

WIKI JOURNALISM

Are wikis the new blogs?

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New media technologies have facilitated a range of new forms of journalism online: this paper analyses 'wiki journalism' as one such form which is being increasingly utilised by news organisations and other online content providers. Critically exploring case studies such as Wikinews and the LA Times 'wikitorial', the author identifies the qualities that typify the form, and on the basis of these proposes a taxonomy of wiki journalism types. The author concludes with some preliminary recommendations for future research and suggestions for the future growth of the form.

Introduction

The past few years have seen the news industry begin its first tentative experiments with the wiki format. From the open nature of Wikinews to the aborted LA Times wikitorial, these experiments have demonstrated the potential of wiki technology both to reach out to a readership - and to fall flat on its face - while also demonstrating the difficulty of exploiting the potential of wiki technology within existing news production processes.

In this paper I explore the possibilities of 'wiki journalism', looking at the brief history of the technology and the form, its relationship with participatory journalism as a whole, and current opinions in the news industry about wikis as a medium for journalism. The economic role of wikis is assessed, as news organisations move online and seek new business models, and I propose a number of criteria for assessing wiki journalism, which form the basis for a taxonomy of wiki journalism forms. Finally, I argue that we are entering a new stage in the evolution of wiki journalism, and outline the strategies on which its future rests.

Wikis: a brief history

Wikis are web applications which enable multiple authors to add, remove, and edit content in a process of collaborative authoring - usually through WYSIWYG controls that resemble those of a word processor or blog. First employed in 1995 on

WikiWikiWeb, within a few years wiki technology was being used by businesses as collaborative software, examples including project communication, intranets, and documentation.

From 2001 onwards Wikipedia played a significant part in popularising the technology, and there are currently hundreds of wikis covering topics ranging from geology and physics to food and travel. The growth of wikis is also facilitated by a range of free wiki hosting services (known as wiki farms) as well as open source wiki software. Setting up a wiki is now as easy as setting up a blog.

A wiki can contain one or more pages, and users can add pages if they feel it is necessary. In addition to the current version of a wiki page wikis can include a number of other important features, including:

- a system whereby authors are notified of changes to pages and can revert to older versions if necessary
- permissions, whereby users may have different levels of editorial control. Some wikis also include password protection, so only users who know the password can edit a page.
- records of previous versions of the page, so users can see how the subject has changed over time
- discussion pages, where authors can discuss the subject and reach consensus on page contents
- the ability to include an "edit summary" when a page is edited - a short piece of text explaining what has been done and why

Wiki journalism case studies

It could be argued that journalism in one form or another has been hosted on wikis for almost as long as the technology has existed: the lists of wikis at Wikia and Wikipedia include many that would be considered examples of journalism, such as ShopWiki, for product reviews (Levine, 2006), or WikiTravel, "a worldwide travel guide written entirely by contributors who either live in the place they're covering or have spent enough time there to post relevant information." (Gillmor, 2004: 150), and [Wikipedia's 'current events' section](#) provides a dedicated space for that service's 'news' aspect (Kolodzy, 2006). But perhaps the first major attempt to use wiki technology purely for news-based journalism came out of a suggestion from Wikipedia's Meta-Wiki community (Allan, 2006).

Wikinews was launched by Wikipedia in 2004 with a stated aim to promote the idea of the citizen journalist. Allan notes of the service:

"Mutual trust and cooperation are the key 'checks and balances' guiding the conduct of Wikinews [...] Of particular import for Wikinews is the policy to be followed by users when referring to points of fact. Specifically, all such sources used for information must be cited, and they must be verifiable, at least in principle, by someone else. In the case of original reporting, field notes must be presented on the article's discussion (Talk) page." (2006: 136-7)

It is notable that this citation and transparency of process is rare in commercial news websites.

Lih notes the importance at Wikipedia and Wikinews of the neutral point of view (NPOV) as the central editorial principle, which requires contributors to represent fairly and without bias all significant views included. "Some of the decisions are strikingly similar to those of other professional news organisations. For example, the Wikipedia community's tendency to avoid the use of the word 'terrorist' is similar to the policy adopted by the Reuters news agency." (2004b: 11)

Allan argues the NPOV provides a new approach to the "longstanding, if in my view highly problematic, principle of impartial journalism [...] to the extent that it is made possible by collaborative contributions from across the community of users" (2006, p138), while also noting "No undue influence is exercised by corporate proprietors, nor are market forces brought to bear, when determining what counts as a newsworthy event deserving of coverage." (2006: 140) In other words, impartial journalism may be more achievable when facilitated by wiki technology.

Although Wikinews has been successful in terms of numbers of articles generated, the experiment has attracted criticisms for gaps in its coverage, and the proportion of rewritten material (Allan, 2006). As Dominguez (2006) argues, "in most cases, the authors do not write about events or facts they have gathered at first hand, but which they have learned through the media."

Where Wikinews - and indeed Wikipedia - has been most successful is in covering large news events involving large numbers of people, such as Hurricane Katrina and the Virginia Tech Shootings, where first hand experience, or the availability of first hand accounts, forms a larger part of the entry, and where the wealth of reportage makes a central 'clearing house' valuable (Thelwall & Stuart, 2007).

Kolodzy describes Wikinews coverage of such major events as follows:

"The first stories have the feel of initial wire service reports on the events. [Wikinews] operates under the premise of publishing first and then editing, albeit the editors are Wikinews users who become contributors. Some edits can involve punctuation, adding a subhead, or correcting spelling. Others add new information, such as the death toll updated by authorities during the London bombing or Prime Minister Tony Blair's statement." (2006: 238)

Yamamoto (2005) feels that such coverage occurs because "In times of emergency, wikis are quickly being recognized as important gathering spots not only for news accounts but also for the exchange of resources, safety bulletins, missing-person reports and other vital information, as well as a meeting place for virtual support groups," a process driven by the community, not news organisations.

In June 2005, six months after the launch of Wikinews, the LA Times decided to experiment with a 'wikitorial' on the Iraq war, publishing their own editorial online but inviting readers to "rewrite" it using wiki technology.

The experiment received broad coverage in both the mainstream media and the blogosphere. Ross Mayfield of SocialText, a company that creates wikis, was sceptical before the experiment began:

"Offering up otherwise finished text for rewrite has limited effect. Generally, wikis can work best when something is slightly unfinished, when room for contribution is left clear. Finished text leads people to drop in links or short

comments. Quite different from wikitechure that involves people in the process of production and encourages development of shared practices. Also, this is a marked departure from the reference model most public wiki users know, the neutral point of view of Wikipedia. Almost begs for edit wars. But starting with the least newsy section of the news could be a good place to start." (2005)

Mayfield's predictions were more than realised, as Glaister (2005) described:

"By early morning, readers were inserting a tone that was more shrill than the high-minded balance of the original: "The Bush administration should be publicly charged and tried for war crimes and crimes against humanity."

"At 9am, the editorial was erased by a reader and substituted with another. Bizarrely, the new version echoed the position of the original.

"By mid-morning, the editorial had been replaced by the more reductive "Fuck USA".

"By lunchtime, the founder of Wikipedia got in on the act, "forking" the editorial into two pieces, representing opposing viewpoints.

"I'm proposing this page as an alternative to what is otherwise inevitable, which is extensive editing of the original to make it neutral ... which would be fine for Wikipedia, but would not be an editorial," wrote Jimbo Wales, who advised the paper on its experiment.

"At 4am the paper's managing editor got a call from the office. Explicit images known as "goatses" had appeared on the wikitorial page. The experiment was terminated. "

In September 2005 Esquire magazine used Wikipedia itself to 'wiki' an article about Wikipedia by AJ Jacobs. The draft called on users to help Jacobs improve the article, with the intention of printing a 'before' and 'after' version of the piece in the printed magazine. He included some intentional mistakes to make the experiment "a little more interesting"

The article received 224 edits in the first 24 hours, rising to over 500 before the article was 'frozen' in order to be printed. Jacobs later wrote (2005a) "I was riveted to my computer, pressing refresh every 45 seconds to see the next iteration ... I feel like I should submit all my articles to the community to get them Wikipedia-ized."

In 2006 *Wired* also experimented with an article about wikis. When writer Ryan Singel submitted a 1,000 word draft to his editor, "instead of paring the story down to a readable 800 words, we posted it as-is to a SocialText-hosted wiki on August 29, and announced it was open to editing by anyone willing to register." (Singel, 2006a).

When the experiment closed,

"there were 348 edits of the main story, 21 suggested headlines and 39 edits of the discussion pages. Thirty hyperlinks were added to the 20 in the original story.

"One user didn't like the quotes I used from Ward Cunningham, the father of wiki software, so I instead posted a large portion of my notes from my interview

on the site, so the community could choose a better one." (Singel, 2006a)

Singel felt that the final story was "more accurate and more representative of how wikis are used" but, significantly, not a better story than would have otherwise been produced:

"The edits over the week lack some of the narrative flow that a Wired News piece usually contains. The transitions seem a bit choppy, there are too many mentions of companies, and too much dry explication of how wikis work. It feels more like a primer than a story to me."

However, continued Singel, that didn't make the experiment a failure, and he felt the story "clearly tapped into a community that wants to make news stories better ... Hopefully, we'll continue to experiment to find ways to involve that community more."

Since that experiment Wired have launched their [How-To Wiki](#), a blog-style collection of editable how-tos from the technical to topics that would not normally be featured in the magazine ('How to Buy a Mountain Bike').

Less well publicised experiments with wiki technology by news organisations include CNET's wikis about interactive television and the Indian technology industry (Dorroh, 2005; Kolodzy, 2006). The India tech wiki initially included "Some scathing comments about the story's "factual errors" on a map, some banal comments about India's progress and some real discussion about the lack of infrastructure in India perhaps slowing its growth" (Anonymous, 2005), but went on to expand into "more than a dozen 'chapters' addressing such topics as competition from other countries and regions, such as Latin America, the next wave of new technology companies, cautions and concerns for tech businesses in India, and even information on the limited representation of the wiki audience" (Kolodzy, 2006: 239).

More recently, both the San Diego Tribune and the Online Journalism Review have employed wikis to tap into the expertise of their readership. The San Diego Tribune's 'AmpliPedia' (<http://wiki.amplifysd.com/>) invites its readers to contribute information on local bands, venues and the history of the local music scene. Chris Jennewein, Vice President, Internet Operations, is optimistic. "We haven't yet reached a critical mass, and it may take a number of months, but we're very optimistic. I think wiki journalism is best for stories a level below the big ones, as well as stories that have a long life. I can see citizen journalists using wikis to fill in the details after professionals cover the major points." (Email correspondence, 2007)

The Online Journalism Review launched a collection of wikis in January 2007 at <http://www.ojr.org/ojr/wiki/> with mixed results. Editor Robert Niles feels this is perhaps due to the non-standard "Wikipedia"-style software or journalists' lack of experience with the wiki format (Email correspondence, 2007). He has experimented with the format more successfully at specialist online publications ThemeParkInsider.com and Violinist.com.

As important as the public-facing experiments in wiki journalism are the internal wikis. The N&Opedia at the News & Observer provides a central repository of useful documents for breaking or ongoing stories, as well as information about

expertise within the newsroom and general information about competitions and training (Ebbs, 2006). The Columbus Dispatch's newsroom wiki 'Dewey Answers' was started in December 2005, emerging from a local style book for provide other documents such as tipsheets and research, and a source of background information on news events and newsmakers, timelines and buildings. It is controlled by librarians and senior editors, and the newspaper has a monthly 'Dewey Answers meeting' (Hunter, 2006). Likewise, the St. Louis Post-Dispatch also has a research wiki for the research department, containing research and standard procedures (Meiners, 2006). All of these stay closer to the encyclopedia-style, Wikipedia model of wikis, with added document-sharing, intranet-type functions. Access tends to be limited even within the news organisation.

It is likely that most examples of 'wiki journalism' exist outside traditional news organisations. Dorroh (2005) notes: "Volunteers are perusing thousands of pages of U.S. government documents, obtained by the American Civil Liberties Union, that detail treatment of detainees at Guantánamo Bay Naval Base. The group is using a wiki to report its findings", while there may also be more subjects of journalistic coverage who decide to launch their own wikis to appeal directly to the public, as cyclist Floyd Landis did when he was faced with doping charges (Hughes, 2007).

Wiki journalism and participatory journalism

Lih places Wikis within the larger category of participatory journalism, arguing that the format "uniquely addresses an historic 'knowledge gap' - the general lack of content sources for the period between when the news is published and the history books are written." (2004b: 4).

Participatory journalism also includes blogs, citizen journalism models such as OhMyNews and peer to peer publishing models such as Slashdot. A useful framework for looking at wikis is provided by Bruns (2005), who suggests the following criteria for analysing peer to peer publications:

1. Participation at the input stage
2. Participation at the output stage
3. Participation at the response stage
4. Centrality of gatewatching
5. Fixed roles
6. Mobility of peers
7. Centralization of the organisation

Bruns uses these criteria to identify a number of site models including Closed News (a traditional news website such as the New York Times), Closed Gatewatching (MediaChannel), Supervised Gatewatching (Slashdot), Editor-Assisted Open News (OhMyNews), and Open News (IndyMedia). Wiki journalism could, potentially, fit into most of these categories depending on the individual example. Wikinews, for instance, fits the Open News model, where all content is published automatically and is then open for anyone to edit. The experiments of Wired and the LA Times would constitute Supervised Gatewatching, where some degree of editorial control rests with the news

organisation (to set the agenda, or to pull the story entirely); and the San Diego Tribune's wiki is a form of Editor-Assisted Open News.

Lasica (2003) similarly offers a number of broad categories of participatory journalism:

1. Audience participation at mainstream news outlets.
2. Independent news and information Web sites.
3. Full-fledged participatory news sites [such as OhMyNews]
4. Collaborative and contributory media sites [WikiNews]
5. Other kinds of "thin media." [such as email newsletters]
6. Personal broadcasting sites [video blogs and podcasts]

WikiNews here would be of the collaborative type (4), while the San Diego Tribune's wiki is of the participatory type (3), and the LA Times' wikitorial was of the mainstream audience participation class (1).

Bowman and Willis define participatory journalism as "The act of a citizen, or group of citizens, playing an active role in the process of collecting, reporting, analyzing and disseminating news and information. The intent of this participation is to provide independent, reliable, accurate, wide-ranging and relevant information that a democracy requires." (2003, p10). They identify four types of news site: Open Communal; Open Exclusive; Closed; and Partially Closed. In this taxonomy, Wikinews would be classified as Open Communal (all publishing activity is carried out by the community); the wikitorial would be Open Exclusive (readers are only allowed to comment on published material); internal wikis such as Dewey Answers would be Closed (only privileged editors can access and participate).

Writers including Lih (2004b) and Bruns (2005) see wikis as part of a move towards journalism as process rather than product, a constantly updating 'story': what Hiler calls "iterative journalism" or Brian Eno's idea of the "unfinished" (both in Bruns, 2005).

Another useful perspective on the possibilities of wiki journalism is provided by Hume, who proposes "resource journalism" (2005), which

"Works to combine news about problems with news about a range of potential solutions to those problems, but it does not seek to encourage any particular action. Through carefully curated websites, resource journalism tries to offer a relevant selection of deeper information resources, a range of clearly labeled, diverse opinions, and interactive access points for citizens who may want to get involved."

Francisco (2006) identifies wikis as a 'next step' in participatory journalism: "Blogs helped individuals publish and express themselves. Social networks allowed those disparate bloggers to be found and connected. Wikis are the platforms to help those who found one another be able to collaborate and build together."

Walsh (2007) also notes the community-oriented nature of wiki websites: "the most important aspect [is] that people come together to do something constructive, something they consider to be important."

A taxonomy of wiki journalism

Based on the review of examples of, and the literature on, wiki journalism, this paper argues there are key qualities that must be identified when examining the use of wikis in journalism:

- Whether the topic is defined by an editor, or a user
- Whether the first draft is produced by a journalist paid to do so, or by a user
- Whether the material could have been produced without using wiki technology
- Whether the timescale is finite ('frozen' for print publication), or infinite (ongoing)
- Whether the wiki draft is professionally edited further for 'final' publication (in contrast to those which are edited solely by users)

Based on variations in the above, we can identify five broad types of wiki journalism:

- **'Second draft' wikis:** a 'second stage' piece of journalism, during which readers can edit an article produced in-house (*Wired* article, *Esquire*, *LA Times* wikitorial)
- **Crowdsourcing wiki:** a means of covering material which could not have been produced in-house (probably for logistical reasons), but which becomes possible through wiki technology (*San Diego Tribune's* AmpliPedia; *Wired* How To Wiki)
- **Supplementary wiki:** a supplement to a piece of original journalism, an 'add-on': "A tab to a story that says: Create a wiki for related stories" (Francisco, 2006) (CNET's India Tech Wiki; parts of the *Wired* How To Wiki)
- **Open wiki:** an open space, whose subject matter is decided by the user, and where material may be produced that would not otherwise have been commissioned (Wikinews)
- **Logistical wiki:** a wiki limited to in-house contributors which enables multiple authorship, and may also facilitate transparency, and/or an ongoing nature (Dewey Answers; N&Opedia)

This taxonomy can be mapped out as follows:

See next page

<i>Wiki journalism: a taxonomy of types</i>					
	User-defined topic?	User-created draft?	Impossible without ?wiki?	Infinite?	Unedited?
Second-draft	NO	NO	NO	NO	NO
Crowd Sourcing	NO	NO	YES	YES	NO
Supplementary	NO	YES	YES	YES	YES
Open	YES	YES	YES	YES	YES
Logistical	YES	YES	YES	YES?	NO

This taxonomy is not definitive, but indicative: it is possible, for example, to have a second-draft wiki that was ongoing (infinite), but the suggestion is that this would be atypical. The taxonomy aims to provide a conceptual framework through which to analyse examples of wiki journalism. It highlights the range of types of wiki journalism in their relation to 'pure' wiki-ness: Open wiki journalism, for example, has all the qualities that could be argued are inherent in the form; whereas Second-Draft wiki journalism has none. The taxonomy also highlights the closeness of certain types of wiki journalism: Second-Draft and Crowdsourcing types, for instance, are almost identical save for the fact that a piece of Second-Draft wiki journalism does not need the audience in the same way.

Strengths of wiki journalism

Wikis allow news operations to effectively cover issues on which there is a range of information so broad that it would be difficult, if not impossible, to summarise effectively in one article, or by one journalist, alone. Examples might include local transport problems, experiences of a large event such as a music festival or protest march, guides to local restaurants or shops, or advice.

Jay Rosen, talking about his crowdsourcing citizen journalism experiment Assignment Zero ([2006](#)), explains it as follows:

“A professional newsroom can't easily do this kind of reporting; it's a closed system. Because only the employees operate in it, there can be reliable controls. That's the system's strength. The weakness is the organization knows only what its own people know. Which wasn't much of a weakness until the Internet made it possible for the [people formerly known as the audience](#) to realize their informational strengths.”

Organisations willing to open up wikis for their audience to define the news agenda may also find a way of identifying their communities' concerns: Wikipedia, for instance, notes Eva Dominguez (2006) "reflects which knowledge is most shared, given

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that both the content and the proposals for entries are made by the users themselves."

Internally, wikis also allow news operations to coordinate and manage a complex story which involves a number of contributors: journalists are able to collaborate by editing a single webpage that all have access to. News organisations interested in transparency might also publish the wiki 'live' as it develops, so readers can view as it develops, and look at previous versions, while the discussion space which accompanies each entry also has the potential to create a productive dialogue with users. There is also, in theory, the possibility that readers may translate articles into other languages, as already takes place with Wikipedia entries, providing a way to make content accessible to normally hard-to-reach communities.

There are also clear economic and competitive advantages to allowing users to create articles. With the growth of low-cost micro-publishing facilitated by the internet and blogging software in particular, and the convergence-fuelled entry into the online news market by both broadcasters and publishers, news organisations face increased competition from all sides. At the same time, print and broadcast advertising revenue is falling while competition for online advertising revenue is fierce and concentrated on a few major players (Rayport, 2007) .

Lincoln Millstein, Senior Vice President of Digital Media at the Hearst Corporation makes this point quite explicitly:

"Newspapers should harness the power of communities—rather than wire service copy—to help fill pages. Half of the newspaper's service-oriented content can be done by users in an engaging way that can enrich the audience. Such a model would free precious resources to do the craft of journalism and create content that sets newspapers apart from other media. You don't need journalists to put out a travel or food section. Users are better served by having user-generated content. Use the journalists to do highly differentiated journalism." (Liu, 2007)

Wikis offer a way for news websites to increase their reach, while also increasing the time that users spend on their website (Francisco, 2006), a key factor in attracting advertisers: user generated content has proved hugely successful in attracting readers, accounting for 60% of pageviews on some websites (Liu, email correspondence, 2007). When successful, a wiki can engender community (Gillmor, 2004; Bowman and Willis, 2003). And a useful side-effect of community for a news organisation is reader loyalty.

Ken Liu puts it in more commercial terms: "It's perhaps more about highly leveraged content generator and traffic booster, of features content that arguably is more interesting than news. For example, wikis on Man U and gardening and cricket will draw more interest than more news." (Email correspondence, 2007).

Andrew Lih notes how wikis function primarily as social software, acting to foster communication and collaboration with other users:

"By emphasising social interaction over technological solutions, the project harnesses the creative energies of the participants, rather than forcing them to

work in any strict or prescribed process ... This human orientation promotes personal engagement and investment in the community, building stronger bonds and imbuing a sense of belonging. By not being constricted by process or content management structure, users are empowered by the software system and not victims of it. Users become stakeholders in the content and in the outcome of their articles." (2004b: 15-16)

Economically, wikis appear to offer the attractions of free "user generated" content, and, in the case of published articles, free subediting. But these attractions are misleading: the disadvantages of the form mean costs elsewhere, in maintenance and monitoring. Talking about wiki operations in general, Andrew Frank, a research director at technology consulting firm the Gartner Group, is quoted as suggesting "The assertion that these sites are cheap to run is questionable. For example, to sell a substantial amount of advertising, wiki sites might have to filter for objectionable content" (Levine, 2006). Howe (2007) also argues "Attempting to use crowdsourcing simply as a cost-saving measure [doesn't work]. Communities must be cultivated, respected and deftly managed if they are to come together to create economic value. This takes talented staff, and a set of skills not taught in journalism or business schools."

Weaknesses of wiki journalism

Richmond identifies two obstacles that could slow down the adoption of wikis: inaccuracy and vandalism, "Particularly in the UK, where one libellous remark could lead to the publisher of the wiki being sued, rather than the author of the libel. Meanwhile, the question of authority is the biggest obstacle to acceptance by a mainstream audience" (2007a).

Writing in 2004 Lih also identified authority as an issue for Wikipedia: "While Wikipedia has recorded impressive accomplishments in three years, its articles have a mixed degree of quality because they are, by design, always in flux, and always editable. That reason alone makes people wary of its content" (2004b).

Vandalism, a problem known as "trolling", is a recurring issue in wiki technology. Wikis such as Wikipedia have generally taken a "soft security" approach, making damage easy to undo rather than attempting to prevent its occurrence in the first place:

"When vandals learn that someone will repair their damage within minutes, and therefore prevent the damage from being visible to the world, the bad guys tend to give up and move along to more vulnerable places." (Gillmor, 2004: 149)

'Edit wars' are a related problem, where contributors continually overwrite each other's contributions due to a difference of opinion. The worst cases may require intervention by other community members to help mediate and arbitrate (Lih, 2004b).

Attempts to address the security issue vary. Wikipedia's own entry on wikis explains:

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"For instance, some wikis allow unregistered users known as "IP addresses" to edit content, whilst others limit this function to just registered users. What most wikis do is allow IP editing, but privilege registered users with some extra functions to lend them a hand in editing; on most wikis, becoming a registered user is very simple and can be done in seconds, but detains the user from using the new editing functions until either some time passes, as in the English Wikipedia, where registered users must wait for three days after creating an account in order to gain access to the new tool, or until several constructive edits have been made in order to prove the user's trustworthiness and usefulness on the system, as in the Portuguese Wikipedia, where users require at least 15 constructive edits before authorization to use the added tools. Basically, "closed up" wikis are more secure and reliable but grow slowly, whilst more open wikis grow at a steady rate but result in being an easy target for vandalism."

Walsh (2007) argues that

"Even if you don't plan on moderating a community, it's a good idea to have an editorial presence, to pop in and respond to users' questions and complaints. Apart from giving users the sense that they matter - and they really should - it also means that if you do have to take drastic measures and curtail (or even remove) a discussion or thread, it won't seem quite so much like the egregious action of some *deus ex machina*."

The author of the *Wired* experiment also feels there is a need for an editorial presence, but for narrative reasons: "in storytelling, there's still a place for a mediator who knows when to subsume a detail for the sake of the story, and is accustomed to balancing the competing claims and interests of companies and people represented in a story." (Singel, 2006a).

A further complication for news organisations used to the deadlines and production cycles of print and broadcast is the long timescales involved in building a successful wiki and the communities needed to maintain it. Wikinews contributor Erik Moll notes the reduced incentive for readers to contribute to articles with a short shelf life: "Wikinews articles are short-lived, so there is a reduced feeling of contributing to a knowledge base that will last a lifetime" (Weiss, 2005).

Issues around authorship and remuneration also need addressing:

"In open source, at least, there exists a well-defined system of licenses which determine how authors are to be acknowledged, and what (if any) commercial use may be made of their work without remunerating them. [...] In collaborative and open news sites, however, only basic disclaimers tend to exist; these are often placed on the site more in an effort to ward off potential legal action against site owners for questionable content than in order to acknowledge the contributors' ownership of their content." (Bruns, 2005: 299)

Bruns notes, however, that while there is no well-defined system as yet, models do exist, including the Creative Commons initiative, and the system used by OhMyNews, which shares copyright and insists contributors disclose bank account details for payment.

Finally, one of the biggest disadvantages may be readers' lack of awareness of what a wiki even is: only 2% of Internet users even know what a wiki is, according to Harris Interactive (Francisco, 2006), although similar statistics were once applicable to blogs.

Conclusions

So far the most highly publicised experiments with the form (the 'Wikitorial'; Wired's wiki article; the Esquire Wikipedia article) have been of the 'Second draft' variety, relinquishing the least amount of control over content, and incorporating wiki technology into pre-existing work processes: the subject of the article is still chosen by editors, the first draft is written by a journalist, and only then does the wiki community take control, taking a role as a second journalist/editor in the process.

In these cases the article has also been 'frozen' at some point for publication, often only days after first being published online, something which could be seen as 'unnatural' for a wiki. Furthermore, freezing wikis reduces the opportunity to allow vandalism to be cleaned up over time (Cannon-Brookes, 2006), underexploits the ability to look at various 'edits' of an article/topic/event as it develops over a long period of time, and removes the opportunity to build an online community.

In terms of the Wood test of user participation - "would the news on a Website look fundamentally different if users did not participate in its information gathering processes?" (Bruns, 2005) the answer in these cases is "No."

In contrast, outside of traditional news operations, Wikinews and Wikipedia have adopted an 'Open' model, relinquishing almost all control, with huge success for Wikipedia, but less for Wikinews, perhaps because of the inclusion of 'short-shelf-life' material.

Timescale appears to be a key variable in the success of wiki journalism as, between these two types on the wiki journalism continuum, the most successful models of wiki journalism have involved subject matter with a long shelf life, that builds, and taps into, a community that is wiki-literate and willing to contribute.

This community, and the management of community, are crucial to the shape that wiki journalism takes. As Boczkowski (2004) points out: "at least two transformations appear to distinguish the production of new-media news from the typical case of print and broadcast media: The news seems to be shaped by greater and more varied groups of actors, and this places a premium on the practices that coordinate productive activities across these groups."

Furthermore, creating a community is difficult and, once created, that community may not act in ways the wiki owner wants them to:

"Real community is a self-creating thing, with some magic spark, easy to recognize after the fact but impossible to produce on demand, that draws people together. Once those people have formed a community, however, they will act in the interests of the community, even if those aren't your interests. You need to be

prepared for this. [T]hey may well treat you, the owner of the site, as an external perturbation. Another surprise is that they will treat growth as a perturbation as well, and they will spontaneously erect barriers to that growth if they feel threatened by it.[...] Many of the expectations you make about the size, composition, and behavior of audiences when you are in a broadcast mode are actually damaging to community growth. To create an environment conducive to real community, you will have to operate more like a gardener than an architect." (Shirky, 2002)

But investment made in building this community can produce significant results. Scott B. Anderson, director of shared content for the Tribune Co.'s interactive unit, says "This is a way that a newspaper can let its audience take part in its core mission: investigation" (Dorroh, 2005), and there are increasing examples of 'crowdsourcing' methods, of which wikis are just one, being used to build journalism projects that would otherwise not have taken place. When Gannett's Florida News-Press, for example, decided to ask for help from its readers in investigating a utility charge story, "readers spontaneously organized their own investigations: Retired engineers analyzed blueprints, accountants pored over balance sheets, and an inside whistleblower leaked documents showing evidence of bid-rigging" (Howe, 2006a). But equally notably, the readership became hugely engaged in a story which traditionally would not have drawn as large an audience (the website received more hits than for any other stories excepting hurricanes).

This inevitably raises issues of access, and the proportion and type of user who will contribute to a wiki. Nielsen's research on participation inequality (2006) found a '90-9-1' rule whereby 90% of users are "lurkers" who do not contribute, 9% "contribute a little", and 1% account for "almost all the action", while [McCawley \(2007\) notes](#): "there were more major contributors to the 1911 Britannica than there are to Wikipedia and the front page of Digg is controlled by fewer people than the front page of the New York Times."

Although Bruns proposes that participatory journalism marks a fundamental change to the processes of information gathering, he notes that

"there is no automatism at work here which will inevitably lead to the emergence of multiperspectival news [...] such coverage depends not only on the fact that users *do* participate, but also on the question of *which* users take part - in other words, multiperspectivity depends on the condition that participating users do indeed represent a multitude of perspectives. When this condition is not met, participatory journalism might in fact lead to a *limiting* of available perspectives." (2005: 27)

But Bruns also argues that "In itself this does not undermine the project of open news any more than the fact that not everyone is a software programmer undermines the project of open source: even those who do not engage with the deliberations taking place within open news can still benefit from their outcomes as they emerge." (2005, p74), while Pavlik asks: "Is the knowledge gap reason enough to resist the development and growth of online journalism? Definitely not. Although some segments of society are likely to benefit more rapidly than others, all groups will eventually gain. Moreover, even the classical media are subject to the same knowledge-gap

effect [and] if anything, new media present a possible reversal of the knowledge gap by eliminating the barriers to entry into the journalism marketplace." (2001: 144)

It could also be argued that the '90% lurkers' statistic is misleading, focused as it is on any one site, where most people are going to be 'passing through'. In contrast, when the focus moves to individual people, the figures change dramatically: a Pew study in 2003 found that 44% of adult American internet users had contributed content online (Lih, 2004a). Even with 10% of users contributing, the case can be made that a local newspaper with 40,000 print readers would not have previously expected to tap into an army of around 4,000 contributors.

Even so, the skills to manage a community and give a 'voice to the voiceless' become important, and to that end an increasing number of news organisations are creating 'Community Editor' roles (Bradshaw, 2006). The case of the BBC's 'user generated content' unit is worth noting here: the team of over two dozen staff not only manages incoming contributions, but also looks to balance proactive voices by physically seeking out others who may not have access to communication technologies.

Francisco (2006) argues that it is only a matter of time before more professional publishers and producers begin to experiment with using wikis in the same way as they have picked up on blogs. But there are clear cultural barriers to its adoption (Dorroh, 2005). Bruns notes the tendency of professional journalism to regard audiences as lacking the skills to make sense of the news, a tendency which leads journalists to engage in a public journalism which is "'journalism in public view' rather than 'journalism with broad public participation'." (2005: 72), while Surowiecki provides examples of the cultural resistance to "the idea that a crowd of people could know anything at all":

"Henry David Thoreau lamented: 'The mass never comes up to the standard of its best member, but on the contrary degrades itself to a level with the lowest.' Friedrich Nietzsche wrote, 'Madness is the exception in individuals but the rule in groups,' while the historian Thomas Carlyle put it succinctly: 'I do not believe in the collective wisdom of individual ignorance'." (2004, xv-xvi)

Surowiecki provides copious examples that, given sufficient diversity and independence, the knowledge of a crowd can outperform highly paid experts, and it might be argued that his book, *The Wisdom of Crowds* (2004), and its success, is a symptom of a wider cultural change in favour of group knowledge.

A further cultural change is the move within the news industry from an industrial, Fordist product, to one that is interactive and customisable - a postmodern product "in the same way that postmodern products frequently consist of a common central core which can be modified and individualised" (Bruns, 2005: 218) - a description which could easily be applied to wikis. This move from a product-based industry to a service-based industry is central to the changing cultural conceptions of news and its audiences, and essential for any genuine embracing of wiki journalism.

At the same time cultural opposition to the use of wikis in journalism is likely to be eroded by the use of wikis within the business world. The Gartner Group predicts that half of all companies will use them internally in some fashion by 2009 (Levine,

2006), and The Telegraph's Web News Editor, Shane Richmond, agrees: "Unusually, it may be business people who bring wikis into the mainstream. That will prepare the ground for media experiments with wikis [and] I think it's a safe bet that a British media company will try a wiki before the end of the year." (2007b)

Richmond added that The Telegraph were planning an internal wiki as a precursor to public experiments with the technology. "Once we have a feel for the technology, we will look into a public wiki, perhaps towards the end of the year." (Bradshaw, 2007)

The BBC has been using wikis internally for some time, particularly for product development and distributed team working within BBC Future Media & Technology, according to Robin Hamman, Senior Broadcast Journalist and Producer at the corporation, while a straw poll of senior media professionals shows enthusiasm about the potential of the technology in organisations including Channel 4, BSKYB, and FT.com (King, 2007).

Even of those opposed to, or unaware of, the use of wikis in journalism, Gahrn (2007), notes that "Most [had] used, shared documents via services such as [Google Docs](http://GoogleDocs) or Zoho [...] Once they get used to the idea of collaborating on a document (any document, really) via the Web, wikis start to look more appealing and make more sense."

This paper sought to fill a gap in the academic literature by providing an exploratory investigation of the use of wikis in journalism. As the taxonomy proposed above illustrates, 'wiki journalism' is too broad an area to be covered in effective depth in one paper alone, and it must be remembered that wikis are a platform which can contain journalism, not a form of journalism *per se*, which is why this paper has not posed the question "Are wikis journalism?"

Further studies are needed to look at individual forms of wiki journalism, in particular those which have only been briefly mentioned, such as internal wikis, and wiki journalism taking place outside of traditional news organisations. Longitudinal studies are needed to look at the development of wiki communities over time at sites like the AmpliPedia (as the CNET wiki illustrates, wiki communities often need long periods of time to build quality content). Other studies might investigate what makes users contribute to wikis, and how under-represented groups might be attracted.

A number of projects in 2007 indicate that we may be seeing a new stage in the evolution of wiki journalism. In terms of Rushkoff's (2003) three stages of development in the growth of participatory media - deconstruction of content, demystification of technology and finally do-it-yourself or participatory authorship - it could be suggested that some publications, in particular the San Diego Tribune AmpliPedia and Wired's How-To Wiki, are emerging from the first stage of deconstruction of content and that, if wiki journalism is to become part of the online journalist's toolbox, the next challenge is further demystification of wiki technology, with time and money invested in facilitating participation.

Wikis are blogs 2.0: like blogs, they provide an arena for readers to critique and correct, to self-publish, and to form communities. But while they share many characteristics with blogs and older technologies such as discussion forums, the significance of wikis lies in the way they move away from the linear call-response communication models that those technologies reflected. If blogs are a distributed

discussion (Bowman and Willis, 2003), then wikis offer a single place for that discussion to reach (ongoing) consensus.

The range of voices editing each other tends to result in a fact-based piece of work that represents the 'Neutral Point Of View' (NPOV) formalised by Wikipedia, and which, potentially, avoids some of the biases inherent in individual, commercial journalism. The networked nature of wiki technology allows for genuine collaboration and community, as well as holding enormous potential for transparency and a more impartial consensus. Whether this potential is realised depends on the investment and understanding that is brought to any wiki project.

In other words, wiki journalism will only flourish if as much time and care is invested in wikis as are invested in traditional journalism. Weaknesses identified in this paper, such as vandalism and inaccuracy, can be addressed if staff are assigned to monitor and facilitate the wiki - to prevent legal issues, to attract A-List contributors (and monitors), and build genuine online communities. This will involve a new skills set for those involved, and it will involve a fresh look at copyright, legal and ethical issues. Hardest of all, it will involve relinquishing control over what has traditionally been a news organisation's biggest asset - content - in order to rebuild another that has recently been neglected: the community that may be key to journalism's future both editorially and economically.

ACKNOWLEDGEMENTS

The author would like to thank Dennis Foy, Chris Jennewein, Ken Liu, Mindy McAdams, and Robert Niles for their contributions to the wiki of this paper and via email correspondence.

REFERENCES

- Allan, Stuart (2006) *Online News*, Open University Press
- Anonymous. India and CNET go high-tech. *Tech Confidential*, June 27, 2005
http://techconfidential.thedealblogs.com/2005/06/india_and_cnet_go_hightech.php accessed August 2 2007
- Anonymous. Seigenthaler and Wikipedia: A Case Study on the Veracity of the "Wiki" concept (Wiki experiments). *Journalism.org*, October 1 2005,
<http://www.journalism.org/node/1676> accessed July 2 2007
- Baumgart, Jessica. *Newsroom Wikis: Wiki Applications in the Newsroom*. Special Libraries Association 2006 Annual Conference. 12 June 2006.
http://www.ibiblio.org/slanews/conferences/sla2006/presentations/wikis/wiki_intro.htm accessed August 2 2007
- Boczkowski, Pablo (2004) *Digitizing the News: Innovation in Online Newspapers*, MIT Press
- Bowman, Shayne and Willis, Chris. *We Media*, The Media Center at the American Press Institute, 2003.
http://www.hypergene.net/wemedia/download/we_media.pdf accessed July 2 2007
- Bradshaw, Paul. [The future of news media](#), *Online Journalism Blog*, October 24, 2006

- <http://ojournalism.blogspot.com/2006/10/future-of-news-media.html> accessed August 2 2007
- Bradshaw, Paul. *MySun makes 'readers the next editors'*, Online Journalism Blog, October 25, 2006 <http://ojournalism.blogspot.com/2006/10/mysun-makes-readers-next-editors.html> accessed August 2 2007
- Bradshaw, Paul. Are wikis the new blogs? Press Gazette, February 9, 2007 <http://onlinejournalismblog.wordpress.com/2007/02/09/are-wikis-the-new-blogs/>
- Bruns, Axel (2005) *Gatewatching*, Peter Lang
- Bruns, Axel. Wikinews: The Next Generation of Alternative Online News? Scan Journal vol 3 number 1 june 2006 http://www.scan.net.au/scan/journal/display.php?journal_id=69 accessed August 3 2007
- Cannon-Brookes, Mike. When wikis don't work - mass journalism. Rebelutionary, September 6 2006, <http://blogs.atlassian.com/rebelutionary/archives/000736.html> accessed July 2 2007
- Dominguez, Eva. Wiki journalism. La Vanguardia.es, September 14, 2006, <http://www.lavanguardia.es/lv24h/20060914/51283227918.html> accessed July 3 2007
- Dorroh, Jennifer. Wiki: Don't Lose That Number. American Journalism Review, August/September 2005. http://www.ajr.org/article_printable.asp?id=3947 accessed July 2 2007
- Ebbs, Susan. N&Opedia: The Newsroom Wiki of The News & Observer. Special Libraries Association 2006 Annual Conference. 12 June 2006. <http://www.ibiblio.org/slanews/conferences/sla2006/presentations/wikis/ebbswiki.pdf> (PDF file) accessed August 2 2007
- Fox, Steve. Looking to Crowdsourcing? Better Have a Dog in the Race. Newassignment.net, November 9, 2006 http://www.newassignment.net/blog/steve_fox/nov2006/09/a_gannett_silo_i accessed August 2 2007
- Francisco, Bambi. Why media will embrace wikis. MarketWatch, December 28, 2006. <http://www.marketwatch.com/news/story/why-media-embrace-wikis/story.aspx?guid=%7B65DE7FE7-0E72-4BF0-B7CC-2DF7755DD69C%7D> accessed July 2 2007
- Gahrn, Amy. Shared Docs: Gateway Drug to Wikis? Poynteronline, August 3 2007. <http://www.poynter.org/column.asp?id=31&aid=127907> accessed August 6
- Giles, Jim. Internet encyclopaedias go head to head. Nature, March 28 2006 http://www.nature.com/news/2005/051212/pf/438900a_pf.html accessed July 2 2007
- Gillmor, Dan (2004) *We the Media: Grassroots Journalism by the People, for the People*. O'Reilly Media ([full text online](#))
- Glaister, Dan. LA Times 'wikitorial' gives editors red faces. The Guardian, June 22, 2005, accessed July 2 2007 <http://technology.guardian.co.uk/online/news/0,12597,1511810,00.html>
- Heikkilä, Heikki and Kunelius, Risto. Access, Dialogue, Deliberation: Experimenting

- with Three Concepts of Journalism Criticism. The International Media and Democracy Project,
http://www.imdp.org/artman/publish/article_27.shtml accessed August 6 2007
- Hirsh**, Jesse and **Stalder**, Felix (2002) Open Source Intelligence
http://subsol.c3.hu/subsol_2/contributors2/stalder-hirshtext.html
- Howe**, Jeff. Gannett to Crowdsource News. *Wired*, March 11 2006.
<http://www.wired.com/software/webservices/news/2006/11/72067>
- Howe**, Jeff. The Rise of Crowdsourcing. *Wired* 14.06 June 2006.
http://www.wired.com/wired/archive/14.06/crowds.html?pg=1&topic=crowds&topic_set=
- Howe**, Jeff. Did Assignment Zero Fail? A Look Back, and Lessons Learned. *Wired*, July 16 2007.
http://www.wired.com/techbiz/media/news/2007/07/assignment_zero_final?currentPage=all accessed August 2 2007
- Hughes**, Jennifer. The Wiki Defense: What Floyd Landis taught the press about drug testing. *Columbia Journalism Review*, May/June 2007.
http://www.cjr.org/on_the_job/the_wiki_defense.php
- Hume**, Ellen (2005) Resource Journalism: A Model for New Media. *Ellenhume.com*.
http://www.ellenhume.com/articles/resource_journalism.html accessed August 6 2007
- Hunter**, Jim. Dewey Answers: A Newsroom Wiki. Special Libraries Association 2006 Annual Conference. 12 June 2006.
<http://www.ibiblio.org/slanews/conferences/sla2006/presentations/wikis/hunterwiki.pdf> (PDF file) accessed August 2 2007
- Jacobs**, AJ et al. Wikipedia:Improve this article about Wikipedia. *Wikipedia*, September 2005,
http://en.wikipedia.org/w/index.php?title=Wikipedia:Improve_this_article_about_Wikipedia&printable=yes accessed July 2 2007
- Jacobs**, AJ et al. Wikiworld. *Esquire*, December 1 2005,
http://www.esquire.com/features/best-n-brightest-2005/ESQ1205SOCWIKIPEDIA_226 accessed July 2 2007
- King**, Matt. [News organisations see potential of wiki journalism](#). *Online Journalism Blog*, July 6 2007.
<http://onlinejournalismblog.wordpress.com/2007/07/06/news-organisations-see-potential-of-wiki-journalism/> accessed August 13 2007
- Kolodzy**, Janet (2006) *Convergence Journalism*. Rowman & Littlefield
- Lasica**, J.D. What is Participatory Journalism? *Online Journalism Review*, August 7 2003
<http://www.ojr.org/ojr/workplace/1060217106.php> accessed August 6 2007
- Levine**, Robert. New Web Sites Seeking Profit in Wiki Model. *New York Times*, September 4, 2006.
<http://derekpages.googlepages.com/NewWebSitesSeekingProfitinWikiModel-.pdf> (PDF file) accessed July 2 2007
- Lih**, Andrew. Participatory Journalism and Asia: From Web Logs to Wikipedia. Paper for the 13th Asian Media Information & Communications Centre Annual Conference: ICT & Media Inputs & Development Outcomes Impact of New & Old

- Media on Development in Asia July 1-3, 2004.
<http://jmsc.hku.hk/faculty/alih/publications/amic-2004-wikipedia-rc2-wtitle.pdf> (PDF file) accessed July 2 2007
- Lih, Andrew. The Foundations of Participatory Journalism and the Wikipedia Project. Conference paper for the Association for Education in Journalism and Mass Communications Communication Technology and Policy Division Toronto, Canada August 7, 2004. <http://jmsc.hku.hk/faculty/alih/publications/aejmc-2004-final-forpub-3.pdf> (PDF file) accessed July 2 2007
- Lih, Andrew. Wikipedia as Participatory Journalism: Reliable Sources? Metrics for evaluating collaborative media as a news resource. Paper for the 5th International Symposium on Online Journalism (April 16-17, 2004) University of Texas at Austin. <http://jmsc.hku.hk/faculty/alih/publications/utaustin-2004-wikipedia-rc2.pdf> (PDF file) accessed July 2 2007
- Liu, Ken. [MindTouch Nexus is the Most Leveraged Publishing Platform for Online Media](#). MindTouch Blog, July 17 2007 accessed July 31 2007
- Makice, Kevin. More on the Wired Article. BlogSchmog, September 6th, 2006, <http://www.blogschmog.net/?p=477> accessed January 17 2007
- Mayfield, Ross. Wikitorials. Corante, June 13 2005, <http://many.corante.com/archives/2005/06/13/wikitorials.php> accessed January 17 2007
- Mayfield, Ross. What makes wikis work. Telegraph Blogs, September 12 2007, <http://blogs.telegraph.co.uk/technology/shanerichmond/sept06/wikiswork.htm> accessed January 17 2007
- McAdams, Mindy. Students' Use of Wikipedia. 31 January 2006. <http://mindymcadams.com/tojou/2006/students-use-of-wikipedia/>
- McCauley, Seamus. The people still known as the audience. April 19, 2007, http://virtualeconomics.typepad.com/virtualeconomics/2007/04/more_on_the_my.html accessed August 6 2007
- Meiners, Mike. Research Wiki at St. Louis Post-Dispatch. Special Libraries Association 2006 Annual Conference. 12 June 2006. <http://www.ibiblio.org/slanews/conferences/sla2006/presentations/wikis/meinerswiki.pdf> (PDF file) accessed August 2 2007
- Nielsen, Jakob. Participation Inequality: Encouraging More Users to Contribute. October 9, 2006, http://www.useit.com/alertbox/participation_inequality.html accessed August 6 2007
- Online Journalism Review. Online Journalism Wikis. <http://www.ojr.org/ojr/wiki/> accessed August 6 2007
- Orlowski, Andrew. Nature mag cooked Wikipedia study. The Register, March 23 2006, http://www.theregister.co.uk/2006/03/23/britannica_wikipedia_nature_study/print.html July 2 2007
- Pavlik, John V. (2001) Journalism and New Media. Columbia
- Rayport, Jeffrey. Advertising's death is greatly exaggerated. MarketWatch, Jun 8, 2007, <http://www.marketwatch.com/news/story/advertisings-death-greatly-exaggerated/story.aspx?guid=%7B17A4688C%2D867B%2D42D6%2DA82D%2DD87712FDA6D6%7D&dist%20=> accessed July 2 2007

- Richmond, Shane. Change is inevitable. Telegraph Blogs, January 16 2007, <http://blogs.telegraph.co.uk/technology/shanerichmond/january07/changeisinevitable.htm> accessed January 17 2007
- Richmond, Shane. Wild Wild West. Telegraph Blogs, January 17 2007, <http://blogs.telegraph.co.uk/technology/shanerichmond/january07/wikiwild.htm> accessed January 17 2007
- Rosen, Jay. The People Formerly Known as the Audience. PressThink, June 27, 2006 http://journalism.nyu.edu/pubzone/weblogs/pressthink/2006/06/27/ppl_frmr.html accessed August 2 2007
- Rosen, Jay. Why We're Doing This. 2006. <http://zero.newassignment.net/about> accessed July 2 2007
- Rusbridger, Alan. Ombudsmen in the digital future, Niemann Foundation, Harvard, May 21 2007. <http://image.guardian.co.uk/sys-files/Media/documents/2007/05/21/speech.pdf> accessed August 2 2007
- Rushkoff, Douglas (2003) Open Source Democracy: How online communication is changing offline politics, Demos. <http://www.demos.co.uk/files/OpenSourceDemocracy.pdf> accessed August 2 2007
- Shirky, Clay. Social Software and the Politics of Groups. [Clay Shirky's Writings About the Internet](http://www.shirky.com/writings/group_politics.html), March 9, 2003 http://www.shirky.com/writings/group_politics.html accessed August 7 2007
- Shirky, Clay. Wikis, Grafitti, and Process. Corante, August 26, 2003 <http://many.corante.com/20030801.shtml> accessed August 7 2007
- Shirky, Clay. Broadcast Institutions, Community Values, September 2002, http://www.shirky.com/writings/broadcast_and_community.html accessed August 2 2007
- Singel, Ryan. The Wiki That Edited Me. Wired, September 7 2006, <http://www.wired.com/science/discoveries/news/2006/09/71737> accessed January 17 2007
- Singel, Ryan. Veni, Vidi, Wiki. Wired, September 7 2006, <http://www.wired.com/science/discoveries/news/2006/09/71733> accessed January 17 2007
- Singel, Ryan, et al. Veni. Vidi. Wiki. http://www.eu.socialtext.net/wired/index.cgi?wired_wiki accessed January 17 2007
- Surowiecki, James (2004) *The Wisdom of Crowds*, Abacus
- Terdiman, Daniel. Esquire wikis article on Wikipedia. CNET News.com, September 29, 2005, http://news.com.com/Esquire+wikis+article+on+Wikipedia/2100-1038_3-5885171.html accessed July 2 2007
- Thelwall, Mike and Stuart, David. RUOK? Blogging Communication Technologies During Crises. Journal of Computer-Mediated Communication, 2007, p523-548 <http://jcmc.indiana.edu/vol12/issue2/thelwall.html>
- Thoeny, Peter. Wired News Wiki Story Experiment, September 7 2007, http://www.structuredwikis.com/peter_2006-09-07.html accessed July 5 2007
- Weiss, Aaron. The Unassociated Press, New York Times, February 10, 2005, <http://www.nytimes.com/2005/02/10/technology/circuits/10wiki.html?ex=118>

- [6200000&en=ca1b59892aab21bc&ei=5070](#) accessed August 2 2007
- Walsh, Jason. Build the perfect web community. .net Magazine, p39-43, no.165, August 2007 <http://www.netmag.co.uk/zine/podcast/episode-12>
- Wei, Hsing (2006) The Hype vs. Reality vs. What People Value: Emerging Collaborative News Models and the Future of News, Harvard University, <http://citmedia.org/learn/surveys/collaborativenews.htm> accessed August 7 2007
- Wikipedia. Hurricane Katrina. Wikipedia. http://en.wikipedia.org/wiki/Hurricane_Katrina accessed July 2 2007
- Wikipedia. Wiki. Wikipedia. <http://en.wikipedia.org/wiki/Wiki> accessed July 2 2007
- Winston, Brian (1998) *Media Technology and Society*. Routledge
- Yamamoto, Mike. Katrina and the rise of wiki journalism. CNet News Blog, September 1, 2005, http://news.com.com/8301-10784_3-5845892-7.html accessed January 17 2007

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