

Academic research about the reliability of Wikipedia

台灣維基人冬聚

Taipei, January 7, 2012

T. Bayer

Perspective of this talk

- About myself:
 - Wikipedian since 2003 (User:HaeB on de:, en:)
 - Editor of *The Signpost* on en:, 2010-11
 - Working for the Foundation since July 2011 (contractor, supporting movement communications)
 - Editor of the *Wikimedia Research Newsletter* (together with WMF research analyst Dario Taraborelli): Monthly survey on recent academic research about Wikipedia

Reliability of Wikipedia

- Standard criticism: “Wikipedia is not reliable because anyone can edit”
 - ... is fallacious:
 - Yes, one traditional quality control method (restrict who can write) is totally missing
 - But there is a new quality control method: Anyone can correct mistakes
- But does the new method work?
- Need to examine the content, not the process that leads to it

Anecdotes vs. systematic studies

- Seigenthaler scandal (2005, vandalism in biography article). Public opinion problem: Unusual, extreme cases are more newsworthy and memorable – and because of “anyone can edit”, these tend to be negative for WP.
- Scientists are trained not to rely on anecdotes:



Wikipedia Wikipedia

Chemistry Nobel laureate about [#Wikipedia](#): "In my field, it's more reliable than the textbooks." ur1.ca/5mvct

4 Nov

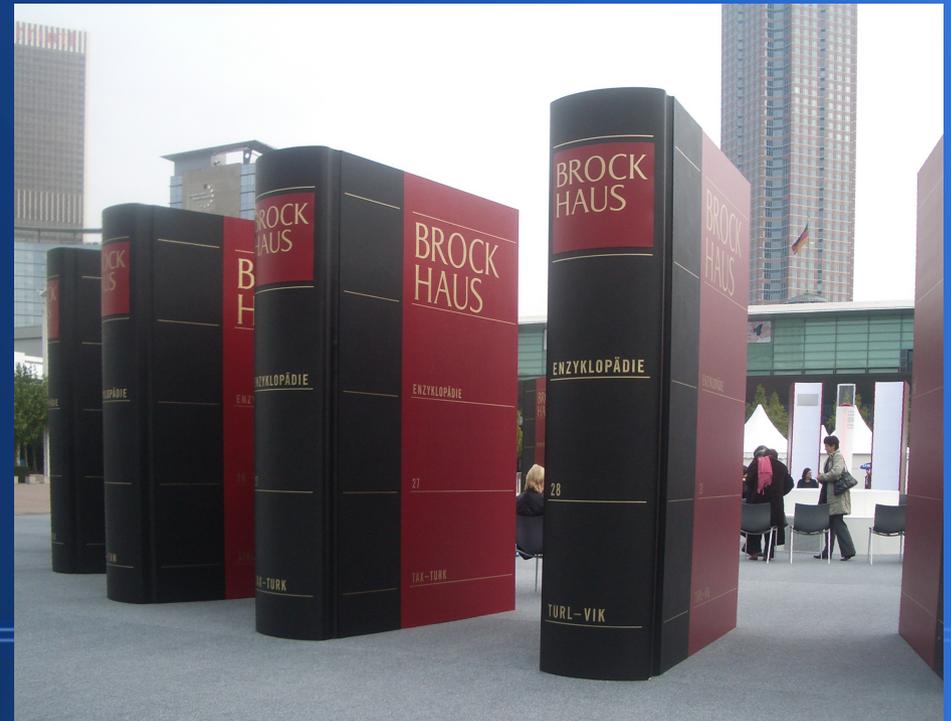
The 2005 *Nature* study

- “first [study] to use peer review to compare Wikipedia and Britannica’s coverage of science”
- 42 reviews by experts
- Errors per article: Wikipedia 4 , Britannica 3
- Britannica protested, Nature stood by it
- 6 years later, still the most frequently cited study about Wikipedia's reliability



• Brockhaus – “the” German encyclopedia

- “generally regarded as the model for the development of many encyclopaedias in other languages” (Britannica entry “Brockhaus Enzyklopädie”)
- 1796: First edition
- 2005: 21st edition (30 volumes)
- 2009: Editorial staff dismissed, brand sold



Stern (news magazine) study, 2007

- Compared 50 random articles in German Wikipedia and Brockhaus
- Not peer-reviewed, but conducted by experienced research institute
- Wide range of topics
- Wikipedia more accurate: Brockhaus 2.3 vs. Wikipedia 1.6, on scale from 1 (best) to 6 (worst)



Political Science and Politics (academic journal), 2011

- “large-n, specific-fact” approach: Check all Wikipedia articles from a given area for accuracy on one aspect (e.g. all 230 US governor candidates between 1998 and 2008)
- Found very few errors. “Wikipedia may be just accurate enough“ for preliminary research work by political scientists(!)
- Observes that other “studies of Wikipedia’s accuracy have generally found worries about its credibility to be overblown”

Psychological Medicine (medical journal), 2011

- Reviewers: Psychologists with clinical and research expertise
- “the quality of information on depression and schizophrenia on Wikipedia is generally as good as, or better than, that provided by centrally controlled websites, Encyclopaedia Britannica and a psychiatry textbook”
- But Wikipedia (and Britannica) more difficult to read than the other resources

Psychological Medicine (medical journal), 2011

- The same paper contains a literature review of 8 other studies on the quality of health information on Wikipedia (2007-2010), concluding:
- “Wikipedia articles on health topics typically contain relatively few factual errors, although they may lack breadth of coverage. ... It seems that Wikipedia is an appropriate recommendation as an information source [for patients !]”

We need more!

- E.g. some pharmacological studies about the quality of drug articles are less favorable.
- But overall, most systematic studies find Wikipedia's reliability to be high, contrary to the stereotype. This should be more widely known!
- Actually assessing accuracy is a lot of work. (Much research about WP quality uses proxy indicators, e.g. many citations = high quality.)
- Most systematic studies seem to focus on the English Wikipedia, and on narrow subject areas.

Upcoming study by Epic/Oxford University

- Goal: Study quality and accuracy of Wikipedia in various languages (English, Arabic, Spanish) and across subjects
- Compare with other standard reference works
- Funded by the Wikimedia Foundation
- Aims at greater rigor than 2005 Nature study
- Reviewers: Students and academic experts
- Small-scale pilot, aims to develop methodology

Questions, remarks?

謝謝

- [\[\[en:User:HaeB\]\]](#)
- [tbayer \(at\) wikimedia.org](mailto:tbayer@wikimedia.org)
- [\[\[meta:Research:Newsletter\]\]](#)

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First talk briefly about reliability of Wikipedia in general and how it is perceived, then go through some examples of notable studies of Wikipedia's accuracy, then do some outlook and mention an ongoing project supported by the Foundation

Reliability of Wikipedia

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 - ... is fallacious:
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 - But there is a new quality control method: Anyone can correct mistakes
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- Define reliability? E.g. “Probability that what I read on Wikipedia is wrong” (actually, things are a bit more complex)
- Only interested in factual accuracy here – disregarding neutrality problems, “errors of omission”, etc.

Anecdotes vs. systematic studies

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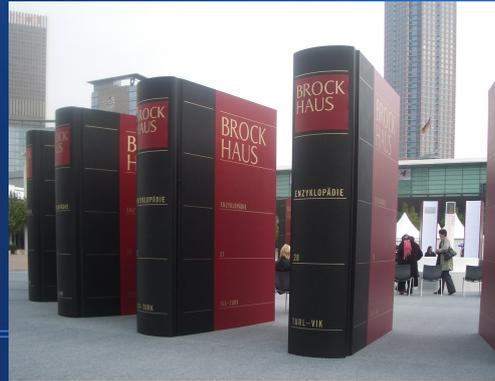
Not peer reviewed itself

<http://www.jimgiles.net/pdfs/InternetEncyclopaedias.pdf>

<https://en.wikipedia.org/wiki/WP:EBE>

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"Brockhaus Enzyklopädie." Encyclopædia Britannica. Encyclopædia Britannica Online. Encyclopædia Britannica Inc., 2012. Web. 02 Jan. 2012. <
<http://www.britannica.com/EBchecked/topic/80653/Brockhaus-En>
>.

<https://commons.wikimedia.org/wiki/File:Brockhenge.jpg>
(Andreas Praefcke / PD)

Photo: Presentation of last edition at Frankfurt Book fair
– by coincidence, same city and same year as first
Wikimania ;)

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https://en.wikipedia.org/wiki/Wikipedia:Wikipedia_Signpost/2011-04-18/In_the_news

Criticized errors of omission, bias on recent events

***Psychological Medicine* (medical journal), 2011**

- Reviewers: Psychologists with clinical and research expertise
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<https://meta.wikimedia.org/wiki/Research:Newsletter/2011-12-26>

The 2005 Nature article actually profiled a professional neuropsychologist who had reworked [[schizophrenia]] as example of an expert with positive experiences in editing Wikipedia.

That Wikipedia articles are hard to read is another consistent finding of these studies (but we are only concerned with factual accuracy here).

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Epic is an UK e-learning company

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