The Changing Face of Authority in Web Resources

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Abstract

This paper looks at the current trends in establishing authority, defined as the presumed level of expertise and credibility of a work, in published works, especially those originally published to the Web. Traditionally published articles which are subsequently published to the Web undergo peer review and have authority that is subject to the credentials of both the author and the publisher both in print and online. Web-published articles have no such built-in mechanism for determining authority but are instead given authority by the number of times they are cited, read, or shared with others. Current Web 2.0 social bookmarking or networking sites provide varying methods to rank papers, essays, or blog posts via comments, star rankings, and thumbs up/thumbs down mechanisms, among others. While these methods have not yet become standard, some information providers are already looking to the future of Web 3.0 and developing authority models that combine user rankings with computer-generated rankings of key phrases or author involvement in publishing or critiquing others' work. Without a set model for determining authority, information seekers must exercise caution in collecting and using web resources in their research.

While standards for authority in print publishing have settled into a familiar pattern, those for Web publishing are still evolving. Various standards exist for journal articles provided through databases, articles provided through commercial or personal web sites, and blog entries posted by scholars or lay persons. Print standards of peer review are being evolved for the Web, and the Web interface is introducing new methods of establishing authority including comments on and reader rankings of published works. Web 2.0 technologies are shifting the burden of establishing authority from those who publish the works to those who read and share them.

For many years, the limiting factor in getting articles published was money. Jensen (2007) wrote that because of the high cost of printing and distributing books, publishers "evolved immensely complex, self-referential mechanisms to make the most of scarce, expensive resources", with authority given to works published by respected publishers or those written by authors with advanced degrees and tenure. Early Web 1.0 scholarly publishing worked in much the same way; authority was measured by the number of citations to or quotations from a work, the quality of the publishing journal, and the author's institutional affiliation (Jensen, 2007).

Of course, authors with stellar credentials did not automatically get an article published; each article had to undergo peer review first. Traditionally, peer review would occur in a closed environment, with publishers acting as intermediaries, and often without the authors and reviewers knowing each other's identity (Anderson, 2008). However, even the authority of well researched and reviewed articles does not necessarily mean quality; Meola (2004) wrote that "if the information is from a subscription database provided by the library, students can assume at least some degree of accuracy and reliability."

Jensen (2007) compared Web 1.0 to prehistoric hunter-gatherer societies; he writes that in places where potential food is scarce, those who know where to find resources have the power. In the abundance of Web 2.0, on the other hand, "acquiring food is hardly the issue" and it is how people present their information that confers power and authority (Jensen, 2007).

In Web 2.0, authors don't need peer-reviewed journals; they can publish full-length papers on their own websites, write articles for subject-focused blogs or Web-based magazines, or even contribute their knowledge to Wikipedia. In these instances, authority is conferred by the scholarly or lay readers who find this content online and provide comments or, more often, share content with others via social networking or bookmarking sites. These sites offer disparate rating systems comprised of thumbs-up or thumbs-down, vote-by-tag, star ratings, and other methods with real names or usernames attached to the ratings. Since these methods of publishing and user commenting are free and prevalent, they are becoming the status quo. "The ability to participate in most online experiences, via comments, votes, or ratings, is now presumed, and when it is not available, it is missed" (Jensen, 2007). There also exist sites like Technorati which collect information from a set of listed blogs to determine the authority of the other blogs in the set via the ready standard of citation. Blogs that are linked to more often, and by more highly ranked blogs, are given a high authority rank.

The value of these systems is not yet established; Jensen (2007) wrote that "While such sites provide a way to sort information, they can also skip valuable images – or, in Google's case, documents – that were not famous." In Technorati's case, blogs that are not specifically listed by their author(s) are not included in the ranking system. User ranking of articles and posts may be too subjective to denote real authority on a subject, but in the case of reader comments future readers may be better able to place works in context. "It's interesting to note that blog postings and comments may offer more thorough commentary as they incorporate a wider range of thought and responses than does traditional peer review" (Anderson, 2008).

The extreme of user participation in scholarly Web publishing is Wikipedia, where anyone with a username can edit articles on a wide variety of information. The encyclopedia has become a common target of anti-Web resource advocates who view this open editing as a breeding ground for misinformation.

Davidson (2007) wrote that "several comparative studies have shown that errors in Wikipedia are not more frequent than in comparable print sources." She further notes that even when errors occur in Wikipedia articles, they are more easily corrected than in print sources. In fact, there is a listing of comparative studies on Wikipedia's site; the annotations to these studies note general accuracy of information but also "glaring omissions" in specific articles ("Reliability of wikipedia," 2009). One of the studies concluded that users should "be aware that erroneous edits do occur, and check anything that seems outlandish with a second source" (Williams, 2008). This statement seems to reduce the presumed authority of Wikipedia articles, but it is backed up by another writer who states that "A simple rule for students could be: do not use information unless you have corroborated it. Corroboration with varied and reviewed sources increases the probability of accuracy" (Meola, 2004).

Authority as found in Wikipedia is the opposite of the well-regarded scholar, according to Jensen. He wrote, "Interestingly, in Wikipedia, most users seem to believe that the more an entry has been edited (i.e., the more it has been touched and changed by many different people), the more authority it has." (Jensen, 2007) More edits should mean more corrections, which could not exist in a traditional print article and allows for hyper-current information, whether or not it has been corroborated. These edits can also include notes like "citation needed" to articles and mark sections or whole articles for rewriting, which demote the authority of those specific articles until they are remedied.

Although openness to all editors has been Wikipedia's operating procedure since its inception, the site has been increasing the power of those with more traditional credentials as well as those who have gained authority by providing useful information and edits to articles. Or, as Jensen (2007) wrote, "recently some more ''authoritative'' editors have been given authority to override whingeing axe-grinders." This preference for established editors does not preclude new editors from working on the encyclopedia.

As another way of bringing authority to wiki articles, two high-profile wikis have been established to provide a compromise between peer-reviewed print sources and the open-to-all Wikipedia. One, called Citizendium, seeks to limit spurious edits to articles by requiring all editors to write under their real names. Citizendium editors also separate "approved" articles, those that have been deemed worthy of citation, and "draft" articles, which are available to the public but not meant to be authoritative (*Citizendium*, 2009). Another wiki called Scholarpedia is, as its name suggests, open only to editing by approved scholars chosen by Scholarpedia editors or readers. Each article has a digital object ID used for citation, but can be edited by Scholarpedia-approved authors. Thus, "articles are not frozen and outdated, but dynamic, subject to an ongoing process of improvement moderated by their curators" (*Scholarpedia*, 2009).

Even before the widespread use of social networking and bookmarking sites and wikis like those mentioned above, scholars argued that the pervasive ban on using online resources is no longer valid, because of the proliferation and ease of use of journals and scholarly databases publishing online. "In addition to increased access points and the ability to search multiple years concurrently, currency of the electronic sources is far superior" (Puacz, 2005). These resources provide information that has gone through the traditional channels of authority and so are

comparable to print sources. "Although there is a tremendous amount of information on the Web that has not been through the traditional processes of peer or editorial review, there is now a large amount of information available through the Web that has," including full-text articles from print sources provided to databases by publishers (Meola, 2004).

Meola, however, also gave benefit of the doubt to information seekers' ability to judge for themselves the authority of a particular article. In criticizing the use of checklists for determining authority in websites, Meola (2004) wrote that "college students are often portrayed as unsuspecting simpletons who are completely unaware of any type of information sources besides Google or Yahoo and are easily duped by the most obviously fraudulent Web pages." However, even of print-to-web sources Meola (2004) wrote only that "if the information is from a subscription database provided by the library, students can assume at least some degree of accuracy and reliability," not that they are intrinsically authoritative. Students still need to corroborate information and use comparisons to determine the value of a resource.

Though Web 2.0 authority standards have not yet been hammered out, information professionals are already looking to what they call "Authority 3.0." Jensen's (2007) predictions for Web 3.0 authority included the current methods of determinations plus algorithmic evaluations including the percentage of phrases that are valued by a disciplinary community; the significance rating of all the texts an author has touched, viewed, or read; and the inclusion of a document in "best of" lists, syllabi, indexes, and the like. Other predictions include the ability to analyze the text of authors' previous blog postings and comments for relevant phrases and determine what percentage of a document is quoted in other works, and that taggers of specific works will garner their own level of authority (Anderson, 2008).

This will branch off of the envisioned Web 3.0, a movement driven by artificial intelligences and "automated computer-assisted systems that can make reasonable decisions on their own, preselecting, pre-clustering, and preparing material based on established metrics, while also attending very closely to the user's individual actions, desires, and historic interests and adapting to them" (Jensen, 2007). One such system is the National Academies Press Search Builder, which, "when working with a chapter from a report of the National Academies Press, takes the algorithmically-derived key phrases from that chapter, and presents them via Javascript in a manner that allows you to easily 'pair up' key phrases, or add your own," as well as the NAP Reference Finder, which uses the Search Builder but with user-provided content (*About NAP's Web Search Builder*, 2009). Key phrases can then be used to search via Google, Yahoo!, or MSN or within the NAP's own resources.

The developing standards of Web 2.0 authority, and the future of Web 3.0 authority, may soon become the norm, but until then, "without an agreed upon metric in determining scholarly value, traditional authority will retain its dominance" (Anderson, 2008). With so many more people involved in the creation and propagation of information via the Web as opposed to via traditional publishing methods, a consensus on defining authority may either come quickly or not at all. As Anderson (2008) wrote, "abundance has created new expectations and new models for scholarly authority based on openness, participation, and a two-way, read-write flow of information," and while those who create the models have ample chance to view and modify others' models to improve their use, there are also so many models being created that no one method may prove victorious. Information seekers thus cannot rely on the supposed authority of any author, but must rely on their own intuition and ability to corroborate facts to get the best information.

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