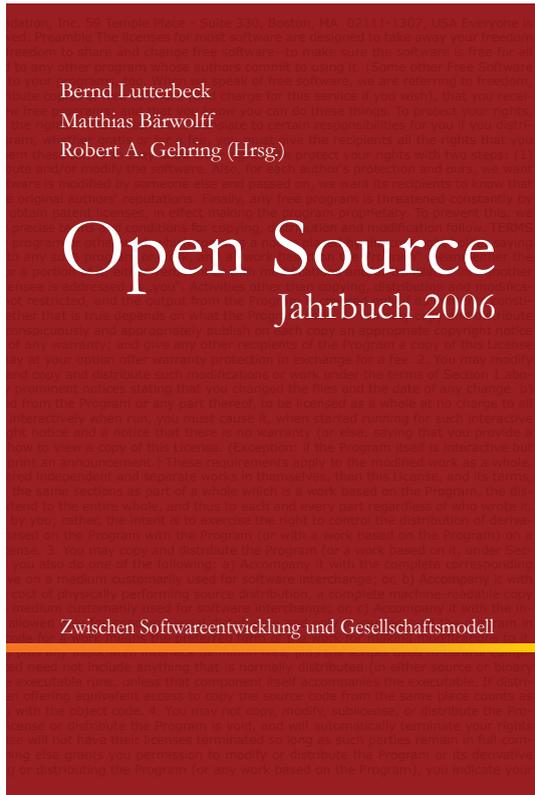


This article has originally been
published in German as part of the



available at www.opensourcejahrbuch.de.

The *Open Source Jahrbuch 2006* is an extensive compendium dealing with the various aspects of open source software and beyond. Whilst most articles have been written in German, this is one of the articles that have originally been written in English and subsequently been translated into German. Refer to our website for more English articles as well as our translation wiki.

Wikipedia as a learning community: content, conflict and the ‘common good’*

CORMAC LAWLER



*(CC-Licence 2.5, see
<http://creativecommons.org>)*

This paper looks at aspects of Wikipedia’s structure and process, with specific focus on its community (or organisational) learning. Learning is conceptualised as a collective, collaborative process, whereby multiple perspectives are shared and meanings are constructed. Fundamental to this learning are Wikipedia’s policies and the procedure of collaboration in an often conflicting environment. Conflict is viewed as a key component in the process of creating the content of Wikipedia as well as a key factor in people’s participation in the project. A case study of conflict is presented, of which the focus is on how individual users communicate their opinions and feelings to other users and how these communications are read and/or understood by individuals and/or the community, especially in the light of it being mainly a text-only medium. How experiences are shared between and within projects is seen as a crucial factor in its organisational learning—Wikipedia as an organisation has both traditional and radical features, but its learning, as well as so many other aspects of its proclaimed success, is seen to be predicated on its structure, as well as its policies. Recommendations are made to improve its learning as an organisation as well that of individuals, through the idea and praxis of a learning community.

Keywords: Learning Community · Online Community · Collaboration
· Conflict · Constructivism · Organisational Learning

* This article is based on a conference paper that was edited for the Open Source Annual. The original document can be found in the proceedings of Wikimania 2005: <http://meta.wikimedia.org/wiki/Transwiki:Wikimania05/Paper-CL1>.

Project	Website	No. of languages
Wikimedia Foundation	http://wikimediafoundation.org/	14
Wikipedia	http://wikipedia.org/	203
Wiktionary	http://wiktionary.org/	142
Wikisource	http://wikisource.org	65
Wikiquote	http://wikiquote.org/	51
Wikibooks	http://wikibooks.org/	40
Wikinews	http://wikinews.org/	19
Commons	http://commons.wikimedia.org/	59
Wikispecies	http://species.wikipedia.org/	32
Meta	http://meta.wikimedia.org/	46

Table 1: *Wikimedia Foundation projects (excluding defunct 9/11 memorial)*

1 Introduction

Wikipedia, the multilingual, open-content, collaborative encyclopedia, has gone from strength to strength. In four-and-a-half years it has grown to contain over two million articles in over 200 languages, and counting. The idea of collaborative-building of an encyclopedia was seeded by its predecessor Nupedia, operated by an expert-only peer-review system and where the idea of a wiki (user-editable) system was implemented, which sparked its flourishing into the sprawling organism it is today, the biggest encyclopedia in the world. Despite its astonishing size, my main focus of this study resides in analyzing three aspects of Wikipedia as a learning process, specifically the organisation, structure and modus operandi of Wikipedia. I am not focusing exclusively on Wikipedia, but also its sister projects (see table 1) and its parent, the Wikimedia Foundation (a non-profit organisation, currently registered in U.S., France and Germany, with plans underway for others). Data for this research is mainly obtained from the content and discussion pages from English Wikipedia and Meta, discussions related to Wikipedia, and mailing lists.

My overarching reason for writing this paper is to make recommendations to the community for improving its practice, ie the collaborative writing of an encyclopedia. My objective is, by the end of this paper, to have convinced both the ‘non-Wikipedian’ reader that Wikipedia is a model worth serious consideration, and also the Wikipedian that the good start that has been made needs to be reinforced, or even in parts, restructured. In so doing, I want to redress the imbalance noted by Feenberg & Bakardjieva (2004) in that previous studies of online communities have tended to describe the workings of the community for an external audience without addressing the needs of the communities or their participants themselves. I also, most importantly, hope to frame the discourse of Wikipedia in terms of it *actually being a learning community*,

rather than as a model, or way of looking at it.

While Wikipedia is not constructed or conceived as a learning environment per se, it does have some interesting characteristics of one. In this paper, I will frame the activities of its users in the light of the theory around learning communities, learning organisations and communities of practice. All of these have their own particularities and they all overlap in parts, but all, I think, are present in the continued work and functioning of Wikipedia. I shall therefore look at each area, in an attempt to come to a better understanding of how best to synthesise them.

2 Communities of practice

Wenger & Snyder (2000) say that communities of practice: 1) set their own agendas (self-organising), 2) are open to all who are willing to participate (self-selective) and 3) learn and grow through time and hence reinforce their strengths and capabilities (self-perpetuating). Unlike many other online communities, Wikipedia exists for a definite purpose and very real work is being done continuously, as I write and as you read, making it more like other work-based communities of practice than an online discussion group, for example. Wikipedia's goal, its *raison d'être*, is very simply to create and distribute an encyclopedia to every single person on the planet in a language they can easily understand or, in the classic phrase, "of the people, for the people". This overlaps with the second point above which characterises the entirely voluntary membership of Wikipedia, and which goes for all of its languages and their subprojects¹, as well as of course its sister projects (i.e. Wiktionary etc.), placing Wikipedia in a straddling role between the Tönnies' (2001) classic demarcation of community and civil society. It also goes somewhat for roles within the communities, like adminship or membership of the dispute resolution process, although these are based on community approval and usually involve a vote. The third point, of course, is the difficult one, and the one I will be focusing on here. To what extent does *growth* and *learning* take place within the community at large and in the smaller communities within this/these communities, and how does it work or can it be done? These are my research questions.

Growth (in size at least) is easily quantified (Voß 2005); learning, however, is not. But what, at least, do contributors to Wikipedia feel they have learned? To this question, I have been told (apart from "reams of trivia"): how to do research, how to write better academically, how to read and write better in another language, how to get on with and work with members of another culture and to be generally critical of the media in its presentation of information (Lawler 2005).

¹ Subprojects are e.g. finding sources, article translations—themselves 'semi-communities'.

3 Organisations, leadership and learning

“Hierarchical authority,” writes Peter Senge (1996), “[. . .] tends to evoke compliance, not foster commitment” (p. 2). Citing Argyris (1994), he claims that the problems of traditional organisations are that they stifle potentially damaging information for self-preservation purposes, when in fact this is precisely the kind of information that is needed for their development. He then goes on to advocate the conception of new types of leadership in order to improve the flow of communication

While Wikipedia does have a somewhat hierarchical system, i.e. project administrators, mediation and arbitration committees (on the English Wikipedia) and a board of trustees overseeing the Wikimedia foundation, it offsets this with a decentralised structure throughout. Except for occasional foundation decisions, it is possible to take part in any discussion on policy, directly upon arrival to Wikipedia, whether logged in or not. It is also possible to apply for adminship of any project, once proof of sufficiently substantial edits is given, in many cases after only a month or so of contributing. Essentially, Wikipedia is a composite of many structural systems² to go alongside the view of a completely open, flat system (Aigrain 2003). But its openness is still its most basic, enduring and all-pervasive quality (Lawler 2005) and how, in the final analysis, it must be viewed.

Of course, no discussion of the leadership of Wikipedia is complete without reference to its co-founder Jimmy (Jimbo) Wales. Other co-founder Larry Sanger left after Wikipedia’s first year, having contributed greatly to its workings and principles (at that time), and continues to play an ‘outsider’ role (Sanger 2004); but it is still very much Wales who retains a uniquely central role in Wikipedia/Wikimedia. His title is disputed (by himself, mainly), but Wales does retain special rights in ultimately safeguarding the project in maintaining its goals and values. He remains quite self-deprecating about his role, and tends to make minimal intrusion into community process; as Anthere wrote on the *wikipedia-l* mailing list:

“I think a project of such a type can only work without a strong authority. It is important to let people build their own organisation. Jimbo has this very powerful strength, in that he lets most of the organisation be a self-organisation. For those who know a bit about leadership, it is a rather rare occurrence.”³

Essentially, leadership is an open invitation in Wikipedia, and dependent upon people taking roles within the organisation as spelled out by Senge (1996, 2002). Philippe Aigrain (2003) states that the success of analogous ‘information communities’ depend on certain people playing certain roles, such as by referring to useful information,

2 See http://meta.wikimedia.org/wiki/Power_structure for further information.

3 This e-mail can be found here: <http://mail.wikimedia.org/pipermail/wikipedia-l/2005-April/039181.html>.

moderating (e.g. conflict), challenging opinions etc. We are encouraged to “be bold” and to take matters into our own hands. Also, the praxis of this community is such that it pays to help each other and point out interesting pages, discussions, or simply beautiful images, thus taking from Bourdieu’s notion of cultural capital or, in a current guise, the gift economy. We help each other—I have said so on my user page and I see my role thus far as being a “questioner” in Wikipedia, which explains the approach taken in my research and the reason I am writing this paper.⁴

4 Learning communities

Pedagogy has been steadily changing over the last fifty years to reflect the growing view of both knowledge and learning as socially constructed (Cuthell 2002). Consequently, a drive to make learning more socially situated has begun, with more of a focus on student-student interaction than student-teacher, in order to make it easier for students to share experiences, give each other feedback and learn from each other. A learning community is therefore, rather unsurprisingly, a specifically constructed community of learners.

Greene (2005, p. 7) says that taking part in a learning community “allows learning to be contextual and social, as well as distributed”. Contextual means that learning is situated in the context of where it is learned, e.g. operating a machine, in a classroom, on a mailing list etc. The communal element is what makes the learning both social and distributed, in that the experience is shared and collaborative; in this respect the notion of a *cohort group* is useful, in the sense of it being mutually supportive and a potential place for personal growth (Tisdell et al. 2004).

I see many (even, perhaps, any) groups in Wikipedia as being such cohort groups. There are mini-projects within the various language projects that focus on specific tasks, whether it be finding references, improving coverage of a field of study or helping to translate articles or messages between languages. All of these are kinds of cohort groups, and all are potentially learning communities. For instance, a project grew for a while between the Balkan (and environs) Wikipedias to work on a way of representing the past decade of conflict there in a neutral manner, acceptable to differing cultural points of view. The project has since petered out, but is just one example of a group of people coming together to work on a common problem. Potentially, this could be said about any content page in Wikipedia, where the principle of neutrality is constantly negotiated, though itself, in the words of Jimmy Wales, “non-negotiable”.⁵

Another continuously developing project is the software, the underlying architecture of Wikipedia. Like all open-source software, MediaWiki⁶, upon which all Wikimedia

4 See also the author’s user page: <http://en.wikipedia.org/wiki/User:Cormaggio>.

5 The basics of how to write a neutral article are to found at http://en.wikipedia.org/wiki/Wikipedia:Neutral_point_of_view.

6 <http://de.wikipedia.org/wiki/MediaWiki>

projects run, is itself freely downloadable and editable. Lawrence Lessig (2004) says the openness of the internet, and particularly open source technology, gives people the opportunity to “tinker” and thereby learn through experience about writing, designing and producing media by and for themselves. Tinkering is also central to Eric Raymond’s (2003) view of creativity and freedom in decentralised collective working; even the byline for MediaWiki, “Because ideas want to be free”, reinforces this message.

So, stated above are some notions of what constitute the major components of the theory on the area of community and learning and how Wikimedia projects may relate. But the questions now arise: does learning actually take place, and if so, how and to what extent? A further, more practical question from my perspective in writing this paper is, what are the learning opportunities in Wikipedia?

5 Wikipedia: learning opportunities

Apart from the dynamics of distributed learning-through-discovery, the main potential for learning, in my opinion, is conflict. Conflict arises for many reasons in many guises, whether through difference of culture, ideology or belief, or simple misunderstanding, prevalent in a text-only medium. It may be about the presentation of content in a partisan manner, or whether a particular piece of information or image etc. should be there at all. It is the main source of heat generated in the project and comprises a huge part of the general discussion that I have seen. These conflicts often spill over into flames or edit wars, sometimes with little or no discussion on potential solutions, but simple deadlock. This is where third parties come in, sometimes voluntarily by themselves, or else by request to comment on, or directly mediate/arbitrate in the dispute.

The words conflict and dispute connote negative images, often justifiably so, though sometimes not. Conflict can be very much constructive or at least productive, depending on the form it takes. Reagle (2004) warns against “facile agreement” in the avoiding of conflict within Wikipedia, and says that it bears the potential for sharing perspectives. A conflict, by nature, comprises multiple perspectives and is thus an opportunity for debate but depends on whether the nature of the conflict is constructive or destructive. In fact, a destructive conflict should be viewed as an extreme form of discussion, even if discussion has broken down. The way to solve a dispute is through discussion; this is fundamental to the general community and, in particular, the Mediation Committee⁷.

Discussion is the basic state of Wikipedia, between talk pages, mailing lists and IRC channels, and it is as such that the notion of a place of perspective-sharing comes into its own. Returning to the concept of leadership advocated by Senge (1996), the role of leaders is to make sure that communication is happening throughout the organisation;

⁷ <http://en.wikipedia.org/wiki/Wikipedia:Mediation>

if we transpose this concept to the completely decentralised structure of Wikipedia, we can see that everyone has the potential to take on any one of these leadership roles and consequently to form and frame the work of the community as a whole.

A major aspect of discussion/communication, certainly in a multilingual environment, is that of cultural background. Cross-cultural communication literature is already a big part of business practice, but it is growing within the field of education. Liebkind & McAlister (1999) conducted a study whereby students engaged in story-telling about other countries and cultures and consequently were significantly less xenophobic than students in schools who had not taken part in the activity. It would be interesting to do some research on this in Wikipedia, to see if this finding bore out, but of primary interest (to me at least) is how the discourse of Wikipedia is conducted and how cultural issues are dealt with, and how language is used. As Ferdinand Tönnies (2001, p.33) says, “language has not, as we all know, been ‘invented’ or somehow agreed upon as a mere tool for making ourselves understood; it is the very act of understanding at work, both in form and content”. Particularly in the text-based medium of computer-mediated-communication, the language used is crucial to coming to consensus in a conflicting territory.

Finally, being involved in a project such as Wikipedia requires the development of critical thinking, as is often repeated. Wikipedia is a filtering process in the age of information⁸, and to decide what is eligible and appropriate to enter requires critical faculties. I think that being critical also requires one to be open to criticism of oneself and to avoid defensive reasoning, which according to Argyris (1994, p. 103) “encourages individuals to keep private the premises, inferences, and conclusions that shape their behavior and to avoid testing them in a truly independent, objective fashion”.

6 Conflict: a case study

One example (among many) this year of conflict and cross-cultural issues was a dispute over the representation of the Cassini-Huygens telescope launched into space as a collaborative venture between US and European scientists. Anthere claimed on the *wikiEN-1* mailing list that some French scientists had mentioned to her that the represented format of the event on the English Wikipedia was subtly but noticeably biased against the European-built Huygens probe. This point was contested as either being either irrelevant or unfair, and the issue became a dispute, in parts personal and, to an extent, nationalistic. I have presented key points from the participants, taking excellent but not specifically related points out, and for the sake of style and clarity, I have edited some of the comments themselves. Also, since it was discussed in this thread, and having asked the question myself in another, I think there is no

⁸ According to “Letter from the Founder”: http://wikimediafoundation.org/wiki/Wikimedia_Quarto/2/En-2.

benefit from disguising the names of those involved, or more practically, no way of referencing this discussion without identifying its participants (Bruckman 2002). I also do not wish to cause offence to anyone by bringing this debate out into the open again, but rather think of it as a strong case of perspective sharing, misunderstanding, apology and resolution.

Anthere (15th Jan, 05) “I am sure it was not done on purpose at all. This is just a view of things so different between one culture and another.”⁹

Stan Shebs (15th Jan, 05) “I think you’re working a bit too hard to find bias here. [. . .] The ‘bias’ is that we work on what interests us. I’ve been digging figures of European history out of 1911EB lately, and half the time it’s the first information about these in any language WP. We’re just perennially short of people to do all the things we would like to get done.”¹⁰

Anthere (15th Jan, 05) “No I am not working too hard. [. . .] If we want to be perceived reasonably neutral, we just have to pay attention to this type of details. That’s all what I would like to say. Consider it crap if you wish.”¹¹

Stan Shebs (15th Jan, 05) “This is absolutely nothing to do with NPOV¹², and it’s unfair to hardworking editors to say that they’re biased and not doing anything about it. What you report fits exactly into the worst stereotypes of the French; sneering at other people’s work, but not taking any responsibility for having let this perceived problem go unmentioned for years. You said these scientists ‘know Wikipedia’; did you ask them why they didn’t do anything about it themselves? [. . .] There are enough real problems making WP unbiased and neutral; by taking a trivial point of organization never before discussed anywhere, and holding it up as something that matters, you’re undercutting all the editors who put in real research and real discussion time on the issues that are genuinely important. Why should I bother spending two hours in the library to research a substantive question, when you’re telling the world that WP is biased because some frontpage article doesn’t cater enough to nationalistic pride?

The whole attitude really troubles me. I’ve put in a lot of WP time over the past two years, and now it feels like it doesn’t matter.”¹³

Anthere (15th Jan, 05) “We are all biased, and little can be done about this. [. . .]

But yes, why would I even neglect my whole family and personal job as well as personal health by lack of sleep to try to take care of a project, and try to make it the

9 <http://mail.wikimedia.org/pipermail/wikien-1/2005-January/018348.html>

10 <http://mail.wikimedia.org/pipermail/wikien-1/2005-January/018353.html>

11 <http://mail.wikimedia.org/pipermail/wikien-1/2005-January/018355.html>

12 NPOV stands for “neutral point of view”.

13 <http://mail.wikimedia.org/pipermail/wikien-1/2005-January/018393.html>

best possible and the least biased possible, when you are telling me that my opinion has no importance whatsoever, is fantasm and only nationalistic pride? [..]

I can understand that some of you just do not see where the problem is and think I am just nut. That is okay, you can consider I am nut and that there is no bias here. I can accept that. This is exactly where the problems stand when we come to lack of neutrality. One editor considers one point of view and another will not necessarily see the same point of view at all. And this is exactly why we have edit wars, because the second will just not recognise the validity of the first one view and will just refuse that the other one could have a piece of truth in his hands. That is fine. What is not fine is to resort to personal comments on those having a perception that you do not share, and try to lower the possible validity of what they say by resorting of calling her 'French'.

I feel quite upset by your comment. If you wish to close your eyes to internal comments, or to attack those of us who try to point out to what is not perfect, do not be suprised when there is criticism from public audience.

I apologize to those who participated to the article if they feel I criticized their work. I did not.”¹⁴

Puddl Duk (15th Jan, 05) “‘Point of views’ in one’s mind are shaped with communal information. Communication is the only way to approach a common reality.”¹⁵

Stan Shebs (16th Jan, 05) (Re: Anthere’s original comment) “It’s a very very bad thing to say to people who take issues of bias and npov seriously. [..] This is a public mailing list; all the messages are carefully archived forever, then carefully indexed by Google, and if past experience is any guide, there’s a good chance that your initial message will be brought out as support for one side or another in an edit war. [..]

A question as simple as ‘why doesn’t the Huygens probe have its own article?’ is usually enough to spur a flurry of edits by knowledgeable people. Those of us who are serious about bias will drop everything else to look at that sort of thing and try to fix it. I think that’s part of why your original comment hurts; I’ve sacrificed a bunch of time working on subjects that I personally don’t enjoy, just to try to address other people’s claims of bias.”

(Re: ‘French stereotypes’) “I thought hard about whether to include this, and I fear I was misinterpreted. I personally don’t have this feeling; I love France, would go more often if I could, and since November I’m wondering if I could emigrate there. [..]

I’m sorry to have upset you, that was not my intent.”¹⁶

14 <http://mail.wikimedia.org/pipermail/wikien-1/2005-January/018398.html>

15 <http://mail.wikimedia.org/pipermail/wikien-1/2005-January/018402.html>

16 <http://mail.wikimedia.org/pipermail/wikien-1/2005-January/018415.html>

Zoney (18th Jan, 05) (Re: Bias) “It’s a huge problem I think, and one of Wikipedia’s biggest to overcome. And denying that it is there is absurd. And I’m not laying the blame solely with US wikipedians, far from it - US bias is just more apparant (to non-US editors) because there are more US editors than not (or than any other single category). I have no doubt there are a minority of articles biased against the US which have perhaps only received non-US editors. And speaking for myself I can for sure point out one or two Irish articles which have been biased by Irish editors for example.”¹⁷

Though this exchange was relatively short (compared to, say, the infamous debates over images and censorship), I think most people involved showed a great measure of maturity and thinking about one another’s perspective, even if it did cause offence. What’s interesting about this exchange for me primarily is that it was rich in emotion and honesty. Of course the content of the dispute, i.e. (systemic) bias in the English Wikipedia, is vital to the community, but this issue is a long-standing one and not one likely to have been resolved immediately.

Like religion, issues of national identity are likely to inflame passions, and this is what happened here (as it has again very recently, in not dissimilar circumstances). Stan’s comments were thoughtful but potentially hurtful, since he himself was hurt, and this made for a heated discussion. Anthere’s comments were full of her characteristic fire, but more importantly, her humanity. Brian tried to diffuse the situation by denying a national bias and tried to inject some humour. And Zoney’s comment was a good indication of the wider picture and a restatement of the difficulty in avoiding bias.

It is exchanges like this that I think are perfect for learning. They include emotional honesty, cultural sensitivity and humility when appropriate. It is an example of the daily discourse within Wikipedia (though, obviously, not all debates will play out like this one), but it is also an indication of the measure by which Wikipedia may be judged, i.e. as a culturally sensitive resource and/or community. Potentially, it could serve as a warning to contributors to the issues around cultural identity and bias, though this would need further research. Ultimately though, this discussion shows the dominant discourse of Wikipedia to be centred on neutral and balanced representation and finding the consensus to do so.

7 Building Wikipedia

The construction of an online community is usefully conceptualised under Jenny Preece’s (2001) notions of sociability¹⁸ and usability, or in other words, how much consideration exists for people’s potential interaction with the community and its technology or *modus operandi*. “The focus of sociability”, Preece says, “is human-human

¹⁷ <http://mail.wikimedia.org/pipermail/wikienl/2005-January/018482.html>

¹⁸ Sociability: how social interactions are facilitated, or hampered, by a technological environment.

interaction supported by technology” (p.349) whereas *usability* is more concerned with how easy it is to access, navigate and retrieve information from and about the community. I particularly find her suggestions for supporting online social interaction (Preece & Maloney-Krichmar 2003) to be inherent insights into understanding the praxis of learning in Wikipedia.

Sociability is achieved in many ways on Wikipedia, mainly through logging in and creating a user page (or, at least, a username) by which you can be recognised and contacted. There are many other modes of communication, e.g. mailing lists as stated above, but there are also other ways of getting to know people such as *Facebook* on English Wikipedia.¹⁹ This has been shown to be important for the affective needs of participants (e.g. Sunal et al. 2003) as well as being a way to introduce oneself and outline topics/fields of interest/expertise, both of which have recently been discussed on the mailing lists. On the mode of discussion, apart from IRC, Wikipedia is an asynchronous format, but, in setting up a *watchlist*²⁰, its functionality allows for quick feedback, another of Sunal et al.’s (2003) criteria for successful online learning community building. Issues of sociability will undoubtedly prove relevant to the development of the upcoming e-learning resource, currently known as Wikiversity.

As outlined above, Wikipedia is being constantly constructed, new versions of its code being released with regularity. This continual flux is just how Vannevar Bush (1945) saw the practice of information storage in his classic essay *As we may think* when he says,

“a record, if it is to be useful to science, must be continuously extended, it must be stored, and above all it must be consulted. [. . .] Even if utterly new recording procedures do not appear, these present ones are certainly in the process of modification and extension.”

Wikipedia is not only a continuously evolving resource, but also a continuously evolving entity in site, structure and community. Feenberg & Bakardjieva (2004) are saying that new media have to be seen as a process, not as a finished product, lest they become the sole preserve of experts. I am fully aware that this will ring alarm bells in the pro-expertise camp, but this is missing the point: that a developing media should not be fully conceptualised while it is still in process which is very much the case in Wikipedia, as it is the view of many of its users (Lawler 2005).

8 Reflection and meta-cognition

Probably the most useful model of learning is that put forward by Kolb and others which views the process as a cycle going from 1) experience, to 2) reflection, to 3) abstract conceptualisation, to 4) active experimentation leading back again to

¹⁹ <http://en.wikipedia.org/wiki/Wikipedia:Facebook>

²⁰ http://en.wikipedia.org/wiki/Help:Watching_pages

experience (Gibbs 1988). In plainer terms, this means learning from an experience through a process of reflection and relating past thinking to the experience in order to inform further experiences or practice. Reflective practice is key to understanding our own actions, and thereby learning from them. As Paulo Freire (1998, p. 30) puts it, “Critical reflection on practice is a requirement of the relationship between theory and practice”—otherwise, theory becomes meaningless and practice, mindless.

The existence of Meta, and the call for papers for Wikimania itself, is evidence enough of a reflective stance within the larger community.²¹ Interestingly, Anthere said that taking part in Meta can take the strain away from contributing to Wikipedia, which can be stressful due to having to write an acceptably neutral opinion; on Meta it is not obligatory (or even advisable) to write from a neutral perspective, but rather to write freely on any aspect of the projects, like where there is a problem, and how it could be improved, or philosophical or sociological aspects of Wikipedia, like for instance the structure of power.²² This kind of meta-discussion forum is an essential ingredient of what Bieber et al. (2002) call for in their proposals for the evolution of knowledge communities. Wikipedia also answers the call by Ripamonti et al. (2005) for online communities to work out their usage and performance, and this is open to anyone who has the technical ability (or time and patience to learn) to hack into the MediaWiki software, currently undertaken by Erik Zachte.²³

Commenting on the internet’s influence on our perceptions of time, Ilkka Tuomi (2002) wrote: “On the net we live in dog years, but our memory is that of an elephant” (cited in Holtgrewe 2004, p. 131). In terms of memory, the transparent structure of Wikipedia does offset this substantially, but the challenge is to maintain the collective memory of the community to continue the process of reflection, and hence, learning. The crucial point here though is that the community continues to be critical of itself and make sense of its various experiences in order to reinforce the quality of its future practice and discourse.

9 Conclusions

Central, I believe, to the success of Wikipedia is the nature of its participation and the behaviour of its contributors. Much of these issues is covered in policy and guidelines, but much of it comes down to why people get involved and how. The reasons for contributing to Wikipedia are many (Lawler 2005) and it is clear that many of its most active contributors consider it to be an essential part of their lives, restated around the May 2005 appointment of Foundation officers by Vice-Chair of

21 The Wikimania conference was held from August 4 through August 8th 2005. See also http://wikimania.wikimedia.org/wiki/Call_for_papers.

22 See http://meta.wikimedia.org/wiki/Power_structure and http://meta.wikimedia.org/wiki/Wikipedia_sociology.

23 Compare <http://en.wikipedia.org/wikistats/DE/Sitemap.htm>.

the board, Florence Nibart-Devouard (Anthere) and the then Chief Research Officer, Erik Möller (Eloquence).

Set against this, however, is possibly the fear of messing up an article, due to lack of language proficiency or knowledge in the area—issues which were raised in the conflict case study mentioned above (though not reproduced here). Chris Allen (2005) also wrote on people's attitudes to participation:

“One interesting possible barrier of entry to active participation in a wiki is what I call the ‘wiki editing dichotomy’. You have to be proud enough to believe what you are contributing is generally worthwhile to others (or at least worth your effort), but you also have to be humble enough to understand that others can improve it. I don’t know of many other collaborative media that requires both pride and humility.”

Militantly meritocratic, Eric Raymond (2003) states bluntly, “attitude is no substitute for competence”. I differ in that I think the key is to temper the meritocracy of Wikipedia (no bad thing in itself) with an appreciation of the cultural value of the individual and the role that each brings with them to the project. It seems to me that Wikipedia, as a project built on the spirit of cooperation, will only succeed in an atmosphere of openness and, crucially, listening. I believe I have shown its good side to a large extent, but any contributor to the Wikimedia community (especially, it seems the English Wikipedia) will be aware of the destructive and sometimes hurtful quality of comments made, or even ignored.

9.1 Further work on Wikipedia

Research in and on Wikipedia is gaining momentum, as people, myself included, flock to it as a fascinating case study in the era of the internet. The incentive for Wikipedia to itself do internal research is ever-growing as the English Wikipedia's recent drive to initiate article validation, after the success of the German Wikipedia in producing a DVD of its best content. The Wikimedia research network is further evidence of a consolidated effort to gain understanding about the various projects and how best their technical and social needs may be met.²⁴ This study has been more of an overall reading of the literature and how it applies to Wikipedia but I also hope to have shed some light on its process, particularly conflict, to improve or at least inform its future practice. Further research needs to be done in many areas, in both quantitative and especially qualitative studies. Qualitative studies are often quite complex and raise important ethical issues, like disclosure of identity, which I have chosen to do here after consultation with the main participants and in the light of Bruckman's (2002) ideas on publishing and publicity. But the crucial point is that we continually inquire

²⁴ http://meta.wikimedia.org/wiki/Wikimedia_Research_Network

into and reflect upon our own practice, in order to better understand it and improve on it for the future.

Findings from the literature on online communities and learning communities are still tentative, but it would be interesting to put a number of them to the test. For instance, Norris (2002) found that online community participation did not have much significant positive effect on contacts across social divides, but that it did across age-gaps—is this the case in Wikipedia? And what about across cultures and, particularly, ideologies? How do projects/communities cross-fertilise each other and do people shy away from some projects and not others (Stacey et al. 2004)? And in terms of Wikipedia really being a learning community and its participants cohort learners, Sujo de Montes et al. (2002, p.269) ask, “How do we encourage some students to find their voices and speak powerfully and others to find their ears and learn to listen?” These, alongside the many other questions raised at Wikimania will serve to enrich and strengthen the process of collaborative working and learning.

Therefore, I make here a number of recommendations that could contribute to the learning of the community overall:

- Learning to become a core competency in the Wikipedia community
- Recognition of the importance of constructive conflict
- Research to explore relationships between projects and possibilities for sharing perspectives and learning
- *Lessons learnt* pages to be created and maintained on Meta

The main work in Wikipedia and all other Wikimedia projects is to continue to work in a collaborative and open sense and, I believe, with the attitude of shared learning. This for me is Wikipedia’s strongest asset and the most radical answer to Larry Sanger’s and others’ criticisms of Wikipedia regarding expertise—that in building a product of excellence, Wikipedia is also building a learning community where leadership is decentralised and expertise is distributed and in so doing creating a new kind of academic community, as already suggested to me by a participant in my previous study (Lawler 2005). But as it develops its own mode of discourse (Lamerichs & te Molder 2003) and its own critical viewpoint, it must make sure that this experience is synthesised into something explicitly useful to the community—we must balance our desire for ongoing distributed learning (or “editor education”, as Tony Sidaway 2005 suggests) with documented information, ie through *lessons learnt*, by which newcomers can themselves learn from Wikipedians’ previous experiences. As Lehtinen (2002, p. 110) puts it:

“Knowledge structures based solely on informal and ‘tacit’ knowledge can be very inflexible and provide only limited opportunities for continuous knowledge advancement, typical for dynamic expertise. On the other

hand, high-level expert performances cannot be adequately described as individual accomplishments since they are typically based on the use of socially and physically distributed resources. Correspondingly, the view of learning that focuses only on the cultivation of individual minds may be too narrow when developing teaching-learning environments for supporting the development of expertise.”

This emphasises the communal nature of learning, which I believe to be central to both the praxis, progress and even the very notion of Wikipedia. But it also poses us a challenge in making explicit this collective memory whereby the newbies have just as much a chance of benefiting from the community as do the old-timers.

References

- Aigrain, P. (2003), The individual and the collective in open information communities, *in* ‘BLED Electronic Commerce Conference’, Vol. 16.
<http://opensource.mit.edu/papers/aigrain3.pdf>.
- Allen, C. (2005), ‘Future topics’, Life with Alacrity.
http://www.lifewithalacrity.com/2005/04/future_topics.html.
- Argyris, C. (1994), ‘Good communication that blocks learning’, *Harvard Business Review* 72(4), 77–85. <http://www.onepine.info/HBRArg.htm>.
- Bieber, M., Engelbart, D., Furuta, R., Hiltz, S. R., Noll, J., Preece, J., Stohr, E. A., Turoff, M. & Walle, B. V. D. (2002), ‘Toward virtual community knowledge evolution’, *Journal of Management Information Systems* 18(4), 11–35. <http://web.njit.edu/~bieber/pub/jmis02.pdf>.
- Bruckman, A. (2002), ‘Studying the amateur artist: A perspective on disguising data collected in human subjects research on the internet’, *Ethics and Information Technology* 4(3), 217–231. http://www.nyu.edu/projects/nissenbaum/ethics_bru_full.html.
- Bush, V. (1945), ‘As we may think’, *The Atlantic Monthly*.
<http://www.ps.uni-sb.de/%7Educhier/pub/vbush/vbush-all.shtml> [May 2, 2005].
- Cuthell, J. (2002), ‘Mirandanet: A learning community – a community of learners’, *Journal of Interactive Learning Research* 13(1), 167–186. <http://dl.aace.org/9150>.
- Feenberg, A. & Bakardjieva, M. (2004), ‘Virtual community: No “killer implication”’, *New Media & Society* 6(1), 37–43. <http://nms.sagepub.com/cgi/reprint/6/1/37>.
- Freire, P. (1998), *Pedagogy of Freedom: Ethics, Democracy, and Civic Courage*, Rowman & Littlefield Publishers, Lanham.
- Gibbs, G. (1988), *Learning by Doing: A Guide to Teaching and Learning Methods*, Further Education Unit, London.
- Greene, H. C. (2005), ‘Creating connections: A pilot study on an online community of learners’, *Journal of Online Interactive Learning* 3(3).
<http://www.ncolr.org/jiol/issues/PDF/3.3.3.pdf>.

- Holtgrewe, U. (2004), 'Articulating the speed(s) of the internet: The case of open source/free software', *Time & Society* **13**(1), 129–146.
<http://soziologie.uni-duisburg.de/PERSONEN/holtgrewe/uh-kwi602.pdf>.
- Lamerichs, J. & te Molder, H. F. (2003), 'Computer-mediated communication: From a cognitive to a discursive model', *New Media & Society* **5**(4), 451–473.
<http://www.sls.wau.nl/com/PDF%20files/Computer%20Mediated%20Communication%20LamerichsTeMolder.pdf>.
- Lawler, C. (2005), A small scale study of wikipedia, Essay, University of Manchester.
http://en.wikisource.org/wiki/A_small_scale_study_of_Wikipedia.
- Lehtinen, E. (2002), 'Developing models for distributed problem-based learning: theoretical and methodological reflection', *Distance Education* **23**(1), 109–117.
- Lessig, L. (2004), *Free Culture – How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*, The Penguin Press, New York.
<http://www.free-culture.cc/freeculture.pdf> [Feb 23, 2005].
- Liebkind, K. & McAlister, A. L. (1999), 'Extended contact through peer modelling to promote tolerance in finland', *European Journal of Social Psychology* **29**(5–6), 765–780.
<http://www3.interscience.wiley.com/cgi-bin/fulltext/62002776/PDFSTART>.
- Norris, P. (2002), 'The bridging and bonding role of online communities', *The Harvard International Journal of Press/Politics* **7**(3), 3–13.
<http://ksghome.harvard.edu/~pnorris/ Acrobat/bridging%20and%20bonding.pdf>.
- Preece, J. (2001), 'Sociability and usability in online communities: Determining and measuring success', *Behavior and Information Technology Journal* **20**(5), 347–356.
<http://www.ifsm.umbc.edu/~preece/paper/4%20BIT%20Twenty%20years.pdf>.
- Preece, J. & Maloney-Krichmar, D. (2003), Online communities, in J. Jacko & A. Sears, eds, 'Handbook of Human-Computer Interaction', Lawrence Erlbaum Associates, pp. 596–620.
<http://www.ifsm.umbc.edu/~preece/paper/7%20Handbook%20v1.7Final.pdf>.
- Raymond, E. S. (2003), 'How to become a hacker', *Database and Network Journal* **33**(2), 8–10.
<http://www.catb.org/~esr/faqs/hacker-howto.html>.
- Reagle, J. M. (2004), 'A case of mutual aid: Wikipedia, politeness, and perspective taking'.
<http://reagle.org/joseph/2004/agree/wikip-agree.html> [May 25, 2005].
- Ripamonti, L. A., De Cindio, F. & Benassi, M. (2005), 'Online communities sustainability: some economic issues', *The Journal of Community Informatics* **1**(2), 63–78.
<http://ci-journal.net/viewarticle.php?id=63&layout=html>.
- Sanger, L. (2004), 'Why wikipedia must jettison its anti-elitism', Kuro5hin.
<http://www.kuro5hin.org/story/2004/12/30/142458/25> [Jun 15, 2005].
- Senge, P. M. (1996), Leading learning organizations the bold, the powerful, and the invisible, in M. Goldsmith & F. Hasselbein, eds, 'The Leader of the Future', Jossey Bass. https://www.ohrd.wisc.edu/WSTC/wstc_2004/readings/Leading%20Learning%20Organizations.pdf.

Wikipedia as a learning community

- Senge, P. & Wheatley, M. (2002), 'Changing how we work together', *Reflections: The SoL Journal* 3(3), 63–67. <http://www.shambhalasun.com/Archives/Features/2001/Jan01/senge.htm>.
- Sidaway, T. (2005), 'Comment on wikipedia:requests for arbitration:rfe'.
http://en.wikipedia.org/wiki/Wikipedia:Requests_for_arbitration/RFC#Alternate_solution_.237_by_User_Tony_Sidaway_Motion_to_dismiss:_Wikipedia_isn.27t_broken.__Don.27t_try_to_fix_it.
[Jul 24, 2005].
- Stacey, E., Smith, P. J. & Barty, K. (2004), 'Adult learners in the workplace: online learning and communities of practice', *Distance Education* 25(1), 107–123.
- Sujo de Montes, L., Oran, S. M. & Willis, E. M. (2002), 'Power, language, and identity: Voices from an online course', *Computers and Composition* 19, 251–271.
- Sunal, D. W., Sunal, C. S., Odell, M. R. & Sundberg, C. A. (2003), 'Research-supported best practices for developing online learning', *Journal of Online Interactive Learning* 2(1).
<http://www.ncolr.org/jiol/issues/PDF/2.1.1.pdf>.
- Tisdell, E. J., Strohschen, G. I. E., Carver, M. L., Corrigan, P., Nash, J., Nelson, M., Royer, M., Strom-Mackey, R. & O'Connor, M. (2004), 'Cohort learning online in graduate higher education: Constructing knowledge in cyber community', *Educational Technology & Society* 7(1), 115–127. http://ifets.ieee.org/periodical/7_1/12.pdf.
- Tönnies, F. (2001), *Community and Civil Society*, Cambridge University Press. Originally published as 'Gemeinschaft und Gesellschaft' (1887).
- Voß, J. (2005), Measuring wikipedia, in 'Proceedings of the ISSI 2005 conference', Stockholm.
<http://eprints.rclis.org/archive/00003610/01/MeasuringWikipedia2005.pdf>.
- Wenger, E. & Snyder, W. (2000), 'Communities of practice: The organizational frontier', *Harvard Business Review* pp. 139–146.