

Expanding the Genre of the Online Encyclopedia

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Encyclopedias have moved online in the last decade. Encyclopædia Britannica was among the first when they launched Encyclopædia Britannica Online in 1994 . Wikipedia was founded in 2001, and passed 100 000 articles in English the year after, thus becoming comparable in size to Britannica Online.

As it is free for all readers, Wikipedia has quickly become the most used encyclopedia on the Web, probably read by more people than any print encyclopedia.

The majority of research on Wikipedia has focused on whether it is reliable, and reviews of this research conclude that it mostly is (Fallis). It's writing, however, could often be considerably better, Rosenzweig concluded . He found that overviews of subject areas are biased, and that there was a disproportionate amount of factual detail and popular culture.

In this paper, we will present a project to renew online encyclopedic writing, following a Research by design approach (Sevaldson). Wikipedia is "largely indistinguishable stylistically" from print encyclopedias (Emigh and Herring). We will write and design stylistic alternatives using techniques from several decades of hypertext writing. We ask: How can hypertext writing styles challenge the encyclopedia style? If we consider the possibility that different semiotic systems (such as writing and image) and different media technologies may afford different kinds of

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texts, which kinds of knowledge will an hypermedia encyclopedia foster, and further, what kind of world-image will be the result?

Techniques used in our prototypes will include:

- Trails
- Graphic overviews with links (Landow)
- Link maps (Landow)
- Trails (Landow)
- Pages on top of pages, as in the early Hypercard system (Hughes)
- Drawers (Fagerjord "Four Axes of Rhetorical Convergence")
- QWIKI

This work has followed the approach Sevaldson has called "research by design", where the researcher brings her or his design training to the research problem. In this case, it has followed these phases:

1. Problem definition
2. Research of earlier work.
3. Trying out earlier, related design solutions to the problem at hand.
4. Testing the solutions on users.
5. Evaluating the solutions by the "designer eye".
6. Redesigning solution, testing, evaluating, etc.

This project set out to explore alternatives to Wikipedia's writing style, incorporating stylistic traits that "could not conveniently be presented or represented on paper" as Nelson put it in his original proposal of hypertext ("File Structure"). By using graphics, links, and possibly animations and sound, we hope to find promising ideas that can result in a new encyclopedic genre. This may benefit Wikipedia readers, several critics have pointed out that writing is Wikipedia's achilles' heel.

In Wikipedia, any user may add and edit articles, and this basic difference from earlier encyclopedias has been the focus of much of the research. Most earlier studies focus either on this collective effort, often being described by James Surowiecki phrase "wisdom of crowds," or on whether Wikipedia can be a reliable source, not being writ by experts.

Niederer and Van Dijk have argued that Wikipedia rather than being a "collection of minds", it is a techno-social system. They have

documented the importance of automated software routines, known as "bots," in Wikipedia. Bots are used to assist human editors, but also extensively to automatically edit articles, and even to create new ones .

In his review of earlier literature, Don Fallis concluded that the English Wikipedia is quite reliable . Most of the research Fallis cites has studied entries of scientific topics, and he cautions that Wikipedia is sparse in many other areas (p. 1666). Roy Rosenzweig devoted a fairly large study to entries on American history, and he was less convinced of Wikipedias qualities . Not that he found many facts that were outright wrong, although he did find some, but that the overviews of historical periods were uneven, badly balanced, and with poor analytic qualities. Rosenzweig argues that history needs an author with a coherent overview, and that this rarely is found in an assembly or committee.

Still, Fallis argues that Wikipedia has great epistemic value . Being so large as it is, free, easily accessible, current, and quite reliable, it is an important source of knowledge for millions of users. Most importantly, it is much better than other free, accessible alternatives (p. 1667), a point earlier brought forward by Meyer. Rather than reliability, Fallis finds incompleteness to be a concern in Wikipedia (p. 1672). To improve Wikipedia further, he suggests to set up a system where contributors can flag questionable information and incomplete entries, and to make an effort to link articles to open access peer-reviewed research.

Rosenzweig has criticized Wikipedia for its bland and often banal writing . In the history articles he studied, he found few clear opinions, wordy style, and "waffling conclusions," bringing together different views (p. 130). He suspects that much of this comes from Wikipedia's general rule of a "neutral point of view," and that articles grow from consensus among groups of editors. But another important influence, argues Rosenzweig, is the neutral and rather boring style that emerged in large encyclopedias like the *Britannica* during the Twentieth century (p. 132).

We will make prototype articles in the following styles and designs, drawn from hypertext history, and test them.

Trails, pre-recorded sequences of hypertext nodes, were suggested even before the first hypertext system was built, in Vannevar Bush's

seminal article “as we may think”. We will test the use of trails or “guided tours” through material.

Stretchtext is a form of hypertext where the user can click on links to make a linearly written text can longer or shorter by including or excluding details. It was first suggested by Ted Nelson (*Computer Lib/Dream Machines*), and in the mid-1980ies implemented in the Guide system for the Macintosh, the first commercially available hypertext system (Brown). With the spread of new Web design techniques (known as AJAX among developers), stretchtext functionality became quite widespread from 2006 and on.

In his pioneering work with the Intermedia system at Brown University, George P. Landow introduced *graphic overviews* of subject areas, with links embedded. His examples is one of Charles Dickens, with the authors Dickens was influenced by drawn above Dickens’ name, while the names of authors Dickens influenced are drawn below .

Link maps are similar to graphic overviews, but instead of showing the subject in graphic form, the map shows the organisation of the hypertext . In an encyclopedia, large subjects (like World War II) are likely to span several pages (or nodes), and a link map could show how they are related.

In the CD-ROMs of the mid 1990ies, it was a common technique to signify more detailed information by creating an illusion of *pages on top of pages*, as in the early Hypercard system, or in Gunnar Liestøl’s *Kon-Tiki*. (Hughes) Authors using this metaphor was known in hypertext circles as “card sharks”, as opposed to “holy scrollers” who created long, scrollable pages with internal links. Wikipedia articles tend to be long, and a card solution will be tested.

Another graphic metaphor to explain to readers that they may delve into more detail or related material is a “*drawer*” available at the screen’s edge, containing links to other articles (Fagerjord “Rhetorical Convergence: Studying Web Media”).

The last form to be tested is a new invention on the Web, called a QWIKI. In a QWIKI, written articles are automatically read aloud by a speech synthesizer, and accompanied by images. We will replicate our test

articles in QWIKI too.

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