obscenity-filled letter from a Texas man accusing *Britannica* of bias against the Ostrogoths.³⁰

But perhaps the best-known encyclopedia critic is Joseph McCabe; around 1950 he began documenting a perceived Catholic bias in many popular encyclopedias. McCabe's dedication and focus has the same obsessive character of earlier reference work compilers, present-day Wikipedians, and even some of its critics. He wrote that this new preoccupation resulted from an overseas argument about the Pope's employment of castrati. He discovered that *Britannica's* once accurate "Eunuchs" article "had been scandalously mutilated, the facts about church choirs suppressed, and the reader given an entirely false impression." Upon learning that the Westminster Catholic Federation boasted of their efforts to "eliminate matter which was objectionable from a Catholic point of view and to insert what was accurate and unbiased," McCabe set out to identify what had been altered in his publication *The Lies and Fallacies of the Encyclopædia Britannica: How Powerful and Shameless Clerical Forces Castrated a Famous Work of Reference*.³¹ He followed this work a few years later with *The Columbia Encyclopedia's Crimes against the Truth: Another Analysis of Potential Catholic Bias in Encyclopedias*. Here he tracked changes in various editions over the topics of sexuality, atheists, the forgery of the *Donation of Constantine* (transferring power from the Roman Emperor to the papacy), and the encyclopedia's silence on "Catholic persecution, death sentence for heresy, mental reservation, apostates, vilification marriages, torture, Feast of Fools, the Syllabus, etc."³² No doubt, he would have loved to have a tool like WikiScanner.³³ This tool, which can help identify the origins of some "anonymous" edits, was widely covered in the press in August 2007 when it was revealed that computers associated with the Diebold electronic voting machine company, the Democratic Congressional Campaign Committee, the Vatican, Scientology members, and others had removed embarrassing information from their respective articles.

Yet, as in any history, we must be careful not to divide the field into extremes, in this case between conservative and progressive poles. For example, while an association with the *Encyclopédie* was certainly dangerous, Robert Darnton notes that it was France's sympathetic director of the library, and chief censor, who saved the *Encyclopédie* several times. Indeed, Malesherbes warned Diderot that his papers were about to be seized by the police but that they could be deposited and saved with him after issuing the very order for their confiscation.³⁴ Or, in another anecdote, one can see that even the French Royals had a complicated relationship with the censored work, wishing they had the reference on hand during a dinner party discussion about the composition of gunpowder and the construction of silk stockings.³⁵

And as a final methodological note, the interpretation of past events is often colored by our own present. Consider the question, what did those in power fear from the *Encyclopédie*? Foster Stockwell clearly labels the focus on craftsmanship as a progressive force: Diderot "exploded the religious and social myths that kept people in a condition of servitude." He was also the first to take craftsmanship seriously and by doing so "helped set in motion the downfall of the royal family and the rigid class system," with the result that "every person became the equal of every other."³⁶ Yet another scholar, Cynthia Koepp, renders the import quite differently. Diderot, on behalf of the "dominant, elite culture" expropriated the techniques of the artisan whose "formally unique talents, knowledge, and abilities became dispensable."³⁷

The difference between these two authors shows that the degree to which reference works are viewed as conservative or progressive is not only dependent on their historical context, but also on interpretations of that history in the present: Stockwell sees the *Encyclopédie* as a democratizing force whereas Koepp sees it as a form of expropriation. (It could have been neither or both.) Consequently, the task is not so much to determine whether a particular reference work was objectively and definitively conservative or progressive, but rather whether it was received as such and what that tells us of the larger social context. As Einbinder writes in the introduction to his critique, "since an encyclopedia is a mirror of contemporary learning, it offers a valuable opportunity to examine prevailing attitudes and beliefs in a variety of fields."³⁸ Similarly, for contemporary debate, Clay Shirky, a

theorist of social software, observes: “Arguments about whether new forms of sharing or collaboration are, on balance, good or bad reveal more about the speaker than the subject.”³⁹

Criticisms of Wikipedia and “Web 2.0”

Not surprisingly, though worth a chuckle nonetheless, an informative resource for this chapter is Wikipedia’s “Criticism of Wikipedia” article. It contains the following dozen or so criticisms of the the Wikipedia concept and its contributors:

Criticism of the concept: the wiki model, usefulness as a reference, . . . , suitability as an encyclopedia, anti-elitism as a weakness, systemic bias in coverage, systemic bias in perspective, difficulty of fact-checking, use of dubious sources, exposure to vandals, exposure to political operatives and advocates, prediction of failure, privacy concerns, quality concerns, threat to traditional publishers, “waffling” prose and “antiquarianism,” anonymous editing, copyright issues, the “hive mind.” *Criticism of the contributors:* flame wars, fanatics and special interests, censorship, abuse of power, level of debate, male domination, community, Essay and the lack of credential verification, humorous criticism.⁴⁰

Those are substantive concerns raised about Wikipedia—each interesting in its own way—and many are responded to on another page.⁴¹ Also, many of the specific complaints are part of a more general criticism in which Wikipedia is posed as representative of an alleged “2.0” shift toward a hivelike “Maoist” collective intelligence. The term *Web 2.0*, unavoidable in a discussion about Wikipedia, is attributed to a conversation about the naming of a conference in 2004 to discuss the reemergence of online commerce after the collapse of the 1990s “Internet bubble.” Tim O’Reilly, technology publisher, writes that chief among Web 2.0’s “rules for success” is to: “Build applications that harness network effects to get better the more people use them. (This is what I’ve elsewhere called ‘harnessing collective intelligence.’).”⁴² However, many of the platforms claimed for Web 2.0 preceded it, including Amazon, Google, and Wikipedia. Ward Cunningham launched his wiki in 1995! I’m forced to agree with Robert McHenry, former editor in chief of *Encyclopædia Britannica*, that “Web 2.0” is a marketing term and shorthand “for complexes of ideas, feelings, events, and memories” that can mislead us, much like the term “the 60s.”⁴³ (The label *modern* can be equally frustrating, as we shall see.)

Fortunately, while unavoidable, one can substantiate the notion of Web 2.0 by focusing on *user-generated content*. Clay Shirky, in *Here Comes Everybody*, argues we are moving from a model of “filter then publish” toward “publish then filter”; filtering before was by publishers, today it is by one’s peers.⁴⁴ This seems to be the most important feature of “2.0,” one represented by Craigslist postings, Amazon book reviews, blog entries, and Wikipedia articles. The production of content by Shirky’s “everybody” or Wikipedia’s “anyone” is what Wikipedia’s collaborative culture facilitates and what its critics lament.

In the following sections I engage criticism of Wikipedia, and Web 2.0 more generally, via four themes: collaborative practice, universal vision, encyclopedic impulse, and technological inspiration. In short, a caricature of the criticism that I address is that the fanatical mob producing Wikipedia exhibits little wisdom and is more like a Maoist cult of monkeys banging away on the keyboards and thumb pads of their gadgets, disturbing the noble repose of scholars and displacing high-quality content from the marketplace. Though I am personally sympathetic toward Wikipedia, my intention is not to argue for or against Wikipedia supporters or critics, but to identify the larger social issues associated with Wikipedia collaboration and the pursuit of the universal encyclopedia.

Collaborative Practice

In many conflicts misunderstandings are as common, if not more so, than genuine differences. There are elements to this in the arguments about Wikipedia, particularly over the way it is produced. Describing how knowledge is constituted can be difficult, but one can identify three ways for how we might think of knowledge production throughout history.⁴⁵ First, we must admit that the hermit’s encyclopedia, devoid of all contact with the words of others, would be of little use. Even the monastic scribe copying parchment, and introducing some changes no doubt, is engaged in some degree of sociality. Some have described this interaction at a distance, in time or geography, as a type of stigmergy, like a wasp building upon the work of others.⁴⁶ Second, the production of a reference work eventually exceeded the capability of any one person. What might be thought of as corporate production includes the interaction of financiers and subscribers, and of contributors and editors working within some—even if loose—form of social organization. Finally, there is Wikipedia and other open content.

In earlier chapters I explore how this community and its culture facilitate the production of an encyclopedia. It is on this point that there is much argument, and, I think, some misunderstanding. The central concern seems to be how we can conceive of our humanity in working together, and its implications. (If this sounds confusing or overly grand, bear with me!) I'll begin with two related buzzwords: the *hive-mind* and *collective intelligence*.

A hot topic of the 1990s was chaos and complexity theory; Kevin Kelly, former editor in chief of *Wired*, published a popular book on the topic entitled *Out of Control: The New Biology of Machines, Social Systems, and the Economic World*.⁴⁷ Kelly popularized a burgeoning understanding of how order can emerge from seeming chaos: how the beautiful midair choreography of a flock of birds arises when many individuals follow very simple rules of interaction. This “new biology” was mostly gleaned from and applied to the natural world, but Kelly also posited it as a theory in understanding social organization and intelligence via the notion of the “hive mind.” This idea would persist into the new millennium when a number of new media-related phenomena arose demanding explanation. In 2002 Howard Rheingold, who had previously authored a seminal and popular treatment of virtual communities, published *Smart Mobs: The Next Social Revolution*.⁴⁸ In this book Rheingold argues for new forms of emergent social interaction resulting from mobile telephones, pervasive computing, location-based services, and wearable computers. Two years later, in *The Wisdom of Crowds*, James Surowiecki made a similar argument, but instead of focusing on the particular novelty of technological trends, he engaged more directly with the social science of group behavior and decision making.⁴⁹ In his book Surowiecki argues that groups of people can make very good decisions when there is diversity, independence, decentralization, and appropriate aggregation within the group. This works well for problems of cognition (for which there is a single answer) and coordination (by which an optimal group solution arises from individual self-interest, but requires feedback), but less so for cooperation (for which an optimal group solution requires trust and group orientation, i.e., social structure/culture).

None of these authors engage the case of Wikipedia, which was just beginning to receive significant press coverage in the latter half 2001. But since the publication of *Smart Mobs* and *The Wisdom of Crowds*, two questions have arisen: Are these works on group dynamics applicable to understanding Wikipedia's apparent success; and if so, is that a good thing? But

let's begin with the latter question first: many Wikipedia critics think the collective intelligence model is applicable, and are repulsed by the process and the result.

Michael Gorman, the acerbic librarian encountered at the beginning of this chapter, writes: "The central idea behind Wikipedia is that it is an important part of an emerging mass movement aimed at the 'democratization of knowledge'—an egalitarian cyberworld in which all voices are heard and all opinions are welcomed."⁵⁰ However, the underlying "'wisdom of the crowds' and 'hive mind' mentality is a direct assault on the tradition of individualism in scholarship that has been paramount in Western societies." Furthermore, whereas this enthusiasm may be nothing more than easily dismissible "technophilic rambling," "there is something very troubling about the bleak, dehumanizing vision it embodies—this monster brought forth by the sleep of reason."⁵¹ In a widely read and discussed essay entitled "Digital Maoism: The Hazards of the New Online Collectivism," Jaron Lanier, computer scientist and author, concedes that decentralized production can be effective at a few limited tasks, but that we must also police mediocre and malicious contributions. Furthermore, the greatest problem is that the hive mind leads to a loss of individuality and uniqueness: "The beauty of the Internet is that it connects people. The value is in the other people. If we start to believe the Internet itself is an entity that has something to say, we're devaluing those people and making ourselves into idiots."⁵² Andrew Keen, 1990s Internet entrepreneur turned Web 2.0 contrarian, likens the process of producing and consuming content to "the blind leading the blind—infinite monkeys providing infinite information for its readers, perpetuating the cycle of misinformation and ignorance."⁵³ Author Mark Helprin, like Gorman, unwittingly stepped on a hornets' nest of online dissent with an op-ed. His call to extend copyrights in the United States prompted a backlash that he responded to with a book defending his proposal and counter-attacking the "functionally illiterate" digital barbarians. Free-culture advocates protest the moving window of copyright extensions because, they argue, it creates a perpetual copyright; when copyright terms are continually extended by Congress this contravenes the intentions and limits specified in the U.S. Constitution. Because he was apparently unaware of this controversy and shocked by the vociferous response, he likened the way people work together online as termites that "go steadily and quietly about their business, almost unnoticed" until "an apparently solid house collapses in a foamy heap."⁵⁴

(Lawrence Lessig's review characterizes Helprin's book as an odd combination of memoir and poorly informed policy.⁵⁵)

Yet the question of whether this model is actually relevant to Wikipedia is disputed by many, including prominent Wikipedians. In May 2005 Wikipedian Alex Krupp introduced Surowiecki to the wikipedia-l list via a message entitled "Wikipedia, Emergence, and The Wisdom of Crowds":

I think all Wikipedians would enjoy the book. . . . The basic premise is that crowds of relatively ignorant individuals make better decisions than small groups of experts. I'm sure everyone here agrees with this as Wikipedia is run this way.⁵⁶

Jimmy Wales was quick to respond that he did not agree, and stressed as much in his public talks because "Wikipedia functions a lot more like a traditional organization than most people realize—it's a community of thoughtful people who know each other, not a colony of ants."⁵⁷ Another Wikipedian expressed a similar sentiment based on his experience that Wikipedia is built by "dedicated editors collaborating and reasoning together . . . it is hard to recognize the effect, if any, of 'swarm intelligence' on the project's development."⁵⁸

I participated in the thread myself, hoping to move beyond the *swarm* label toward why the theory might be relevant to Wikipedia production if it can be characterized by diversity, independence, and decentralization within the group. In particular, these conditions might augment other theorists' explanations of "commons-based peer production":

If the asynchronous and bite-sized character of Open contributions contribute to their success (Benkler "fine-grained," Sproull "microcontributions"), is that all? What *kind* of micro-contributions are necessary? *If* the contributions are crap, if they aren't coming from diverse participants (e.g., not "group think"), independent (e.g., not "herding"), and decentralized and filtered/aggregated well (e.g., not "US intelligence" ;) then they might be useful.⁵⁹

However, even the premise of my point was disputed: what role did diverse, sometimes anonymous, fine-grained micro-contributions play in Wikipedia production? Scholars Yochai Benkler and Lee Sproull were among the first to argue the importance of such contributions in online communities.⁶⁰ However, while present, how relevant was this for Wikipedia production? Ward Cunningham has identified openness and incrementalism as key design principles of the wiki.⁶¹ Others focused on the fact that a relatively tight-knit minority did the majority of the work and the majority did little, often explained by way of theories of the long tail, Pareto's

Distribution, Zipf's Law, or the 80/20 Rule; or that we were witnessing the power of "mass collaboration."⁶² Oddly, as reviewed in chapter 1, two seemingly contrary popular theories were being used to explain Wikipedia at the same time: is the crowd or the elite doing a majority of the work?

In any case, the important point was that Wikipedians typically rejected any characterization of Wikipedia as some sort of smart mob, as Wales did:

I should point out that I like Surweicki's thesis just fine, it's just that I'm not convinced that "swarm intelligence" is very helpful in understanding how Wikipedia works—in fact, it might be an impediment, because it leads us away from thinking about how the community interacts in a process of reasoned discourse.⁶³

Of course, as is evident in my concern with Wikipedia culture in earlier chapters, I wrote that I agreed "with Jimbo that any posited explanation that fails to account for the dynamics and culture of good-willed interaction has got it wrong. So in that sense, Surowieki is (perhaps) necessary but (certainly) not sufficient."⁶⁴ Yet, despite an admittedly incomplete understanding and Wales's public attempts to disclaim Wikipedia as a "hive-mind," the accusation continues to be raised. For example, in September 2006 an otherwise informative article entitled "The Hive: Can Thousands of Wikipedians Be Wrong?" appeared in the *Atlantic Monthly*.⁶⁵ In addition to likening online collaboration to a hornet's nest and termite infestation, Helprin made an even less favorable comparison: these interactions were like a "quick sexual encounter at a bacchanal with someone whose name you never know and face you will not remember, if, indeed, you have actually seen it." The resulting works "are often so quick, careless, and primitive that they are analogous to spitting on the street."⁶⁶ In his 2006 "Digital Maoism" essay, Lanier recast the claim of the hive as implying inevitable incremental improvement: "A core belief of the wiki world is that whatever problems exist in the wiki will be incrementally corrected as the process unfolds."⁶⁷ The essay was also published with commentary from a number of prominent thinkers. Wales responded that Lanier's allegation was unfounded:

. . . this alleged "core belief" is not one which is held by me, nor as far as I know, by any important or prominent Wikipedians. Nor do we have any particular faith in collectives or collectivism as a mode of writing. Authoring at Wikipedia, as everywhere, is done by individuals exercising the judgment of their own minds.⁶⁸

Yochai Benkler, law professor and seminal theorist of "commons-based peer production" also responded: "Wikipedia is not faceless, by and large.

Its participants develop, mostly, persistent identities (even if not by real name) and communities around the definitions."⁶⁹ Addressing the question of collectivism and the implication of rosy utopianism, Clay Shirky noted, "Wikipedia is the product not of collectivism but of unending argumentation; the corpus grows not from harmonious thought but from constant scrutiny and emendation."⁷⁰

Contrary to the allegations of critics, Wikipedia supporters argued that wikis were both a powerful tool "that fosters and empowers responsible individual expression"⁷¹ and a community of peers working within a collaborative culture—neither of which was best described by the notion of a swarm, hive, or collective intelligence. Indeed, it seems that the actual understanding of Wikipedia supporters is not that different from Gorman's conception of an encyclopedia. Gorman claims that whereas a traditional encyclopedia is "the product of many minds," it is not "the product of a collective mind." Instead, "It is an assemblage of texts that have been written by people with credentials and expertise and that have been edited, verified, and supplied with a scholarly apparatus enabling the user to locate desired knowledge."⁷²

The real issue to explore, then, is the extent to which access to encyclopedic production is provided to those without "credentials and expertise."

Universal Vision

A simple summary of the universal encyclopedic vision is its aspiration of expansiveness. Otlet's "Universal Repertory" and Wells's "World Brain" were conceived of as furthering an increased scope in production and access. Reference work compilers would be joined by world scholars and international technocrats. Furthermore, every student might have these extensive resources at hand, in a personal, inexpensive, and portable format. It was hoped this collection of intellect would yield a greater sense of mutual accord throughout the world. Nor would the world encyclopedia limit itself to text; new media and tools were accommodated and envisioned. The universal vision persisted into the networked age, becoming more modest in its hope of prompting world peace, but pushing accessibility even further. Once Project Gutenberg launched, content could be had for the cost of network access; then, as access became pervasive, information became free "as in beer"; and then, in Stallman's proposal for a "Universal Encyclopedia," content was to become free "as in freedom": free to

be distributed and modified without restriction, other than reciprocity.⁷³ In the Interpedia days it was thought that reasonable and well-educated people might contribute—which was how most Internet users could conceive of themselves at the time. Nupedia, too, had the potential to open up contribution, even if it was still limited to the formally educated. And, of course, with Wikipedia almost “anyone” can edit, something not even conceived of—or perhaps even approved of—by the earliest visionaries.

Critics of Wikipedia find this to be a cockeyed dream that is quickly becoming an all-too-real nightmare, and liken the universal vision to failed utopias and feared dystopias. In a *Wired* profile of Tim O’Reilly, journalist Steven Levy touches upon the Internet and collective consciousness, and asks if Web 2.0 might be “the successor to the human potential movement”; Nick Carr, a journalist covering information technology, claims that even entertaining this question is evidence of unhinged rapturous “revelation.”⁷⁴ Michael Gorman equates the Internet with the siren song that lures sailors to shipwreck.⁷⁵ Thomas Mann, another librarian, invokes Aldous Huxley in an essay entitled “Brave New (Digital) World”—subtitled “Foolishness 2.0”—and compares the vision of user-generated content to naïve French and Marxist revolutionaries. Mann argues we would be better served emulating the pragmatic authors of the *Federalist Papers*, cognizant of the pathologies that infect social organisms (e.g., that “short-sightedness, selfishness, and ignorance are constant factors in human life”), rather than celebrating the unproven presumption that technology can cure all.⁷⁶

In this case, the larger anxiety that Wikipedia has triggered is clear, and like that of its predecessors it reflects a broader concern about authority. Much as the *Encyclopédie* challenged the authority of church and state and recognized the merit of the ordinary artisan, or the *Third* reflected larger social changes manifested in everyday speech, Wikipedia is said to favor mediocrity over expertise. Or from Andrew Keen’s perspective, Wikipedia elevates *The Cult of the Amateur* at the expense of the professional.

The implication of this shift toward user-generated content and niche markets is contested. Or, it is not so much that different authors envision different futures, but viscerally react to that same future differently. (However, we should remember that all those characteristics now associated with print—its “fixity,” authority, and credibility—cannot be taken for granted and their establishment took some time to develop as a “matter of convention and trust, of culture and practice.”⁷⁷) The popular InstaPundit blogger

Glenn Reynolds has a positive interpretation as seen in the title of his book: *An Army of Davids: How Markets and Technology Empower Ordinary People to Beat Big Media, Big Government, and Other Goliaths*.⁷⁸ And Chris Anderson, the current editor in chief of *Wired*, finds “selling less for more” in *The Long Tail* to be the exciting future of business because retailers can now offer easy access to the “long tail” of niche markets in which that majority of items only sell a few copies.⁷⁹ However, on the flip side, Keen argues that “today’s Internet is killing our culture.” Keen begins his book by mourning the closing of Tower Records, a favorite of his in which he could peruse, hands on, a deep and diverse catalog of music. Independent bookstores and small record labels have also disappeared, and should rampant piracy and the flood of mediocre user-generated content continue, other creative industries face the same fate. Yet, while Keen laments the effects of a cult, Anderson finds value in the long tail: celebrating the easy access and massive selection of Amazon (for books), Rhapsody (for music), and Netflix (for movies).

However, besides implications for the marketplace, the question of authority also invokes concerns about autonomy and liberty. Matthew Battles, a journalist and librarian, responds to critics who prefer the professional to the amateur by asking who is going to force the cat back in the bag:

Does Gorman really believe, along with Andrew Keen, that “the most poorly educated and inarticulate among us” should not use the media to “express and realize themselves”? That they should keep quiet, learn their place, and bow to such bewiggled and alienating confections as “authority” and “authenticity”? Authority, after all, flows ultimately from results, not from such hierophantic trappings as degrees, editorial mastheads, and neoclassical columns. And if the underprivileged (or under-titled) among us are supposed to keep quiet, who will enforce their silence—the government? Universities and foundations? Internet service providers and media conglomerates? Are these the authorities—or their avatars in the form of vetted, credentialed content—to whom it should be our privilege to defer?⁸⁰

Shirky similarly notes the “scholars-eye view is the key to Gorman’s complaint: so long as scholars are content with their culture, the inability of most people to enjoy similar access is not even a consideration.”⁸¹

This concern about access and authority is further manifested by way of argument about two labels: modernism and Maoism. Matthew Battles, continuing his response on authority, argues that genuine “digital Maoism” emerges when users are bullied to be kept silent:

Experience, expertise, and authority do retain their power on the web. What's evolving now are tools to discover and amplify individual expertise wherever it may emerge. Maoist collectivism is bad—but remember that Maoism is a thing enabled and enforced by authority. Similarly, digital Maoism rears its head whenever we talk about limiting the right to individual expression that, with the power of the web behind it, is creating a culture of capricious beauty and quirky, surprising utility. Digital Maoism will emerge when users are cowed by authority, when they revert to the status of mere consumer, when the ISPs and the media conglomerates reduce the web to a giant cable TV box.⁸²

Interestingly, critics and supporter alike recognize threads of Enlightenment and modern values in contemporary knowledge work. In their own way, supporters and critics each lay claim. In June 2007 *Encyclopædia Britannica* hosted an extensive “Web 2.0 Forum” on its blog, upon which danah boyd, a researcher of online communities and a PhD student at the time, declared:

I entered the academy because I believe in knowledge production and dissemination. I am a hopeless Marxist. I want to equal the playing field; I want to help people gain access to information in the hopes that they can create knowledge that is valuable for everyone. I have lost faith in traditional organizations leading the way to mass access and am thus always on the lookout for innovative models to produce and distribute knowledge.⁸³

Two points are worthwhile noting about this comment. First, boyd—who prefers her name in lowercase—is comparing new knowledge production models with that of the traditional academy, something she implies some dissatisfaction with here and more pointedly elsewhere.⁸⁴ Historian Peter Burke argues that the institutions of the university, academy, and scholarly society each arose when its predecessor failed to accommodate new approaches to knowledge production and dissemination⁸⁵—perhaps Wikipedia stands astride another such fault. Second, boyd self-identified—I assume sincerely—as a Marxist, and this merits some framing. A common insult levied against those in the free culture movement is the aspersion of communism—or socialism and now even Maoism.⁸⁶ Such statements are usually received as an insult, as intended, and denied. Indeed, given the strong libertarian roots of Internet culture it is a grave mistake to accept such a generalization. Jimmy Wales, a former futures and options trader, credits Friedrich Hayek, a famous free market thinker, with informing his understanding of collective behavior.⁸⁷ In any case, despite red-baiting or parading, one should remember that Karl Marx was as “modern” as Adam

Smith; by this I mean that although their mechanisms of social action were different, each was relatively optimistic about the power of human beings to positively shape their own destiny.

The critics too, will admit to a modern streak: Mann writes that modernism was a good thing, but presently “people’s faith in the transformative effects of gadgets” is utopian, and as Gorman points out, a siren song.⁸⁸ Gorman himself responds in an essay about Google’s efforts to scan millions of books:

How could I possibly be against access to the world’s knowledge? Of course, like most sane people, I am not against it and, after more than 40 years of working in libraries, am rather for it. I have spent a lot of my long professional life working on aspects of the noble aim of Universal Bibliographic Control—a mechanism by which all the world’s recorded knowledge would be known, and available, to the people of the world. My sin against bloggery is that I do not believe this particular project will give us anything that comes anywhere near access to the world’s knowledge.⁸⁹

Keen too, while critical of Wikipedia, refuses to cede the label of modern. In response to Wales describing himself in a widely read article as “very much an Enlightenment kind of guy,” Keen argues that Wales “is a counter-enlightenment guy, a wide-eyed-dramatic, seducing us with the ideal of the noble amateur.”⁹⁰ At this point, as is the case with “Web 2.0,” I balk. I don’t question that it is convenient to use a label commonly associated with a historical period so as to evoke a common understanding of the prominent events and related social themes. However, should we want to argue about whether something is, or is not, modern it is best if we ground that discussion with theoretical clarity and historical specificity. Otherwise, we may be speaking past each other—this is why I speak of a twentieth-century universal aspiration, encyclopedic impulse, technological inspiration, and collaborative practice.

In any case, in this argument about how Wikipedia is collaboratively produced we see a larger argument about authority, its institutions, individual autonomy, as well as possible consequences for content production.

Encyclopedic Impulse

A popular perspective on the reference work is the biography of the people who create them. The range of personality types spans a spectrum ranging from noble self-improvers to the criminally insane, though they all shared a commitment to their craft. This same commitment can be seen in present-day Wikipedians, and is a target of scorn by some critics.

As we saw with Otlet and Wells, idealists and enthusiasts are not at all uncommon in the roster of those concerned with collecting knowledge. Suzanne Briet, a contemporary of Otlet and Wells, highlighted the importance of “altruism” and “zeal in research” among the “signs of the extroverted attitude of the documentalist.”⁹¹ The famous eighteenth-century romanticist Samuel Taylor Coleridge concocted a (failed) scheme with friends for Pantisocracy, a commune in the Americas, and *Metropolitana*, an encyclopedia organized according to the branches of human knowledge rather than alphabetically.⁹² (Project Xanadu was named in honor of Coleridge’s poem “Kubla Khan.”) And Frederick James Furnivall, a founding personality behind the nineteenth-century *Oxford English Dictionary* (OED) was known as an agnostic, vegetarian, and Socialist—characteristics for which many thought him foolish.⁹³

But perhaps the most well-known personality is also one of the most tragic. Simon Winchester’s *The Professor and the Madman* is the story of the OED and one of its most fecund contributors, Dr. William Minor. It is not clear what caused Minor’s paranoid delusions, which eventually drove him to murder an innocent he mistook for the phantasms that tormented him in the night. Yet Winchester argues that Minor’s devotion to the project—Minor submitted 10,000 citation slips to the OED documenting the early usage of terms—was perhaps one of his few solaces: partially replacing his paranoid compulsions with a constructive one that gave Minor some sense of purpose and connection to others.⁹⁴

Regardless of whether these men were self-improvers or madmen, their passion and commitment is aptly characterized by Thomas McArthur in his history of reference works:

In this they epitomize an important element in the history and psychology of reference materials: the passionate individuals with the peculiar taste for the hard labor of sifting, citing, listing and defining. In such people the taxonomic urge verges on the excessive. Thus, the wife of the Elizabethan lexicographer Thomas Cooper grew to fear that too much compiling would kill her husband. To prevent this, she took and burned the entire manuscript upon which he was working. Somehow, Cooper absorbed the loss—and simply sat down and started all over again.⁹⁵

An early example of such diligence is that of Pliny the Elder’s thirty-seven volume *Natural History*, one of the earliest European encyclopedias. A respected Roman admiral, statesman, and author, Pliny wrote his work of 20,000 facts with a genteel diligence. His nephew and protégé, Gaius

Plinius Cecilius Secundus, better known as Pliny the Younger, wrote to a friend of his uncle's habit of devoting every spare moment to his studies in which he would take notes while a servant read:

I remember once his reader having mis-pronounced a word, one of my uncle's friends at the table made him go back to where the word was and repeat it again; upon which my uncle said to his friend, "Surely you understood it?" Upon his acknowledging that he did, "Why then," said he, "did you make him go back again? We have lost more than ten lines by this interruption." Such an economist he was of time!⁹⁶

Pliny even recorded his uncle's chastisement for wasting hours in walking about Rome instead of being carried in a litter from within which he could continue his studies.

Wikipedians can be a similarly compulsive and eccentric lot. So much so that some refer to themselves as Wikipediophiles with a case of editcountitis, "a serious disease consisting of an unhealthy obsession with the number of edits you have made to Wikipedia."⁹⁷ One's edit count is a sort of coin of the realm. Although it is acknowledged as an arbitrary number (i.e., some might save a Wikipedia page after every tweak, whereas others may edit "offline" and paste it back when done in a single edit), one's count is a rough approximation of one's involvement and commitment to the project. In the 2006 Wikimedia Board elections only those with 400 edits could participate; in 2008 the requirement was raised to 600 edits.⁹⁸ The "Deceased Wikipedians" article states: "Please do not add people to this list who were never an integral part of the community. People in this list should have made at least several hundred edits or be known for substantial contributions to certain articles."⁹⁹

But wait, a list of deceased Wikipedians? Indeed. Historically many reference-work contributors driven by the encyclopedic impulse also recognized that their passion would not bring them great rewards or fame. As Samuel Johnson wrote in his preface to *A Dictionary of the English Language*, "Every other author may aspire to praise; the lexicographer can only hope to escape reproach, and even this negative recompense has been yet granted to very few."¹⁰⁰ So, in this small way, deceased Wikipedians are acknowledged. And the list also gives a flavor of the character of Wikipedia itself. A consequence of subsuming one's self in a reference work is an appreciation of the personalities and preoccupations of those behind the seemingly staid resource. When A. J. Jacobs undertook the immense task of reading the

whole *Britannica* he concluded that among the best ways to get one's own entry was to be beheaded, explore the Arctic, get castrated, design a font, or become a mistress to a monarch.¹⁰¹ These were seemingly popular topics among *Britannica* editors. Similarly, the lists of Wikipedia give a similar sense of the tastes of its contributors. The "List of Lists of Lists" is one article among a dozen that were nominated as the weirdest of Wikipedia pages, giving a skewed but amusing perspective. Other weird articles included: "List Of Fictional Expletives," "Heavy Metal Umlaut," "List Of Songs Featuring Cowbells," "List Of Strange Units Of Measurement," "Professional Farter," "List Of Problems Solved By MacGyver," "Spork," "Navel Lint," "Exploding Whale," and "Twinkies in Popular Culture."¹⁰²

Whereas tens of thousands of Wikipedians make a handful of changes, many do much more than this: a 2007 survey reported respondents averaged 8.27 hours per week on the site.¹⁰³ Some go even beyond this. For example, in 2006 the Canadian *Globe and Mail* profiled Simon Pulsifer, a Canadian in his mid-twenties at the time, who had edited more than 78,000 articles, two to three thousand of which he created.¹⁰⁴ How does such a habit form? Andrew Lih, author and fellow Wikipedia researcher, referred me to the story of "the red dot guy," Seth Ilys, who tells of his slip into the work as follows:

Sometime early in 2004, I made a dot-map (example) showing the location of my hometown: Apex, North Carolina. Then I decided, what the heck, since I've done that and have the graphics program open, why don't I make maps for every town in the county. That afternoon, I did about a third of the state and it didn't make any sense to stop there, so, like Forrest Gump, I just kept on running. Eerily enough, other people started running, too, and before long nearly all of the User:Rambot U.S. census location articles will have maps.¹⁰⁵

This indicates to me that it is not only the personality types of reference work compilers that are relevant, but also the character of the work itself. There is something about perusing, summarizing, compiling, and indexing. (I prefer to call this an "encyclopedic impulse" instead of McArthur's "taxonomic urge" to indicate a greater scope beyond classification, but I think we each mean the same thing.) Perhaps it is the focused, piecemeal but cumulative work that grabs some people and makes an "addict" of them. Or, as seen with Paul Otlet and H. G. Wells, the idea of liberating facts from the binding of a book is an enchanting one. And while the eccentricities are humorous and charming for the most part, there is a hint of distress

in those who complain of staying up too late, falling behind with work, and suffering sore wrists. In 2006, the Wikipedia policy on blocking users stated, "Self-blocking to enforce a Wikiholiday or departure are specifically prohibited."¹⁰⁶ Again, it is somewhat funny that an administrator would block herself so as to stop editing, but it is also potentially sad. In the world of print, such a compulsion has led to theft, hoarding, and even murder as documented in Nicholas Basbanes's history of the "gentle madness" of book collectors.¹⁰⁷

Critics have taken note of this personality trait too. But whereas I am more likely to view it with amusement, critics tend to be derisive, particularly when the excessive character of the individual joins with the like-minded to become a "MeetUp" or movement. Or, in a less flattering light, Charles Arthur, technology editor at the *Guardian*, observes Wikipedia, like many online activities, "show[s] all the outward characteristics of a cult."¹⁰⁸ This allegation of religious-like fervor is also seen in Gorman's reference to Wikipedia supporters as "the faithful."¹⁰⁹ Helprin characterizes the online Visigoths as an army whose vast bulk "may be just a bunch of whacked-out muppets" led by "little professors in glasses" (i.e., free culture proponent Lawrence Lessig).¹¹⁰ And while Lanier prefers a more secular metaphor, he is nonetheless disdainful by referring to Wikipedians as a Maoist collective and Wikipedia as an "online fetish site for foolish collectivism."¹¹¹ Andrew Orłowski, a journalist at the *Register* and one of the earliest critics of Wikipedia, has published a series of articles documenting Wikipedia faults. Presumably referring to the response to his work, Orłowski returns to the religious theme when he notes "criticism from outside the Wikipedia camp has been rebuffed with a ferocious blend of irrationality and vigor that's almost unprecedented in our experience: if you thought Apple, Amiga, Mozilla or OS/2 fans were er, . . . passionate, you haven't met a wiki-fiddler. For them, it's a religious crusade."¹¹² And Wikipedia can get such criticism from both sides. Proponents of "aetherometry," a fringe (or pseudo) science, have also characterized Wikipedia as "a techno-cult of ignorance." However, in this case, Wikipedia is not being criticized for being overly populist, but for failing to recognize a "dissident science" in favor of the "power-servant peer-review institutions of Big Science."¹¹³

Here, the passions and eccentricities common to compilers throughout the centuries become a feature of the debate between supporters and critics themselves.

Technological Inspiration

Index cards, microfilm, and loose-leaf binders inspired early documentalists to envision greater information access. Furthermore, these technologies had the potential to change how information was thought of and handled. Otlet's monographic principle, discussed in chapter 2, recognized that with technology one would be able to "detach what the book amalgamates, to reduce all that is complex to its elements and to devote a page [or index card] to each."¹¹⁴ (The incrementalism frequently alluded to in Wikipedia production is perhaps an instance of this principle in operation.) Similarly, Otlet's Universal Decimal Classification system would allow one to find these fragments of information easily. These notions of decomposing and rearranging information are again found in current Web 2.0 buzzwords such as *tagging*, *feeds*, and *mash-ups*, or the popular Apple slogan "rip, mix, and burn."¹¹⁵ And critics object.

As noted, Michael Gorman did not launch his career as a Web 2.0 curmudgeon with a blog entry about Wikipedia; he began with an opinion piece in the *Los Angeles Times*. In his first attack, prompted by the "boogie-woogie Google boys" claim that the perfect search would be like "the mind of God," Gorman lashes out at Google and its book-scanning project. His concern was not so much about the possible copyright infringement of scanning and indexing books, which was the dominant focus of discussion at the time, but the type of access it provided. Gorman objects to full-text search results that permit one to peruse a few pages on the screen:

The books in great libraries are much more than the sum of their parts. They are designed to be read sequentially and cumulatively, so that the reader gains knowledge in the reading. . . . The nub of the matter lies in the distinction between information (data, facts, images, quotes and brief texts that can be used out of context) and recorded knowledge (the cumulative exposition found in scholarly and literary texts and in popular nonfiction). When it comes to information, a snippet from Page 142 might be useful. When it comes to recorded knowledge, a snippet from Page 142 must be understood in the light of pages 1 through 141 or the text was not worth writing and publishing in the first place.¹¹⁶

From this initial missive, Gorman's course of finding fault with anything that smelled of digital populism was set, and would eventually bring him to Wikipedia. (Ironically, he became an exemplar of the successful opinion blogger: shooting from the hip, irreverent, and controversial.)

Yet others enthusiastically counter Gorman's disdain for the digital. Kevin Kelly, previously encountered in the hive-mind debate, resurrected

the spirit of the monographic principle in a May 2006 *New York Times Magazine* essay about the “liquid version” of books. Instead of index cards and microfilm, the liquid library is enabled by the link and the tag, maybe “two of the most important inventions of the last 50 years.”¹¹⁷ Kelly noted that the ancient Library of Alexandria was evidence that the dream of having “all books, all documents, all conceptual works, in all languages” available in one place is an old one; now it might finally be realized. Despite being unaware that the curtain was raised almost a century ago, his reprise is true to Otlet’s vision:

The real magic will come in the second act, as each word in each book is cross-linked, clustered, cited, extracted, indexed, analyzed, annotated, remixed, reassembled and woven deeper into the culture than ever before. In the new world of books, every bit informs another; every page reads all the other pages. . . . At the same time, once digitized, books can be unraveled into single pages or be reduced further, into snippets of a page. These snippets will be remixed into reordered books and virtual bookshelves.¹¹⁸

It’s not hard to see Wikipedia as a “reordered book” of reconstituted knowledge. Gorman, probably familiar with some of the antecedents of the liquid library, given his reference to “Universal Bibliographic Control” above and skepticism of microfilm below, considers such enthusiasm to be ill founded: “This latest version of Google hype will no doubt join taking personal commuter helicopters to work and carrying the Library of Congress in a briefcase on microfilm as ‘back to the future’ failures, for the simple reason that they were solutions in search of a problem.”¹¹⁹ Conversely, Andrew Keen fears it is a problem in the guise of a solution, claiming the liquid library “is the digital equivalent of tearing out the pages of all the books in the world, shredding them line by line, and pasting them back together in infinite combinations. In his [Kelly’s] view, this results in ‘a web of names and a community of ideas.’ In mine, it foretells the death of culture.”¹²⁰

Yet, Kevin Drum, a blogger and columnist, notes that this dictum of sequentially reading the inviolate continuity of pages isn’t even the case in the “brick-and-mortar library” today: “I browse. I peek into books. I take notes from chapters here and there. A digitized library allows me to do the same thing, but with vastly greater scope and vastly greater focus.”¹²¹ As far back as 1903 Paul Otlet felt the slavish dictates of a book’s structure were a thing of the past: “Once one read; today one refers to, checks through, skims. *Vita brevis, ars longa!* There is too much to read; the times are wrong;

the trend is no longer slavishly to follow the author through the maze of a personal plan which he has outlined for himself and which in vain he attempts to impose on those who read him."¹²² In fact, scholars have always had varied approaches to reading.¹²³ Francis Bacon (1561–1626) noted, "Some books are to be tasted, others to be swallowed, and some few to be chewed and digested."¹²⁴ A twelfth-century manuscript on "study and teaching" recommended that a prudent scholar "hears every one freely, reads everything, and rejects no book, no person, no doctrine," but "If you cannot read everything, read that which is more useful."¹²⁵ And as (un)usual as it may be for anyone to always read a book from start to finish, Gorman's skepticism also includes an accusation inevitable to discussions about contemporary technology: hype, or "a wonderfully modern manifestation of the triumph of hope and boosterism over reality."¹²⁶ Wikipedia critics claim that technology has inspired hyperbole. In response to the Seigenthaler's complaint about fabrications in his biographical article, Orlowski writes the resulting controversy "would have been far more muted if the Wikipedia project didn't make such grand claims for itself."¹²⁷ Nick Carr writes that what "gets my goat about Sanger, Wales, and all the other pixel-eyed apolo- gists for the collective mediocrization of culture" is that they are "all in the business of proclaiming the dawn of a new, more perfect age of human cognition and understanding, made possible by the pulsing optical fibers of the internet."¹²⁸ Jaron Lanier, coiner of the term *Digital Maoism*, concurs: "the problem is in the way the Wikipedia has come to be regarded and used; how it's been elevated to such importance so quickly."¹²⁹ Building on Lanier, Gorman speaks to the hype, and many of his other criticisms:

Digital Maoism is an unholy brew made up of the digital utopianism that hailed the Internet as the second coming of Haight-Ashbury—everyone's tripping and it's all free; pop sociology derived from misreading books such as James Surowiecki's 2004 *The Wisdom of Crowds: Why the Many are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies, Societies, and Nations*; a desire to avoid individual responsibility; anti-intellectualism—the common disdain for pointy headed profes- sors; and the corporatist "team" mentality that infests much modern management theory.¹³⁰

Helprin likens Wikipedia to the *Great Soviet Encyclopedia* wherein the Krem- lin sent out doctored photographs and updated pages to rewrite history: "Revision as used by the Soviets was a tool to disorient and disempower the plasticized masses. Revision in the wikis is an inescapable attribute that

eliminates the fixedness of fact. Both the Soviets and the wiki builders imagined and imagine themselves as attempting to reach the truth."¹³¹ Likewise, Carr continues his criticism by noting: "Whatever happens between Wikipedia and Citizendium, here's what Wales and Sanger cannot be forgiven for: They have taken the encyclopedia out of the high school library, where it belongs, and turned it into some kind of totem of 'human knowledge.' Who the hell goes to an encyclopedia looking for 'truth,' anyway?"¹³²

Of course, one must ask to what extent has Wikipedia made "such grand claims for itself"? As I belabored in my discussions about NPOV, Wikipedia has few, if any, pretensions to "truth." As is stressed in the "Verifiability" policy, "The threshold for inclusion in Wikipedia is verifiability, not truth—that is, whether readers are able to check that material added to Wikipedia has already been published by a reliable source, not whether we think it is true."¹³³ Unlike the launching of the *Third*, there was no ill-conceived press release claiming Wikipedia to be truth incarnate. Furthermore, encyclopedias gained their present shine of truth when they were first sold to schools in the middle of the twentieth century. Also, we must remember Wikipedia was not started with the intention of creating a Maoistic hive intelligence. Rather, Nupedia's goal was to produce an encyclopedia that could be available to—not produced by—anyone. When the experiment of allowing anyone to edit on a complementary wiki succeeded beyond its founders' expectations, and Wikipedia was born, two things happened. First, journalists, and, later, popular-press authors, seized upon its success as part of a larger theory about technology-related change. For example, Don Tapscott and Anthony Williams reference the wiki phenomenon in the title of their book *Wikinomics*;¹³⁴ they use a brief account of Wikipedia to launch a much larger case of how businesses should learn from and adapt their strategies to new media and peer collaboration. In *Infotopia* Cass Sunstein engages the Wikipedia phenomenon more directly, and identifies some strengths of this type of group decision making and knowledge production, but also illuminates possible faults.¹³⁵ Using Wikipedia as a metaphor has become so popular that Jeremy Wagstaff notes that comparing something to Wikipedia is "The New Cliche": "You know something has arrived when it's used to describe a phenomenon. Or what people hope will be a phenomenon."¹³⁶ Second, as seen earlier, Wikipedians themselves sought to understand how the experiment turned out so well and engaged in discussions about whether those larger theories applied.

However, at the launch of Wikipedia, Ward Cunningham, Larry Sanger, and Jimmy Wales all expressed some skepticism regarding its success as an encyclopedia, a conversation that continued among Wikipedia supporters until at least 2005.¹³⁷ And as evidence of early modesty, consider the following message from Sanger at the start of Wikipedia:

Suppose that, as is perfectly possible, Wikipedia continues producing articles at a rate of 1,000 per month. In seven years, it would have 84,000 articles. This is entirely possible; Everything2, which uses wiki-like software, reached 1,000,000 “nodes” recently.¹³⁸

Some thought this was a stretch. In 2002, online journalist Peter Jacso included Wikipedia in his “picks and pans” column: he “panned” Wikipedia by likening it to a prank, joke, or an “outlet for those who pine to be a member in some community.” Jacso dismissed Wikipedia’s goal of producing 100,000 articles with the comment: “That’s ambition,” as this “tall order” was twice the number of articles in the sixth edition of the *Columbia Encyclopedia*.¹³⁹ Yet, in September 2007, shy of its seven-year anniversary, the English Wikipedia had two million articles (over twenty times Sanger’s estimate), proving that making predictions about Wikipedia is definitely a hazard—prompting betting pools on when various million-article landmarks will be reached.¹⁴⁰

Granting that technology pundits make exaggerated claims, but not always to the extent that critics allege, prominent Wikipedians tend to be more moderate in their claims: in response to the Seigenthaler incident in 2005 Wales cautioned that while they wanted to rival *Britannica* in quantity and quality, that goal had not yet been achieved and that Wikipedia was “a work in progress.”¹⁴¹ The Wikipedia article “What It Is Not” disclaims many of the labels commonly attributed to it, including that it is “not an anarchy.”¹⁴² And of the ten things you might “not know about Wikipedia”:

We do not expect you to trust us. It is in the nature of an ever-changing work like Wikipedia that, while some articles are of the highest quality of scholarship, others are admittedly complete rubbish. We are fully aware of this. We work hard to keep the ratio of the greatest to the worst as high as possible, of course, and to find helpful ways to tell you in what state an article currently is. Even at its best, Wikipedia is an encyclopedia, with all the limitations that entails. It is not a primary source. We ask you not to criticize Wikipedia indiscriminately for its content model but to use it with an informed understanding of what it is and what it isn’t. Also, as some articles may contain errors, please do not use Wikipedia to make critical decisions.¹⁴³

While pundits might seize upon Wikipedia as an example of their argument of dramatic change, most Wikipedia supporters tend to express more surprise than hyped-up assuredness. In response to the Seigenthaler incident in 2005, the British newspaper the *Guardian* characterized Wikipedia as “one of the wonders of the internet”:

In theory it was a recipe for disaster, but for most of the time it worked remarkably well, reflecting the essential goodness of human nature in a supposedly cynical world and fulfilling a latent desire for people all over the world to cooperate with each other without payment. The wikipedia is now a standard source of reference for millions of people including school children doing their homework and post-graduates doing research. Inevitably, in an experiment on this scale lots of entries have turned out to be wrong, mostly without mal-intent. . . . Those who think its entries should be taken with a pinch of salt should never forget that there is still plenty of gold dust there.¹⁴⁴

Economist and author John Quiggin notes: “Still, as Bismarck is supposed to have said ‘If you like laws and sausages, you should never watch either one being made.’ The process by which Wikipedia entries are produced is, in many cases, far from edifying: the marvel, as with democracies and markets, is that the outcomes are as good as they are.”¹⁴⁵ Bill Thompson, BBC digital culture critic, wrote “Wikipedia is flawed in the way Ely Cathedral is flawed, imperfect in the way a person you love is imperfect, and filled with conflict and disagreement in the way a good conference or an effective parliament is filled with argument.”¹⁴⁶ The same sentiment carried through in many of the responses to Jaron Lanier’s “Digital Maoism” article. Yochai Benkler replies, “Wikipedia captures the imagination not because it is so perfect, but because it is reasonably good in many cases: a proposition that would have been thought preposterous a mere half-decade ago.”¹⁴⁷ Science fiction author and prominent blogger Cory Doctorow writes: “Wikipedia isn’t great because it’s like the *Britannica*. The *Britannica* is great at being authoritative, edited, expensive, and monolithic. Wikipedia is great at being free, brawling, universal, and instantaneous.”¹⁴⁸ Kevin Kelly, proponent of the hive mind and liquid library, responds that Wikipedia surprises us because it takes “us much further than seems possible. . . . because it is something that is impossible in theory, and only possible in practice.”¹⁴⁹

And Wikipedia defenders are not willing to cede the quality ground altogether. On December 14, 2005, the prestigious science journal *Nature* reported the findings of a commissioned study in which subject experts

reviewed forty-two articles in Wikipedia and *Britannica*; it concluded “the average science entry in Wikipedia contained around four inaccuracies; *Britannica*, about three.”¹⁵⁰ Of course, this catered to the interests of *Nature* readers and a topical strength of Wikipedia contributors. Wikipedia may not have fared so well using a random sampling of articles or on humanities subjects. Three months later, in March 2006, *Britannica* boldly objected to the methodology and conclusions of the *Nature* study in a press release and large ads in the *New York Times* and the *London Times*. Interestingly, by this time, Wikipedia had already fixed all errors identified in the study—in fact they were corrected within three days of learning of the specific errors.¹⁵¹

Yet the critics don’t accept even this more moderated appreciation of Wikipedia as being imperfect but surprisingly good. Orlowski writes such sentiments are akin to saying: “Yes it’s garbage, but it’s delivered so much faster!”¹⁵² In a widely read article on Wikipedia for the *The New Yorker*, Stacy Schiff reported Robert McHenry, former editor in chief of the *Encyclopædia Britannica*, as saying “We can get the wrong answer to a question quicker than our fathers and mothers could find a pencil.”¹⁵³ Carr is willing to concede a little more, but on balance still finds Wikipedia lacking:

In theory, Wikipedia is a beautiful thing—it has to be a beautiful thing if the Web is leading us to a higher consciousness. In reality, though, Wikipedia isn’t very good at all. Certainly, it’s useful—I regularly consult it to get a quick gloss on a subject. But at a factual level it’s unreliable, and the writing is often appalling. I wouldn’t depend on it as a source, and I certainly wouldn’t recommend it to a student writing a research paper.¹⁵⁴

Furthermore, whereas Wikipedia supporters see “imperfect” as an opportunity to continue moving forward, critics view user-generated content as positively harmful: that “Misinformation has a negative value,” or that “what is free is actually costing us a fortune.”¹⁵⁵ (Perhaps this is a classical case of perceiving a glass to be either half empty or half full.) Or, much like the enormously popular parody of an inspirational poster that declared “Every time you masturbate, God kills a kitten,” Keen concludes: “Every visit to Wikipedia’s free information hive means one less customer for professionally researched and edited encyclopedia such as *Britannica*.”¹⁵⁶ And Carr fears that using the Internet to pursue (suspect) knowledge is actually “making us stupid.”¹⁵⁷

Although technology can inspire, it can cause others to despair. For some, like Gorman’s dismissal of the Library of Congress in a briefcase, the

technology may inspire nothing but a “back to the future” failure. For others, like Keen, the proclaimed implications of the technology are real. Yet, whereas Anderson loves Rhapsody, the online music service, Keen has lost Tower Records, the defunct brick-and-mortar store. Here we can observe a generality of history: change serves some better than others. On this point these arguments seem like those of any generational gap, as Gorman points out:

Perceived generational differences are another obfuscating factor in this discussion. The argument is that scholarship based on individual expertise resulting in authoritative statements is somehow passé and that today’s younger people think and act differently and prefer collective to individual sources because of their immersion in a digital culture. This is both a trivial argument (as if scholarship and truth were matters of preference akin to liking the Beatles better than Nelly) and one that is demeaning to younger people (as if their minds were hopelessly blurred by their interaction with digital resources and entertainments).¹⁵⁸

Nonetheless, Gorman manages to sound like an old man shaking his fist when he complains that “The fact is that today’s young, as do the young in every age, need to learn from those who are older and wiser.”¹⁵⁹ Clay Shirky summarizes Gorman’s position from the perspective of the new generation: “according to Gorman, the shift to digital and network reproduction of information will fail unless it recapitulates the institutions and habits that have grown up around print.”¹⁶⁰ Scott McLemee, a columnist at *Inside Higher Ed*, more amusingly notes: “The tone of Gorman’s remedial lecture implies that educators now devote the better part of their day to teaching students to shove pencils up their nose while Googling for pornography. I do not believe this to be the case. (It would be bad, of course, if it were.)”¹⁶¹

Finally, some of this conflict might be characterized as “much ado about nothing.” Both *Webster’s Third* and Wikipedia have attracted a fair amount of punditry: reference works are claimed as proxies and hostages in larger battles, and I suspect some of the combatants argue for little other than their own self-aggrandizement. When reading generational polemics I remind myself of Douglas Adams’s humorous observation that everything that existed when you were born is considered normal and you should try to make a career out of anything before your thirtieth birthday as it is thought to be “incredibly exciting and creative.” Of course, anything after that is “against the natural order of things and the beginning of the end of civilisation as we know it until it’s been around for about ten years when

it gradually turns out to be alright really.” Even so, with every generation we undergo a new round of “huffing and puffing.”¹⁶² This is because “old stuff gets broken faster than the new stuff is put in its place,” as Clay Shirky notes in a blog entry about the collapse of print journalism. Or, as hypothesized by Steve Weber in his study of open source, the stridency of critics arises because it is easier to see “what is going away than what is struggling to be born” but that there can be a positive side to “creative destruction” if we are sufficiently patient.¹⁶³

Conclusion

Reference works can prompt and embody currents of social unease. As seen in Morton’s history of *Webster’s Third*, much of the controversy associated with its publication was about something other than the merits of that particular dictionary. I generalize the argument by briefly looking to the past for how reference works have been involved in a larger conservative versus progressive tension, and by asking how Wikipedia might be entangled in a similar debate today.

On this point, the conversation about Wikipedia can be understood with respect to a handful of themes. Clearly, the way in which content is produced has changed. It is not surprising that people question whether this type of collaboration is good, bad, or could be improved upon in any case. Furthermore, Wikipedia is an (imperfect) realization of a long-pursued vision for a universal encyclopedia. This vision is challenged by critics as an unlikely utopia, or a dangerous dystopia. Also, how to make sense of the sometimes rancorous character of the discussion? We might understand the doggedness of some of the supporters and critics in light of an encyclopedic impulse and the longer history of bibliophilic passion. Central to the discussion is also a long-debated question about technology and change: although technology may inspire some toward a particular end, it might also disgust others and effect changes that are not welcome. Ultimately, I find a reasoned middle ground to be most compelling. In a keynote speech before the Association of Research Libraries, Hunter R. Rawlings III, classics scholar and former president of Cornell, noted that we should not confuse the useful measures of relevance and popularity in finding information with the means to validate it; we must continue to develop means of “critical judgment.”¹⁶⁴ Wikipedia can serve not only as a reference work, but also, at the same time, as a study of how knowledge is constructed and contested.

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The Culture of Wikipedia

By: Joseph Reagle

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