How People Assess Cooperatively Authored Information Resources

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Abstract

This work in progress highlights late-breaking results
and foreshadows opportunities for designing interfaces
that help support credibility assessment of
cooperatively authored information resources.

Author Keywords

Peer Production; Wikipedia; Credibility

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g.,
HCI): Miscellaneous.

Introduction

In this ongoing study, we seek to understand how
people assess *participatory information resources*. We
define these as information resources that may emulate
traditional reference works like dictionaries,
encyclopedias or product guides, but do not follow
traditional publishing processes. Participatory
information resources are coproduced through the
participation of many individuals using a collaborative
platform. These resources pose an interesting challenge
for users who need to assess the credibility of
information because the process by which participatory
information resources are produced is often obscured.

The literature on information assessment has a long
history with roots in the disciplines of rhetoric and
persuasion, where the credibility of messages is a
central concern. This literature has evolved for

centuries as the technologies used to communicate messages have evolved and, likewise, the cues used to judge credibility. Many researchers have worked to understand the kinds of cues that people look for on the Web to judge credibility, i.e. [3, 5, 7].

The problem of credibility in the context of broad participation in information production has also yielded a strain of research that examines how interfaces can provide information that helps people evaluate information resources, in particular with respect to Wikipedia. For example, WikiDashboard [12], Revert Graph [8], and HistoryFlow [13] are visualizations of Wikipedia that are meant to make editing activity visible in new ways; however, with the exception of WikiDashboard, these have been used as research instruments, not as tools for Wikipedia readers or editors. WikiTrust [1] is an example of a tool that helps users identify trustworthy information in Wikipedia by defining trustworthy text algorithmically and delivering that assessment to readers. This approach seeks to identify trustworthy information prior to readers' engagement with the source; the need to understand the production process and interpret it rests with the developers of the algorithms rather than the readers of the information. Projects like Chromograms [14], WikiChanges [10], WikiRage [15], and WikiStream [16] all provide end users with various representations of wiki activity that are often interesting and beautiful and may inspire insight, but were not designed to influence user behavior and were not studied in that capacity.

In one of the few studies to directly examine readers' emergent strategies for assessing Wikipedia articles, generational differences were reported [4]. Flanagin and Metzger found that young people are less willing than adults to trust Wikipedia and are also more likely to understand what Wikipedia is; however, the cause of this connection is not clear. To date, there has been little research we are aware of that examines role of fluency with participatory media in information assessment practices and how this kind of expertise – understanding the process of information production – affects the ways that people interpret and understand participatory information resources.

To address this gap, we are conducting a study comparing the assessment strategies of Wikipedia editors, librarians and informatics researchers who are professionally trained to critically assess information resources, and readers of Wikipedia who are not trained to assess resources.

Study Design

We are studying Wikipedia users' information assessment practices using a search diary followed by an interview and think-aloud protocol.

Participants

In order to better understand interactions between different forms of expertise and assessment of Wikipedia, we recruited a strategic sample of individuals that represent a broad swath of information consumers including:

- *Amateur experts.* These are active Wikipedia editors, expert producers of a participatory information resource who are not information professionals. These were recruited through Wikipedia contacts, by advertising on Drexel University's campus, and using snowball recruitment methods.

- *Information professionals.* For our purposes, these are researchers or librarians who have formal training as information professionals. Information professionals were recruited from area universities

and libraries including Drexel, University of Pennsylvania, and the Free Library of Philadelphia.

- *Novices.* These are individuals who do not regularly participate in information production either professionally or as "amateurs" in participatory environments but who use Wikipedia. These were recruited from undergraduate student populations at Drexel University.

A total of 20 people participated in the diary study by providing a response for at least one day. Participation averaged 5.2 days and 10 participants completed the maximum 7 days. Respondents included 8 females and 12 males, ranging in age from 19 to 72 (mean 36). These participants represented each of the three target populations and possessed diverse backgrounds that involved library science, information technology, physics, political science, economics, and public relations.

Methods
The first stage of this project involved a diary study. Each day for seven days, participants were asked about their information searches. They were prompted to recall and submit a list of topics they searched for that day. Participants then chose one topic from their list, and responded to questions about their process for searching, the sites they visited, how they assessed the quality of the information each site, where they ultimately found the information they needed and any difficulties they encountered along the way.

For the second stage of the project, we conducted interviews with 12 of the diary study participants. Preliminary analysis suggests that we have reached or are approaching the point of data saturation. In other words, it appears that little or no novel data points are being collected in interviews beyond idiosyncratic

contextual details. Data saturation is a standard heuristic for nonprobabilistic sampling [6, 9, 11].

The interviews progressed from 1) an open-ended exploration of participants' experiences and practices with participatory media to 2) a semi-structured interview [11], in which participants responded to specific questions about their practices, to 3) a think-aloud protocol [2], in which the participants were asked to examine at least two Wikipedia articles, provide an assessment of them and verbally explain how they make judgments about the information. Wikipedia articles were saved to the first author's website before the interview study commenced in order to ensure that all participants were exposed to the same version. We are currently transcribing these data and have not yet completed the analysis, however, we have begun to notice several redundant patterns and can report on some early observations, in particular where assessment of Wikipedia articles is concerned.

Early Observations
We have noticed two obvious themes in the interview data. First, as participants examined Wikipedia pages—and, in some cases, during the open ended discussion that preceded the more structured portion of the interview—many focused on the verifiability of information. Although specific strategies for assessing verifiability varied, many participants mentioned citations and the practice of sourcing as a critical feature of information. Although we expected citation to be a feature of Wikipedia articles that participants would attend to, we were surprised that it surfaced so frequently and in discussions of blogs and other websites as well.

Second, expert Wikipedians and casual editors or readers had very different ways of interpreting the features of Wikipedia to support their assessment of articles. We observed some expert Wikipedians relying on their understanding of how the community functions to interpret interface features. For example, a message box with a warning that the article lacks sufficient citations appeared at the top of one of the articles that participants examined. A long-term Wikipedia community member with deep knowledge of editing practices noted that this message box is used inconsistently by editors and that he simply ignores it. Some casual readers and less experienced readers failed to notice the message box at all, despite its placement at the top of the article.

These early observations have surfaced from a rich corpus of phenomenological data about information assessment. As our analysis progresses, we will categorize all participants by expertise level/type and examine their practices in this context to identify emergent patterns. This work in progress promises to yield new insights about how people assess participatory information sources and the role of participation and expertise in shaping assessment strategies.

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