

**Good Faith Collaboration: The Culture of Wikipedia.** Joseph Michael Reagle Jr. The MIT Press, Cambridge, Massachusetts 02142, USA. 2010. xv + 244 pp. Price not mentioned.

In 2001, the slow progress at Nupedia, a free on-line encyclopaedia written by experts, forced its founders, Jimmy Wales and Larry Sanger, to think of ways to hasten the process. They hit upon the idea of using a wiki, a technology that allows anyone to edit a web page within the browser, and Wikipedia was born. Their original intent was to use Wikipedia as a 'scratchpad' where people would contribute content which, after expert scrutiny, would go into Nupedia. But Wikipedia's extraordinary early progress sealed the fate of Nupedia, which was never revived when its servers crashed in 2003.

True to its self-description as 'the free encyclopedia that anyone can edit', Wikipedia places an inviting 'Edit' button right at the top of each article. A visitor who finds an unsatisfactory article has the option to plunge in, edit it and leave it in a better shape. Since its birth, Wikipedia has benefitted from the care and nurture of millions of contributors; it had over 90,000 of them in early 2010. As of this writing (late March 2011), Wikipedia has over 18 million articles, 3.5 million of them in English. There are 279 Wikipedias in all, including one in simple English and another in Esperanto. Every major Indian language has one – with Hindi, Telugu and Marathi topping the list with over 79,000, 47,000 and 32,000 articles respectively. In addition to these awe-inspiring numbers, Wikipedia also wears a quality stamp it received in 2005, when a study [Jim Giles, *Nature*,

doi:10.1038/438900a] found it holding its own against *Encyclopaedia Britannica* in a direct comparison of their articles on 42 scientific topics.

Wikipedia's phenomenal success has already attracted the attention of trendspotters as well as social scientists. Representing the latter tribe, Joseph Reagle, Jr., a Fellow at Berkman Center for Internet and Society at Harvard Law School, USA, trains his ethnographer's eyes on the community of Wikipedia contributors, and reports his findings and analysis in this book.

With its near universal scope, Wikipedia has articles on all kinds of topics, including contentious ones. Wikipedians represent many nationalities, ethnic groups, languages, political views and ideologies. These two facts point to a strong potential for dissent and discord, which could do serious damage to its mission. Yet, Wikipedia continues to thrive. An explanation of its success must go beyond saying, 'Wikipedians must be doing the right things', and examine the factors behind those 'right things'. Reagle's focus is on cultural norms that underlie Wikipedia's policies and practices. What are these norms?

Wikipedians value neutral content and authentication. Thus, the first set of norms is about the content and tone of Wikipedia articles: Neutral Point Of View (NPOV), No Original Research (NOR), and Verifiability. While NPOV itself is central to Wikipedia, it is a perennial source of disagreement on whether a specific contribution to an article respects NPOV. Such disputes are typically aired in the 'Talk' pages of each article, discussion areas where views are expressed vigorously, and countered equally vigorously. Consider, for example, the article on Indian National Congress. Its Talk page throbs with dissent and debate over many contentious issues, including one about whether today's Congress party is even the same as the one that existed before Independence! From Babri mosque to the Tata group's car factory in Singur, West Bengal, Talk pages are full of disagreement over whether the articles conform to NPOV. While they may resemble a battleground, Talk pages are surprisingly free of landmines; name-calling is rare, for example. This is because the participants are encouraged to keep their focus firmly on enhancing the quality of the articles they are working on, with the result that dis-

cussions rarely become dysfunctional. Much of this happy outcome is attributable to a second set of norms which asks Wikipedians to 'be polite, assume good faith, avoid personal attacks, and be welcoming'.

Wikipedians care deeply about keeping Wikipedia open and inclusive. The second set of norms is essentially a statement of these values. Not quite paradoxically, these very values make Wikipedia vulnerable to vandalism, especially by anonymous users. In an embarrassing incident in 2005, a prankster edited a Wikipedia article to insinuate that John Seigenthaler, a member of Robert Kennedy's staff, was implicated in the assassinations of both John and Robert Kennedy. When Seigenthaler wrote an indignant opinion piece in a major American newspaper, Wikipedia found itself in the middle of a major public relations disaster, and Wikipedians responded by implementing protective measures that would prohibit anonymous or newly registered users from editing articles on living persons. While this response is appropriate for the kind of challenge posed by pranksters, it also runs counter to Wikipedia's reputation as 'the encyclopedia anyone can edit'. Reagle devotes a chapter on several such actions that would, in effect, circumscribe Wikipedia's openness.

Wikipedians are pragmatic. They responded to the Seigenthaler incident with a practical solution that strikes a balance between openness and the need to protect Wikipedia from vandals. Similarly, they responded to Wikipedia's phenomenal growth by creating a bureaucracy to enforce the community's policies, keep a watchful eye on discussion forums as well as Wikipedia content, and respond to vandalism. Thus has emerged a class of Administrators, Bureaucrats, and Stewards with different levels of authority and power. Administrators, for example, can revert an article to an earlier state, disable 'edit' access to certain articles for a period, or even block certain users.

Finally, Wikipedians are a talkative lot. Their extensive discussions and arguments (often tinged with nerdy humour) over Wikipedia's policies in forums and internal wikis are the primary sources for this book. 'Wikipedia is extraordinarily self-reflective', Reagle says. '[Almost] everything is put on a wiki, versioned, linked to, referenced, and discussed'. Reagle draws on this rich trove of

'reflective documentation and discourse' in his exploration and analysis of 'how [Wikipedia's] norms emerge and how they are enacted and understood'.

This book may be read as an answer to the all-important question: Just how does Wikipedia get an encyclopaedia out of the work of so many with such diverse backgrounds, interests and motivations? But Reagle's academic impulse – this book grew out of his doctoral thesis – takes him beyond the cultural norms of Wikipedians. Thus, for example, we get a lively chapter on Wikipedia's intellectual technological ancestors. Reagle draws an analogy between today's Wikipedia and Belgian entrepreneur Paul Otlet's 'Biblion', a collection of abstracts obtained by 'stripping books of their opinion'. The grand idea of compiling the world's knowledge was also the inspiration behind early, web-based initiatives such as Xanadu, Interpedia, and Project Gutenberg. The Wikipedia revolution became possible only when this inspiring vision adopted the wiki technology for its practical realization.

In another chapter, Reagle presents and discusses popular and academic critiques of Wikipedia's vision, mission and practices. He has several fascinating sections on Wikipedia's developmental history and the influence of co-founders. And finally, Reagle does not shy away from touchy topics, such as the formation in 2006 of WikiChix group 'for female wiki editors to discuss issues of gender bias in wikis, to promote wikis to potential female editors, and for general discussion of wikis in a friendly, female-only environment'. [The decidedly male skew among Wikipedia contributors was in the news recently; see *New York Times*, 4 February 2011.]

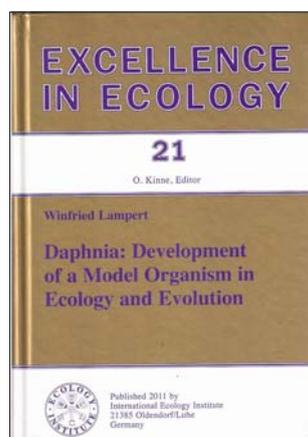
All these different strands come together in a form that enhances our understanding and appreciation of Wikipedia's achievement, its democratic way of functioning, and its intense commitment to stay open and inclusive. One cannot but marvel at Wikipedia's institutional mechanisms that endow it with an ability to find that sweet spot where its lofty, elevating vision coexists in apparent harmony with a pragmatic, problem-solving approach to managing its affairs.

Wikipedia's iconic stature as a venue for productive collaboration on a massive scale deserves serious academic engagement, exploration and explanation. Reagle's book is a worthy contribution to

this endeavour. While successful open source software projects have used the web well before Wikipedia, it is the latter that has inspired collaborative initiatives in many specialized fields. In Polymath projects, for example, mathematicians come together and collaborate on-line to solve outstanding mathematical problems [Timothy Gowers and Michael Nielsen, *Nature*, doi:10.1038/461879a]. Such projects share several themes and concerns with Wikipedia: aggregating contributions from many individuals, extracting the most relevant or elegant pieces from their work, assigning credit, conflict resolution, and technical and cultural solutions to facilitate collaboration. Thus, Reagle's analysis and insights should be useful to anyone participating in, planning or organizing, collaborative communities everywhere.

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***Daphnia: Development of a Model Organism in Ecology and Evolution.*** W. Lampert. International Ecology Institute, 21385 Oedendorf/Luhe, Germany. 2011. 250 pp. Price: €44.

The book under review is the 21st volume in the series 'Excellence in Ecology' and the author, W. Lampert is the winner of the Ecology Institute Prize 2006 in Limnetic Ecology 'for establishing at the Max Planck Institute für Limnologie, Plön a World Center for the study of evolutionary ecology, where a stimulat-

ing mixture of ideas and research are in progress'.

The book commences with an introduction to the Ecology Institute Prize by O. Kinne and *Laudatio* by N. G. Hairston Jr. on the prize to Lampert. The book consists of eight well-organized chapters. The first two chapters describe various biological and physiological features, which make *Daphnia* a 'smart' model organism for research. Interestingly, the annual contributions on *Daphnia* have trebled from 200 publications in 1990 to 600 in 2010, as if to confirm that *Daphnia* is indeed a smart model organism.

*Daphnia* is known for its cyclomorphosis and diel vertical migration (DVM). More than the temperature, predator avoidance is now recognized as an important causative factor for the development of a huge crest induced by backswimmer *Notonecta* and neckteeth by midge larvae of *Chaoborus*. Efforts have been made to identify, isolate and assay the specific chemical, i.e. kairomone, acting as a signal for the presence predators of *Daphnia*. Two types of kairomones that emanate from predators are recognized: (i) from the backswimmers and fish, and (ii) from the midge larvae. The latter is a small (<500 Da), heat-stable, water-soluble organic molecule and it originates from the digestive tract of the midge larvae.

As in cyclomorphosis, the causative factor responsible for DVM is also traced to temperature, light, predator avoidance and UV radiation. Presently, there are overwhelming evidences to show that DVM is a predator-avoidance strategy and is a chemically inducible response to light. In the larger zooplankton context, the more conspicuous zooplanktons like the egg-bearing *Daphnia* are more easily detected by predators and hence these daphnids perform a more pronounced migration. The 12 m high plankton towers at Plön have also confirmed that the daphnids perform DVM in response to light only in the presence of chemical signal emanating from fish. Interestingly, the kairomone of fish is also a small (<500 Da), heat-stable (at pH 0.8–14), water-soluble molecule, but it is degraded within 24 h under non-sterile condition, suggesting its bacterial origin from the fish surface. Trimethylamine (TMA), a substance produced by bacteria that makes the fish 'smelly', is found to be part of a chemical cocktail that constitutes the fish kairomone. This book