Chapter 1

Reliable Sources for Indigenous Knowledge: Dissecting Wikipedia's Catch–22

Peter Gallert
Polytechnic of Namibia, pgallert@polytechnic.edu.na

Maja van der Velden
University of Oslo, majava@ifi.uio.no

This text is an unedited and preliminary version of a book chapter which will be published early 2014 in the Indigenous Knowledge Technology Conference (IKTC) 2011 post–conference book edited by Dr N. Bidwell and Dr H. Winschiers–Theophilus. Under the theme of "Embracing Indigenous Knowledge in a New Technology Design Paradigm", the book intends to present perspectives on a more reflective technology design to support, serve and preserve the use of Indigenous Knowledge. Thus many of the concepts and ideas introduced in this text will be expanded and reflected upon in the upcoming chapter. I therefore invite for a lively debate around the issues.

—Heike Winschiers–Theophilus, co–editor

1.1 Introduction

Historically many indigenous communities did not have a sophisticated writing system, or did not utilise writing for the conservation of their knowledge. Particularly for nomadic (pastoral or warrior) tribes the collection of knowledge in written form is impractical. It produces weighty volumes that cannot easily be relocated, its media are generally sensitive to weather conditions and require solid housing, and it can fall into the hands of enemies and then be used against its creators.

Wikipedia as an encyclopedia is rooted in a culture of writing—not simply in the usage of a writing system to express and conserve thoughts, but in the almost exclusive usage of written sources for the body of its content. In its endeavour to systemise and codify the knowledge of mankind it voluntarily restricts itself to facts that are supported by *reliable, published, third–party sources*, as defined by its editor community.

Indigenous knowledge (IK) is "the body of historically constituted (emic) knowledge instrumental in the long–term adaptation of human groups to the biophysical environment"[1]. For many aspects of the culture, tradition, and knowledge of indigenous people there exist no or insufficient written records. This puts indigenous knowledge in Wikipedia, particularly on its largest language edition, the English Wikipedia,[2] into a disadvantageous situation: Oral information transmission is not regarded as a way of publishing by the online encyclopedia, knowledge keepers are often believed to be too close to their narrative's subjects to follow a neutral point of view, and passing on songs and stories is not seen as a reliable way of preserving knowledge.[3] As a result, IK is not often included in Wikipedia's article system.

Wikipedia represents a way of thinking about knowledge and its production which is found in the so–called "developed world". Its editors are predominantly educated males from the northern hemisphere, and what is important, reliable, neutral, or even acceptable on the online encyclopedia is decided by consensus among them. At the same time the online encyclopedia strives to include *all* knowledge, as the now trademark quote by co–founder Jimmy Wales testifies:

"Imagine a world in which every single person on the planet is given free

[1] Trevor W Purcell (1998): *Indigenous knowledge and applied anthropology: Questions of definition and direction.* In: *Human Organization* 57 (3), Society of Applied Anthropology, p.260. `http://faculty.arts.ubc.ca/menzies/documents/purcell_IK(HO)29.pdf`

[2] Unless stated otherwise, reference to Wikipedia and its rules and customs is valid only for the English language Wikipedia. The online encyclopedia exists in 285 other languages, and on most of the smaller language editions the rules are far less strict than on the English version.

[3] Wikipedia authors (2005–2013): *Wikipedia:Identifying reliable sources*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:Identifying_reliable_sources&oldid=531328734`

access to the sum of all human knowledge."[4]

The situation that Wikipedia's rules and her editors' habits make it very difficult to achieve this goal with respect to IK, is one catch–22 of Wikipedia: If the rules are meticuously followed, IK cannot be represented in the way it deserves to. If IK is to be included, the rules need to be bent or changed. Currently, the editor base is doing the former, defying the main aim of their online collaboration.

1.2 Knowledge Codifications

Apart from the—for the developed world obvious—way to codify knowledge in written form, producing poetry, articles, papers, proceedings, books, and encyclopedias, there are a number of alternative methods. "Western" knowledge itself was not exclusively codified in written form; viz. e.g. the oral dissemination of Homer's *Iliad* or the work of the Brothers Grimm.

Knowledge can further be codified in artifacts, in an explicit or implicit form. Explicit codification can appear in objects that were at least partially produced for the purpose of conserving existing knowledge. Prominent European examples are the Stonehenge ruins, the Antikythera mechanism, and the Nebra sky disk, all of which intentionally codify existing knowledge of navigation and astronomy through the way they have been produced.

Also ordinary objects that were not specifically built for the purpose of long–time knowledge conservation, can implicitly contain knowledge. The very fact that an artifact has been preserved and can be inspected, reveals clues about the materials used to build it, the assembly process, its uses, and its application. Archeologists today retrospectively construct this knowledge to gain insight into bygone cultures, but at the time of production the simple presentation of an object of superior quality or usability (a tool, a piece of crockery, a building, jewelry) can instil new knowledge in the observer.

There is further extensive and varied evidence of proto–writing, writing systems in development or transition, e.g. the yet undeciphered system of the Quipu (talking knots) of South America, hieroglyphs of various origins, runes, pictograms, and so on.

Oral knowledge codification is certainly one of the oldest methods. It permeates from ancient history into the present, although its perceived importance is waning. In indigenous communities it is still the prevalent method for knowledge transfer. "Oral knowledge transfer" must not be understood as mere chatter from one person to another: There are rituals of where, when, and how to offer certain pieces of information, and the procedure is distinct from everyday routine talk:

[4] Robin "Roblimo" Miller (28 July 2004): "Wikimedia Founder Jimmy Wales Responds". Slashdot. `interviews.slashdot.org/article.pl?sid=04/07/28/1351230`

"The Elders would serve as mnemonic pegs to each other. They will be speaking individually uninterrupted in a circle one after another. When each Elder spoke they were conscious that other Elders would serve as 'peer reviewer' [thus] they did not delve into subject matter that would be questionable. They did joke with each other and they told stories, some true and some a bit exaggerated but in the end the result was a collective memory."— Stephen J. Augustine[5]

Assuming that writing itself is not much older than a few thousand years, and that humans were capable of knowing at least since the *Great Leap Forward* around 50,000 BC, knowledge has for fifty millennia been codified in non–written form. Knowledge preservation without the usage of writing works, otherwise we would not be where we are today.

1.3 Converting IK into Conventional Knowledge

The classical way for converting IK into knowledge palatable in the developed world has for decades followed a long and winding path. Direct sources of oral records are village elders, traditional leaders, and other members of the indigenous population. Written records have been created predominantly by alien visitors to traditional communities: Missionaries, adventurers, travellers, merchants, colonial administrators, and scientists.[6]

The way codified indigenous knowledge is converted into western–style, published, information generally follows a particular pattern:

1. The IK source narrates while a visitor is present. The IK source may or may not be affected by the alien presence, and may or may not change the focus or the tone of the narrative accordingly.

2. The visitor might receive help from a translator who might simplify the narrative. Alternatively, lack of perfection in the indigenous language might prevent the visitor from fully understanding the narrated story in its literal form, its figurative meaning, its intended message, or its relevant context.

3. The digest of the visitor's learnings are published directly (as diary or traveller's report) or indirectly as part of a collection of letters or a posthumous edition of notes. The publisher selects "interesting" facts and omits what they perceive to be empty chatter or irrelevant decoration.

[5]Stephen J. Augustine (2008): *Oral Histories and Oral Tradition.* In: Rene Hulan and Renate Eigenbrod (eds.) *Aboriginal Oral Traditions: Theory, Practice, Ethics*, Halifax: Fernwood Publishing, pp.2-3.

[6]Klaus Dierks: *Introduction: From Stolen History to the Real Past.* In: *Khauxa!nas.* `http://www.klausdierks.com/images/Khauxanas/1introduction.htm`, retrieved 2 October 2012.

4. The publication receives commentary from scientists that were not present at all when the IK item was recorded.

In case of authorship of Wikipedia content, there are further steps that potentially change the intended meaning of the narrative. As any other encyclopedia, Wikipedia is a tertiary source of information, and its content is produced through abstraction. It is the responsibility of the encyclopedia's authors and editors—in this case predominantly laymen—to choose the appropriate abstraction level and procedure.

5. Most of the content creation is motivated by missing content. As a result, editors typically do not read a source in its entirety and then write a summary. Rather they look for missing pieces of information (e.g. via Google), read the paragraph that contains the keywords, and rephrase it to cater for Wikipedia's paraphrasing and copyright requirements.

6. The rephrasing can introduce a twist in meaning: It is questionable if exactly the same meaning can be conveyed using different words, but even if this were possible, it would fall under WP's plagiarism guideline and would thus be disallowed.

7. Wikipedia's content is constantly sieved for what its editors call *encyclopedicity* and *notability*,[7] ensuring that its open platform is not misused for the propagation of fringe views, propaganda, advertisements, and hoaxes. Non–conforming articles are nominated for deletion. This selection largely follows the western idea of what is important and what is not, but also leads to a self–censorship of editors: The "currency" of Wikipedia is edit count (related concepts are numbers of created articles, number of articles of a certain minimum quality, numbers of quality reviews). Editors gain little if they author articles that do not survive.

1.4 Wikipedia's Special Problem

1.4.1 Pillars, Policies, and Guidelines

Classical paper or online encyclopedias do not exhibit the problem of reliable sources. They are created by contracted experts in the field who are assumed to have intimate knowledge of the topics they write about. Wikipedia with its crowdsourcing business model[8] does have a disadvantage here: It is principally assumed that anyone can write an article for

[7] Both terms are used on Wikipedia in a specific meaning that at times deviates from its common usage; we will introduce it further down this chapter.

[8] Alison J Head; Michael B Eisenberg (March 2010): *How today's college students use Wikipedia for course-related research.* First Monday 15(3) `http://firstmonday.org/`

Wikipedia without being a subject expert, and that this can be achieved simply by citing reliable sources for every substantial assertion the article makes.

Wikipedia's set of regulations is hierarchically organised, see figure 1.1. The top–five rules of Wikipedia are the so–called *Five pillars* (WP:5)[9], which are together thought to broadly define how Wikipedia operates. Below these general principles are the *policies* which are only to be broken in very unususal circumstances, when common sense trumps the result of a literal application of policy. The third tier is populated by *guidelines* which describe the application of policies in specific contexts, and the bottom of the hierarchy is populated by *essays*, largely unofficial views on policies and guidelines.

The acceptance of Wikipedia essays varies widely. Some of them represent community views not codified in any "official" regulation but accepted by most editors. Other essays are just reflections by single editors, neither widely read nor accepted. Which of the Wikipedia essays are important and which ones are not, is part of Wikipedia folklore and not obvious to an outsider. Essays are generally not enforceable but some of them enjoy wide appreciation.

In order to state what can consitute a reliable source, a particular guideline, *Identifying reliable sources* (IRS)[10] lists and desribes generally acceptable origins of Wikipedia's content. This regulatory framework is supplemented by dozens of additional regulations that are specific to the concept of reliable sources in particular subjects or disciplines.

Wikipedia's IRS is a regulation that has the status of a content guideline; it is a guideline of the *Verifiability* (V)[11] policy. Both IRS and V are further explicitly and extensively referenced in one of the five pillars of Wikipedia, *What Wikipedia is not* (NOT).[12]

---

htbin/cgiwrap/bin/ojs/index.php/fm/article/viewarticle/2830/2476. The classification of Wikipedia as crowdsourcing activity has been questioned for its lack of clear identification of the crowdsourcing personnel and reward: Enrique Estells–Arolas, Fernando Gonzlez–Ladrn deGuevara (2012): "Towards an integrated crowdsourcing definition". In: Journal of Information Science Volume XX Number X, pp 1–14, www.researchgate.net/publication/216804524_Towards_an_integrated_crowdsourcing_definition/file/d912f501ed8605fc96.pdf We do, however, believe that this criticism is partly based on a misunderstanding of the Wikipedia community dynamics and thus not a valid objection.

[9]Wikipedia authors (2005–2013): *Wikipedia:Five pillars*, Wikipedia. http://en.wikipedia.org/w/index.php?title=Wikipedia:Five_pillars&oldid=528107906

[10]Wikipedia authors (2005–2013): *Wikipedia:Identifying reliable sources*, Wikipedia. http://en.wikipedia.org/w/index.php?title=Wikipedia:Identifying_reliable_sources&oldid=531328734

[11]Wikipedia authors (2003–2013): *Wikipedia:Verifiability*, Wikipedia. http://en.wikipedia.org/w/index.php?title=Wikipedia:Verifiability&oldid=534126963

[12]Wikipedia authors (2001–2013): *Wikipedia:What Wikipedia is not*, Wikipedia. http://en.wikipedia.org/w/index.php?title=Wikipedia:What_Wikipedia_is_

Level	Name	Relevance	Example
1	Pillar	Basic and general principles of Wikipedia, to be followed by the spirit	What Wikipedia is not
2	Policy	Detailed specific rulesets that are to be followed to the letter, unless they violate pillar principles	Verifiability
3	Guide-line	Detailed specific instructions that represent community consensus, often tied to a particular policy. Are to be followed unless a policy or pillar principle would be violated.	Notability (Schools)
4	Essay	A variety of opinions, on very specific topics, or of a broad coverage. Some represent wide community consensus, some only a fringe view of a few editors.	Common outcomes of deletion discussions

Figure 1.1: Hierarchical system of regulations on Wikipedia

However, even with its thousands of regulating documents, there is plenty of room for individual interpretation of Wikipedia's rules. There is a certain muddiness in all regulations, and Wikipedia makes no exception. In the absence of a black–and–white policy statement editors exercise their own judgement, and in this situation their own subjectivity comes into play.

1.4.2 What is a Reliable Source for Wikipedia?

Acceptable sources for Wikipedia fall into two categories, those that support essential statements in the article, and those that give further information. Essential statements are those that form the basis for inclusion into the encyclopedia. Such statements are for instance that a building represents a particular architectural style, or is on the National Heritage Register, that a person has won an important award or received international recognition. For events, their factual or expected significance, however minor, is an essential statement.

For all essential statements Wikipedia requires a reliable source. Additional information in articles can be supported by a source that does not conform to IRS; those are statements like self–descriptions (e.g. the political views of a non–politician), facts that are unlikely to ever be challenged (e.g. that the Broadway is situated in Manhattan), or so–called "in–universe" comments: content of notable books or papers, plot descriptions of plays,

not&oldid=533902521

the visual appearance of buildings or artworks, and other commentary that not usually involves judgement.

A reliable source is characterised by two main criteria: reliability and independence. Reliability is described by "Articles should be based on reliable, [...] published sources with a reputation for fact–checking and accuracy"[13]. This restricts the pool of appropriate sources to traditionally published and peer–reviewed material, although some newspaper and World Wide Web content is often accepted.

The independence of a source is given if it is intellectually and economically independent of the subject of description, in Wikipedia's words: "a source that has no vested interest in the subject and is therefore commonly expected to describe the subject from a disinterested perspective".[14] This discussion is less formalised on Wikipedia, its lead document *Independent sources* (IS) has only the status of an *essay*, but has long–standing community consensus.

The IRS guideline applies to several readings of the word "source" at once: The author is considered as much a source of the information as the publisher and the piece of work itself. All three readings must explicitly adhere to the IRS guideline.[15] The Wikipedia–internal discussion of what exactly constitutes a reliable source under the present guidelines is extensive. Since 2007 a particular permanent notice board is in place to discuss this on a case–by–case basis.[16]

The effect of the IRS guideline is that topics for which no conformant source can be found are not included. Articles that nevertheless are created without such sources are regularly detected by the various quality control measures of Wikipedia. "No reliable sources" is the death spell for any article, even if there is unanimous agreement that the topic is notable.

1.4.3 Notability

Notability (N) is the general threshold a subject needs to overcome in order to be considered for inclusion in Wikipedia. This threshold is considerably lower than in classic encyclopedias, it is defined as "If a topic has received significant coverage in reliable sources that are independent of the subject,

[13]Wikipedia authors (2005–2013): *Wikipedia:Identifying reliable sources*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:Identifying_reliable_sources&oldid=531328734`

[14]Wikipedia authors (2006–2013): *Wikipedia:Independent sources*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:Independent_sources&oldid=533590976`

[15]ibid, section "Definition of *source*"

[16]Wikipedia authors (2007–2013): *Wikipedia:Reliable sources/Noticeboard*, Wikipedia. `http://en.wikipedia.org/wiki/Wikipedia:Reliable_sources/Noticeboard`

it is presumed to satisfy the inclusion criteria for a stand-alone article".[17]

Notability on Wikipedia is thus in a way retrospective: The only relevant requirement for a topic to be included is that others have written about it. This retrospectivity connects N to the IRS guideline: Something for which no reliable sources exist generally does not reach the threshold for inclusion, simply due to the IRS requirements of N. This strengthens the already present bias by first–world editors towards first–world topics: Reliable sources as defined by Wikipedia are generated by a writing system, and anything that does not appear there can be discarded.

Applied to IK, topics that have not gathered the attention of scientists or anthropologists, have no sources that satisfy the IRS requirements and can thus not be covered. Moreover, even if there are written sources, and even if there is an understanding that an IK topic is notable, the perspective of the article will often be that of its western sources, even if there is substantive and relevant local coverage. This is necessitated by the IRS requirement to *base* the article on reliable sources and treat all other sources as less relevant.

1.4.4 Systemic Bias

Wikipedia has a host of challenges that are the result of its unique organisation and its general–populace editor base. One of the best recognised of these incapacities is *systemic bias* towards topics corresponding to the composition of its editor base.

Systemic bias is the the inherent tendency of a process to favor particular outcomes. It has been a long time concern of the Wikipedia community, which posits the lack of diversity in its editor base as the main cause for this bias. The editor base is described as: "The average Wikipedian on the English Wikipedia is (1) a male, (2) technically inclined, (3) formally educated, (4) an English speaker (native or non–native), (5) aged 15–49, (6) from a majority–Christian country, (7) from a developed nation, (8) from the Northern Hemisphere, and (9) likely employed as a white–collar worker or enrolled as a student rather than employed as a laborer."—Wikipedia:Systemic bias[18]

One result of the homogenous editor base is an unequal coverage of topics on Wikipedia. Figure 1.2 clearly shows dark patches across much of Africa, South America, Russia, and Central Asia. This map, however, also shows that local initiatives to popularise Wikipedia editing (e.g. in India and Ghana) can be surprisingly effective. These editing drives have been sustained by written material alone; the non–acceptance of IK did not hinder these developments.

[17] Wikipedia authors (2006–2013): *Wikipedia:Notability*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:Notability&oldid=533391309`

[18] Wikipedia authors (2009–2013): *Wikipedia:Systemic bias*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:Systemic_bias&oldid=530931514`

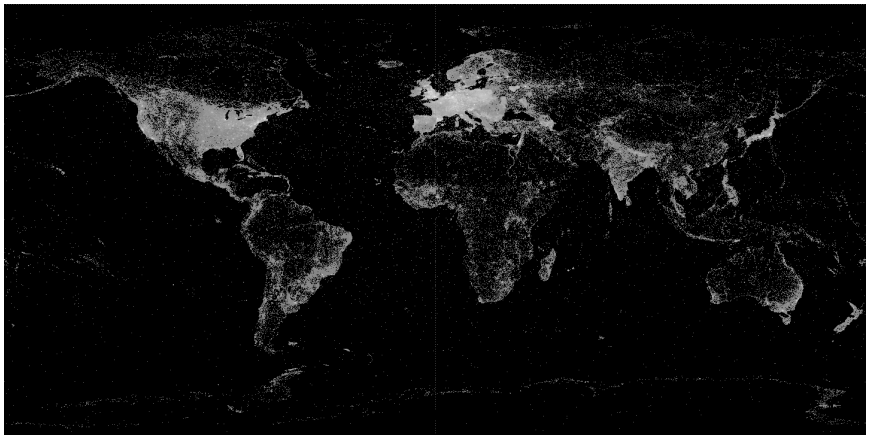

Figure 1.2: February 2013 world map of the distribution of Wikipedia articles that carry GPS coordinates. Kolossus *et al*, Wikimedia Commons, CC-BY-SA 3.0

Incidentially, Wikipedia has no separate article for the term Indigenous Knowledge. It instead amalgamates local knowledge, folklore, traditional environmental knowledge, and indigenous knowledge, into one article *Traditional knowledge*.[19] Even this article is on the lower scale of Wikipedia's self–assessment (*"Start class"*) and has over time been peppered with maintenance templates, notices warning the reader of the low quality of this particular entry. The most concerning of these templates states that the article is unbalanced; this warning has been decorating the *Traditional knowledge* article since mid–2010.

Below we discuss a few examples of the rejection of locally important knowledge:

Gi-Dee-Thlo-Ah-Ee, or Lisa Christiansen,[20] the last descendant of the Cherokee's Blue People Clan, was the subject of a Wikipedia article in 2010. Apart from countless problems with content and tone of the article which could have been fixed by further editing, the editor community decided to delete this contribution due the subject's lack of notability.[21]

This happened despite the fact that the Cherokee Nation published a book on her in 1974 which is available in the Library of Congress, for the

[19]Wikipedia authors (2005–2013): *Traditional knowledge*, Wikipedia. http://en.wikipedia.org/w/index.php?title=Traditional_knowledge&oldid=562663270. The entry on *Indigenous knowledge* is a redirect to this article.

[20]The respective article, titled *Lisa Christiansen (motivational coach)* has been deleted from Wikipedia. The existing article on *Lisa Christiansen*, a Canadian radio host, is unrelated.

[21]The deletion discussion is available on http://en.wikipedia.org/w/index.php?title=Wikipedia:Articles_for_deletion/Dr._Lisa_Christiansen&oldid=380636581.

simple fact that "the Cherokee Nation writing about the last descendant of the Cherokee Nation [...] is not an *independent* publication".[22]

Makmende[23] is Swahili slang for hero and was personified in a music video by the Kenyan band 'Just a Band'.[24] The video went viral and Makmende became the first Kenyan Internet meme, making its way on Twitter, Facebook, and Youtube. Makmende fans made a Wikipedia page about the meme, but the page was repeatedly deleted because it was perceived as nonsense, copyright infringement, and later vandalism.[25] The fourth attempt of a Makmende article contained a reference to the Wall Street Journal, which had written about the Kenyan meme. The article was nominated for deletion again. This time it was claimed that there was no reliable source for the article.[26]

In a blog post called "Makmende is so huge, he can't fit in Wikipedia", Ethan Zuckerberg wrote:

"Most Wikipedians seemed to accept the idea that different languages and cultures might want to include different topics in their encyclopedias. But what happens when we share a language but not a culture? Is there a point where Makmende is sufficiently important to English–speaking Kenyans that he merits a Wikipedia page even if most English–speakers couldn't care less? Or is there an implicit assumption that an English–language Wikipedia is designed to enshrine landmarks of shared historical and cultural importance to people who share a language?"[27]

As a result of this attention, a vote took place on the proposal to delete the Makmende article. The article remained.

Systemic bias can also result in descriptions which make indigenous science and technology invisible. **Terra preta** is a particular kind of fertile soil found in the Brazilian Amazon region. It contains a layer of varying thick-

[22] Lisa Christiansen, Peter Gallert (August 2010): *User talk:Pgallert*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=User_talk:Pgallert/Archive2010_1&oldid=521865463`, original emphasis. One of the authors of this very chapter made this comment; we hope the irony is not lost on the reader.

[23] This example is based on an article by Heather Ford: "The Missing Wikipedians", in "Critical Point of View: A Wikipedia Reader", Geert Loving and Nathaniel Tkacz (eds). Amsterdam: Institute of Network Cultures, 2011.

[24] justabandwidth (14 March 2010): *Just A Band – Ha–He*, YouTube. `http://www.youtube.com/watch?v=_mG1vIeETHc`

[25] No author: *Deletion log: Makmende*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Special:Log&type=delete&user=&page=Makmende`

[26] Woogee and others (March 2010): *Wikipedia:Articles for deletion/Makmende*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:Articles_for_deletion/Makmende&oldid=352988059`

[27] Ethan Zuckerman (24 March 2010): *Makmende's so huge, he can't fit in Wikipedia*, ...My Heart's in Accra. `http://www.ethanzuckerman.com/blog/2010/03/24/makmendes-so-huge-he-cant-fit-in-wikipedia`

ness originally created of charcoal, organic waste, and potsherd. This layer forms a dark (*preta*) and fertile underground beneath the top soil that regenerates itself more than a thousand years after its creation. Terra preta is described as an indigenous soil management technique.

The Wikipedia article with the title "Terra preta" appeared in 2005 and stated exactly that, but this changed mid–2010. The new text questions the intentionality of the technique, but without any citation to support this claim[28]—As if the tribes living in the Amazon Basin 2,000 years ago buried millions of metric tons of valuable charcoal five feet deep into the ground, covering an area of thousands of square miles, by chance or accident. Yet the term *indigenous soil management* has now disappeared from this and later versions of the article.

A slightly different challenge occurs in the editor community's evaluation of how important certain topics within the encyclopedia are. While Wikipedia normally does not exhibit the space restrictions of paper encyclopedias, topic importance does surface in certain areas. One example is the Offline Wikipedia project, a non–editable version for educational use.

Although clearly only useful in developing countries, selection of the 1–2% of all articles for this project involved four factors: quality, importance (both as tagged by the respective Wikipedia projects), page hits, and individual suggestions. The latter two factors by design disadvantage lesser developed countries, as there are fewer people with Internet access, and a smaller editor community.

The **Dorsland Trek** was a migratory movement of farmers from the Cape of Good Hope in the mid–19th century. It explains the large–scale settlement of Whites across much of Namibia, a topic that still heavily influences politics and society. When the project managers were asked to include *Dorsland Trek* in the 2010 edition[29] their response would be simply that this topic is "much too specialised for this release."[30] Yet, articles on the *Underground Electric Railways Company of London*, the *United States Department of the Treasury*, the *TIV MPI Resolution* (a vessel to install turbines on electric offshore wind farms), *CityCenter* (a Las Vegas property development), and the *Autonomous Republic of Northern Epirus* (a Greek separatist state in Albania that lasted for five months in 1914)—were all included.[31]

[28] Wikipedia authors (2005–2013): *Terra preta*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Terra_preta&oldid=560936116`

[29] This edition was called "Version 0.8"; the hope was that only the first proper offline version would be called 1.0. This Version 1.0 has not been released yet.

[30] Walkerma and Peter Gallert (2010): *Wikipedia talk:Version 0.8.* Wikipedia, `http://en.wikipedia.org/wiki/Wikipedia_talk:Version_0.8/archive1`

[31] ibid.

1.5 Suggestions for Improvement

The Wikipedia editor community is aware of its relative neglect of traditional knowledge in particular, and its coverage of the developing world in general. The existence of a widely–cited essay, *Wikipedia:Systemic bias*[32], and a large Wikipedia Project, *WikiProject Countering systemic bias*[33], is testimony to this. As long as there are any sources that are at least somewhat respectable, well–written articles covering IK topics will be accepted by the community.

However, this general principle does not always translate into concrete action. Twelve years after the birth of Wikipedia expectations of the editor community have risen, and it is by no means trivial to create an article that this community regards as well–written, in any topic. Although there is a general consensus to give more leeway to currently underrepresented topics, the champions of this improvement are few and far between such that articles can silently change or disappear without them even realising it.

1.5.1 Allow Oral Citations

The possibility of including oral material into the catalogue of respectable sources has been extensively discussed but so far been summarily dimissed by the editor community. The discussion peaked in February 2012, two months after Achal Prabhala, a Wikimedia Foundation fellow, presented his research report[34] on the inclusion of oral citations.

While the Wikimedia Foundation, the charity running Wikipedia, funded the research and accepted the results, once Prabhala implemented his suggestions in a few sample articles, editors on the English Wikipedia were less perceptive to his idea. His content additions and their oral references have been reverted without comment[35] or as unverifiable[36], at times including a defacement of the existing text. One of Prabhala's articles did survive but was plastered with maintenance templates.[37] One year after the Oral Citations project only one of his contributions, the article on the team sport

[32]Wikipedia authors (2009–2013): *Wikipedia:Systemic bias*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:Systemic_bias&oldid=552290486`

[33]Wikipedia authors (2004–2013): *Wikipedia:WikiProject Countering systemic bias*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:WikiProject_Countering_systemic_bias&oldid=543855848`

[34]Achal Prabhala (2011): *Oral Citations*, Wikimedia Meta–Wiki. `http://meta.wikimedia.org/w/index.php?title=Research:Oral_Citations&oldid=3171583`

[35]Anonymous editor (23 January 2012): *Gilli-danda: Difference between revisions*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Gilli-danda&diff=472766952&oldid=461769942`

[36]MER-C (23 January 2012): *Dappa Kali: Difference between revisions*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Dappa_Kali&diff=480656026&oldid=478618108`

[37]Sreejithk2000 and Achal Prabhala (2011): *Neeliyar Bhagavathi*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Neeliyar_Bhagavathi&oldid=546227017`

Surr[38], is still intact in its intended version.

A discussion started on the *Reliable sources noticeboard*[39] about the possibility to allow oral citations in the way Prabhala had done it, and soon also about the general requirements for a reliable source that is based on an oral citation. While this discussion was archived without being closed (meaning that no consensus had been reached; the conversation had simply faded), it revealed the baseline of the argument.

The **Pro**–oral–citations camp argued that forbidding oral citation amounted to cultural imperialism. Much of the argument follows Prabhala's observation that in the majority of languages, books are a lot less prevalent than in English, German, or Spanish.

The **Contra**–oral–citations camp largely outnumbered the pro side in this discussion. We present, and comment on, a few of the arguments that were brought forward. They mirror the widespread scepticism towards oral citations in the editor community, and they all disintegrate on closer inspection.[40]

- *"[T]he person being interviewed is not an academic authority on the subject".*

  An academic is someone teaching at a formal educational institution and publishing their scientific findings in writing. Indigenous communities do not follow this procedure, and therefore have according to this argument no academic authority. But the argument implicitly conveys another message: That for every established piece of knowledge there must be an academic authority to attribute it to.

  There are, however, vast areas of knowledge that by this definition would have nobody who has academic authority on them. The fallacy is thus in the implicit assumption rather than in the literal statement. To say for instance that anthropologists should be credited with the discovery of a tribes' history, not just its mere re–publication from an elders' tale, is like crediting the mechanisms to build the pyramids to archeologists, an absurd suggestion. A significant portion of knowledge about history and culture of indigenous communities has been obtained by noting and republishing IK without any attempt to interpret, or abstract from, the content as offered by the allegedly non–academic source.

  There also is another fundamental misunderstanding in this interpretation. If telling and re–telling stories is a rough equivalent of publishing,

[38] Utcursch and Achal Prabhala (2011–2012): *Surr*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Surr&oldid=546220209`

[39] Wikipedia authors (February 2012): *Oral Citations*, Wikipedia. In: *Reliable sources/Noticeboard*, Archive 115, `http://en.wikipedia.org/wiki/Wikipedia:Reliable_sources/Noticeboard/Archive_115`

[40] all quotations ibid.

then the person is not just being interviewed. Rather, the person is in the process of publishing their knowledge orally.

- *"In general, oral citations cannot be checked for accuracy"*

  This statement, though widely accepted on Wikipedia, falls short of the relevant facts. Oral citations can be checked, and the narrative, if part of the IK pool of the community, will predictably come up again and again, and be regularly triggered by community members or respected visitors. It is just not very comfortable to check the facts, or to verify how deeply the respective story is rooted within the community. But then, how trivial is it for a member of the indigenous community to verify a fact that is referenced to a library item somewhere in Europe or America?

- *"[Acceptable] content would need to have been published through a minimally reliable ethnographic recording structure"*

  This argument forces re–publication in a "western" souce, implicitly claiming that publishing in writing is superior to keeping oral traditions. However, as already stated, before the invention of writing knowledge had for time immemorial been conserved by other means than writing, and there would probably be no writing system if this conservation had not worked.

- *"[O]ften community truths are falsehoods."*

  We are not aware of any evidence for such statement, particularly for the quantifier *often*. The cited author did not offer any. Of course, published material in books and newspapers is not always factual either, and for such cases the editor community follows the principle of "Verifiability, not truth", a widely cited essay.[41] It appears that oral citations do not enjoy the same level of generosity.

- When confronted with the "cultural imperialism" argument, editors had this to say:[42]

  - *"I don't think we are forced to lower our standards of documentation simply because some other source does."*
  - *"[W]e aren't these other cultures, so we don't have any obligation to conform to their standards. The non-relativist viewpoint [...]*

[41] Wikipedia authors (2008–2013): *Wikipedia:Verifiability, not truth*, Wikipedia. `http://en.wikipedia.org/w/index.php?title=Wikipedia:Verifiability,_not_truth&oldid=553463562`

[42] Wikipedia authors (February 2012): *Oral Citations*, Wikipedia. In: *Reliable sources/Noticeboard*, Archive 115, `http://en.wikipedia.org/wiki/Wikipedia:Reliable_sources/Noticeboard/Archive_115`

is really what we do have here, and frankly I'm willing to defend it as being objectively superior."

– *"I am willing to consider culturally acknowledged elders and the equivalent as experts on their culture's meaning systems and values; and, occasionally even external reality".*

These comments show how deeply rooted that cultural imperialism really is. Without reflection, the superiority of the writing culture is asserted and defended.

Both sides of this discussion required a 'tangible format' for these citations. The rather obvious objection that in oral cultures speech indeed is the tangible format, was not raised by anyone, and neither was the concern that re–publication of a story by an alien visitor might miss the context, the point, the meaning, or a combination thereof.

The current broad resistance against oral citations in their original form is not very encouraging, and their inclusion into the set of Wikipedia–acceptable sources is not likely to happen any time soon. However, given the awareness and the support by the Wikimedia Foundation[43] it could still be feasible to lobby within Wikipedia for a special subset of IRS criteria for IK. To change the IRS guideline will need editor community consensus rather than intervention from the Foundation, though.

1.5.2 Bypass the English Wikipedia

Other language editions of Wikipedia often have less developed regulations and less stringent sourcing requirements. This situation stems from the desire of smaller Wikipedias to grow in article count, something that is not anymore the first priority of the larger editions, e.g. English and German. The article on Bulgaria for instance is rated "good article", the second–highest assessment, on the English Wikipedia. It contained 286 distinct references in January 2013. By contrast, the Afrikaans–language article "Bulgarye" on the same subject is rated *Voorbladartikel* (Front page article), the highest possible rating. It featured just four distinct references at the time of comparison. On language editions in Wikipedia's incubator there is typically no requirement for sources at all during the initial months and years.

It could thus be feasible to collect the indigenous knowledge in its respective original language, thereby demonstrating that a coherent and consistent body of knowledge can be formed from mainly or exclusively traditional sources.

[43] Wikimedia Foundation employees, Peter Gallert *et al*, in a discussion round at Wikimania 2012 in Washington, D.C.

1.6 Summary

Due to the way knowledge about indigenous cultures is created in the first world, a lot of detail, justification, and context is lost when accepting only written sources. Language barriers, lack of contextual background, mistrust, and implicit denial of the very existence of IK, are just some of the barriers preventing the reconstitution of IK in a non–indigenous audience.

All cited regulations in Wikipedia, and many more, have a net negative effect on efforts to include knowledge from indigenous communities. Some of the reservations of the Wikipedia community include:

- Oral communication is not independently verifiable. ⇒ V violation
- Narrating stories in an IK setting is not an act of publishing. ⇒ IRS violation
- The narrator did not develop a history of fact–checking and accuracy. ⇒ IRS violation.
- The story–teller is an actor of history and culture and thus not sufficiently objective towards the subject. ⇒ IRS violation
- IK content is not important in the collection of all human knowledge. ⇒ N violation.

We showed that these objections originate from the systemic bias of Wikipedia's editor community, and that all of them can be refuted with relatively little effort. They are, however, deeply rooted in the community—to an extent that editors are not even aware of their bias.

The case for including oral citations does not necessarily break existing Wikipedia rules. It just changes the interpretation of their literal meaning, albeit in a manner that was not intended by the editor community drafting these: There is firstly the question of how reliable orally disseminated indigenous knowledge is, and whether its reliability really improves when being presented by academic re–publishers. And there is secondly the question of how independent the narrator of indigenous information is, and whether the reliability of the information would improve if it was presented by somebody uninvolved. We believe that in both cases the answer is "no".

If Wikipedia ever wants to get close to representing *all* human knowledge, something has to change.