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Rachel S. Wexelbaum St. Cloud State University, rswexelbaum@stcloudstate.edu

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Are Encyclopedias Dead? Evaluating the Usefulness of a Traditional Reference Resource

Author

Rachel Wexelbaum is Collection Management Librarian and Assistant Professor at Saint Cloud State University, Saint Cloud, Minnesota.

Contact Details

Rachel Wexelbaum
Collection Management Librarian
MC135D Collections
Saint Cloud State University
720 4th Avenue South
Saint Cloud, MN 56301

Email: rswexelbaum@stcloudstate.edu

Abstract

Purpose – To examine past, current, and future usage of encyclopedias.

Design/methodology/approach – Review the history of encyclopedias, their composition, and usage by focusing on select publications covering different subject areas.

Findings – Due to their static nature, traditionally published encyclopedias are not always accurate, objective information resources. Intentions of editors and authors also come into question. A researcher may find more value in using encyclopedias as historical documents rather than resources for quick facts.

Practical Implications—Academic librarians may begin to invest more selectively in encyclopedias, whether in print or electronic format, and market them differently to students and faculty.

Originality/value – This article explores the academic value of encyclopedias in the 21st century.

Keywords – encyclopedias, reference, cultural bias, Wikipedia, open source

Paper type – Research paper

Introduction

The word "encyclopedia" comes from a corruption of the Greek phrase *enkyklios paideia* which literally translates as "complete instruction" or "complete knowledge". As human knowledge increases and evolves, capturing it between two covers becomes impossible. With advances in communication, travel, and scientific research, expecting encyclopedia entries to persist as authoritative fact becomes laughable. The traditional encyclopedia survives as a reference resource due to criticism of open source Wikipedia by historians and academic librarians. While the structure of Wikipedia allows for infinite updates to our expanding, shifting knowledge base, the traditional encyclopedia has value as a historical document. Any explanation of phenomena bound between two covers (or rendered immutable by copyright and license agreement) provides a snapshot of what we had once perceived as truth.

Western Encyclopedias of the Past

Roman naturalist and philosopher Pliny the Elder published the thirty-seven volume *Naturalis Historia*, the first encyclopedia of the Western world. Pliny intended to record all of the knowledge that ancient Romans had acquired about the world, as he understood it, though he admitted that his work may not be complete due to his own blind spots and distractions (Anderson, 1977). Ancient Greek physician Dioscorides published the first *materia medica*¹ between 50 and 79 AD. The five volume *De materia medica* served as an authoritative medical reference source and textbook in Europe until 1600 (Anderson, 1977). Stylized illustrations and inconsistent botanical descriptions proved impractical to medieval healers attempting to fight the Plague.

Several innovations improved the quality of Western encyclopedias. The art of scientific illustration advanced, and the Gutenberg printing press could cheaply reproduce these realistic drawings, rendered in pen and ink or as acid etchings. Renaissance scholars also began to use alphabetical arrangement to organize knowledge in books (Yeo, 1991). This paralleled new awareness that all knowledge must have a universally recognized vocabulary and taxonomy, particularly in the sciences, as noted by the founder of our modern scientific classification system, Swedish naturalist Carl Linnaeus.

Some historians have called the Age of Enlightenment "the Age of the Encyclopedia" (Sullivan, 1990). Eighteenth century scholars wished to educate a new generation with precise, scientifically tested information about the known world and its inhabitants. In 1704, Sir Isaac Newton and Oxford-trained theologian John Harris published the *Lexicon Technicum*, "an encyclopedic exposition of all the arts and sciences known" (Sullivan, 1990). It was the first alphabetical encyclopedia written in English, revered as a reference resource by universities in the British Empire. In pre-revolutionary France, Voltaire, Rousseau and the *Philosophes* published the *Encyclopédie* in 1751. It was the first encyclopedia to be edited and written by a large team—more than 135 credited contributors (Kafker, 2003). Each publication made a statement in regard to religion. Theologian Harris did not want the *Lexicon Technicum* to lose its authority among English-speaking peoples due to religious bias. The Philosophes, on the other hand, praised Protestantism for what they perceived as its role in promoting religious

¹ "The body of collected knowledge about the therapeutic properties of any substance used for healing" (Wikipedia).

tolerance (Blom, 2005). It is likely that, due to its objective nature, the secular *Lexicon Technicum* inspired the *Encyclopaedia Britannica*, first published in 1768 in Edinburgh, Scotland. Alphabetical volumes and objective presentation of perceived facts made *Encyclopaedia Britannica* the model for encyclopedias in the United States.

Western Encyclopedias of the Present

Encyclopaedia Britannica ownership and production moved to the United States in 1929, attracting prominent figures Sigmund Freud, Albert Einstein, Leon Trotsky, Harry Houdini, Marie Curie, Henry Ford, and W.E.B. Du Bois to contribute entries (Encyclopaedia Britannica Corporate Site, 2012). The most well-known American encyclopedia series, however, is the all-American World Book Encyclopedia, established in 1917. While creators of earlier encyclopedias compiled works for scholarly audiences, World Book was marketed specifically to families and school libraries. To this day, World Book claims to "set the standard in publishing accurate, current, and reliable reference and learning materials for children and adults" (World Book, 2011).

Before the Internet, academic libraries purchased multivolume general encyclopedias. These encyclopedias were shelved in the Reference area, often in close proximity of the Reference Desk. The librarian would receive a reference question, and might direct the patron to those encyclopedias. Academic libraries invested hundreds of thousands of dollars in print encyclopedias, and would have to purchase the latest editions to stay current. If the encyclopedia publishers spotted errors after publication, they would send out errata pages to librarians, who would cut and paste "correct" information over the old. Not all libraries followed this practice; less affluent libraries did not regularly update their encyclopedias.

The static nature of print encyclopedias had a negative effect on student research in geography, history, and the sciences. It also became problematic for students searching for accurate information on minorities and LGBTIQ populations. Since the 1970s, educators and librarians have noted a lack of African-American representation in general and American history encyclopedias (Sloan, 1970; Smith, 1988; Peterson, 2009). The majority of general encyclopedias also failed to provide entries about lesbian, gay, bisexual, or transgender (LGBT) populations and issues (SantaVicca, 1977). Encyclopedias published for younger audiences were the least likely to include LGBT representation. Encyclopedias with insufficient LGBT representation sometimes treated homosexuality or lesbianism as a crime, a mental disorder, or both, depending on how legislation and popular opinion of the period addressed these subjects (SantaVicca, 1977). This lack of representation motivated scholars to produce subject-specific encyclopedias about minorities and LGBTIQ populations. Such print encyclopedias remain popular to this day; librarians will keep such works on their shelves to recognize diversity, even if they weed the rest of their print reference collection. Of course, print encyclopedias focused on particular minority groups also date quickly, and are prone to misrepresentation.

Wikipedia

As early as 1981, when personal computers were in their infancy, American encyclopedia publishers expressed interest in developing machine-readable versions of their publications. They envisioned

electronic versions of encyclopedias that would allow for full text searching, as well as searching and sorting by fields. In their opinion, the more efficient "searchability" of an online encyclopedia would have significant advantages over print encyclopedias (Harter & Kister, 1981). While the invention of encyclopedias on CD-ROM and online encyclopedias reduced research time, changing the format of formally published encyclopedias did not make their information more current or more representative of minorities (Peterson, 2009).

An electronic encyclopedia, whether presented as information on a CD-ROM, or a database, or an EBook, remained a finite source of quickly outdated information. As Internet access became ubiquitous, more students used search engines to locate information over the World Wide Web. As anyone who could design a website could make their site public, students, professors, and librarians became alarmed by the dubious nature of such content.

In March 2000, Internet entrepreneur Jimmy Wales and philosopher Larry Sanger launched Nupedia, the first open source encyclopedia. Nupedia would have expert-written, extensively peer-reviewed entries on all subjects, as authoritative as those in traditionally published encyclopedias. The laborious peer-review process attracted few contributors and did not provide an efficient, timely way to publish completed articles online. To streamline the process, programmer Ben Kovitz introduced the wiki to Sanger. The wiki model would allow editors and contributors to work simultaneously throughout the project (Sanger, 2005). It would also allow the public to post articles for the Nupedia experts to review. The Nupedia editors shunned the wiki for fear of mixing "amateur" content with "professionally researched and edited" material. Sanger named this wiki "Wikipedia", placed it on a separate domain from Nupedia, and made it live in January 2001. Within a few days, a small collective of editors had formed, and the number of Wikipedia articles had superseded Nupedia.

Nupedia folded in 2003, making Wikipedia the most influential free online encyclopedia in the 21st century. Today over 82,000 active Wikipedia contributors work on more than 19 million articles in 270 languages, with nearly four million in English ("Wikipedia", 2012). Thousands of people log in daily to edit existing articles and create new ones. Articles about current topics appear within minutes, not months or years. Wikipedia admits that those newer articles "may contain misinformation, unencyclopedic content, or vandalism", but older articles "become more comprehensive and balanced" ("Wikipedia", 2012). Contrary to popular belief, articles added to Wikipedia are subject to scrutiny and sometimes deleted, with a brief reason provided in a deletion log ("Wikipedia: FAQ", 2012).

The open source Wikipedia, with its rejection of "original research studies" and entries perpetually "in progress", initially caused professors and librarians to criticize its content (Rector, 2008; Rosenzweig, 2006) and ban its use (Cohen, 2007). Danish Business professor Morten Rask unsuccessfully argued that Wikipedia was only for "rich countries" (Rask, 2007), even though developing countries are more likely to have access to Wikipedia through an Internet connection than traditionally published encyclopedias. Academics fluent with Web 2.0 technologies and online resource evaluation, on the other hand, recognize Wikipedia as a medium for scholarly publication appropriate for the rapid diffusion of knowledge that takes place in the 21st century (Black, 2008).

While one can argue that the collaborative medium of Wikipedia could reduce cultural bias in its entries, a distinct gender disparity exists among collaborators. In a study conducted by the University of Minnesota's College of Science and Engineering in 2009, only 16 per cent of new Wikipedia editors identified as female, and they only made 9 per cent of the edits by new editors that year (Hyman, 2011). This gender gap often results in lower quality of entries about women's issues. During a five year time period, the percentage of female Wikipedia editors remained constant at 16 per cent, while in other social media such as Facebook and Twitter female contributors are the majority (Hyman, 2011). More research in this area is required in order to address potential gender bias in Wikipedia.

Is the traditional encyclopedia dead as a reference source?

The collaborative, open source environment of Wikipedia invites contributions from anyone. Critics of Wikipedia, often entrenched in the old-school belief that academic publishing is a closed system, criticize instead of editing or adding entries. As open source and open education gain traction in academia, acceptance of Wikipedia as a valid reference resource will grow. As academic librarians teach students how to evaluate encyclopedia entries, many include evaluation of Wikipedia entries in their library instruction. Academic librarians familiar with Wikipedia also teach their students how to log in and create or edit entries as they see fit; some contribute a great deal to Wikipedia.

Wikipedia has caused academic librarians to question the value of traditionally published encyclopedias as a ready reference source. Many academic libraries weeding their print encyclopedia collections either replace them with EReference subscriptions or not at all. Not all academic librarians, however, believe that all encyclopedias should go the way of the used book sale. Encyclopedias addressing different cultures, religions, women, disabilities, LGBTIQ Studies, race and ethnicity, historical eras, philosophies, or subjects of local interest are often kept in the Reference collection as examples of diverse viewpoints and cultural representatives. This is especially the case if the encyclopedia editors and contributors are renowned specialists in their fields. Encyclopedias produced during particular historical eras or cultural movements may also be retained as evidence of what scholars promoted as "fact" during that time. Imagine the research value of a German encyclopedia series published in Nazi Germany, for example, or a Soviet encyclopedia series published during the Stalinist era. Such resources would provide insight for students and history faculty as to what people of those eras accepted as "common knowledge".

An increasing number of traditionally published peer-reviewed encyclopedias invite writers without formal research experience to contribute if they have personal experience with the topic. *The Greenwood Encyclopedia of LGBT Issues Worldwide* (Stewart, 2009) is a classic example of such an encyclopedia, the first major reference work to identify the living conditions for LGBT people around the world. Each entry focused on the state of LGBT civil rights in a particular country, and was written by an LGBT person from that country. To maintain authenticity, if the editor could not find a native contributor, he would omit a country from the encyclopedia. Some contributors maintained their personal perspective on the issues, as they wrote about events which they had personally organized or otherwise experienced. Other contributors wrote under pseudonyms, as their ties to LGBT-supportive activities could result in prison or execution. When writing their entries, many contributors retained the

cultural or racial bias of their home country, and did not always recognize that different ethnic groups had different levels of civil rights. The editor decided to retain these "quirks" to maintain the individual voice and perspective of each author, and inspire further publication in this area. This encyclopedia is a snapshot in time, a historical document that reflects the conditions of LGBT people in different countries.

No one can bind all knowledge between two covers. Not even a library with millions of volumes can do this. Even open source Wikipedia cannot achieve it, as human civilizations continually invent, experience, and discover phenomena open to multiple interpretations. For these reasons, the traditional encyclopedia can only capture what existed in the past, or preserve what compilers would like to collect from the recent present. Academic librarians who continue to collect traditional encyclopedias must always evaluate their breadth, citations, accuracy, and purpose. They must also accept that many Wikipedia entries on popularly researched subjects may provide more in-depth coverage and references than traditional sources.

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