

## Negotiating Cultural Values in Social Media: A Case Study from Wikipedia

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### Abstract

*Wikipedia arguably is one of the most visible examples of the use of social media to enlist volunteers to contribute to a social good. Wikipedia was created to provide an accessible, encyclopedic information resource for people of all nations and cultures. Previous research has shown potential for unacknowledged cultural bias in socio-technical systems. However, the extent to which the technological and social structures of the English Wikipedia are shaped by its western origin and orientation has not been examined. We fill this gap by studying how Wikipedia editors created the culturally controversial article Jyllands-Posten Muhammad Cartoon Controversy. We use Carlile's boundary-spanning model to illustrate how Wikipedia is unable to satisfactorily resolve the fundamental tension between its stated mission of global access and empowerment and the inherent (but unacknowledged) cultural bias of the technologies and processes employed by the English language Wikipedia community. This case study illustrates how knowledge management systems, even those intended to encompass multiple value systems through the use of an open social media design, have built-in (value) biases through the specific technologies and processes employed in the design.*

### 1. Introduction

Social media comprises the set of tools that “enables people to connect, communicate, and collaborate” online and includes blogs, wikis and social network sites[14]. Wikipedia is an example of the use of the wiki technology to create a freely available knowledge base. Wikipedia's model for content creation has proven a powerful tool for the production of accurate, up-to-date encyclopedic knowledge. The website has become a global information resource for anyone with an internet connection, and is the seventh most popular web destination by site traffic.<sup>i</sup>

The English Wikipedia,<sup>ii</sup> which features over 3.5 million articles and more than 30,000 regularly active editors in any given month, represents a particularly successful implementation of social media as a platform for knowledge-sharing, collection and curation. Through Wikipedia, Ward Cunningham's wiki-wiki technology is realized as a knowledge management system—a set of people, policies, practices and information technologies that facilitates the *creation, storage, transfer and application* of knowledge[2]—on an unprecedented scale. Wikipedia boasts an open, decentralized, and non-hierarchical community, populated by a dedicated and motivated base of volunteer contributors[3] who are constantly at work refining and expanding an encyclopedia that is intended to serve as a knowledge repository and resource for the entire world.

Since its inception in 2001, Wikipedia has spun off over 250 language editions containing more than 12 million articles. The site content exhibits accuracy, coverage[12] and tone[10] comparable to that of traditional encyclopedias, and vandalism is comparably rare and quickly reverted[24]—despite the fact that most articles can be edited by anyone at any time.

Wikipedia's success and increasingly global reach may be unprecedented, but it is not unanticipated. The Wikimedia Foundation, Wikipedia's parent company, sums up the website's global ambition in its mission statement, stating that Wikipedia exists

*“to empower and engage people around the world to collect and develop educational content...and to disseminate it effectively and globally.”*

Jimmy “Jimbo” Wales, the site's founder and former head of the Wikimedia Foundation, has made the case for Wikipedia's global mission even more explicitly in conversations with editors, saying

*“Wikipedia as a readable product is not for us. It's for them. It's for that girl in Africa who can save the lives of hundreds of thousands of people around her, but*

only if she's empowered with the knowledge to do so."<sup>iii</sup>

However, Wikipedia's expansion and increasing international prominence has resulted in the site being embroiled in high-profile international controversies, as the content policies of the US-based website have come in conflict with laws and customs of other nations and cultures. China has repeatedly blocked access to Wikipedia since 2006<sup>iv</sup> due to the presence of politically sensitive content on the site. Wikipedia's official stance on censorship has been to only remove material if it violates either the laws of Wikipedia's home state of Florida or one of the community's official content policies. These policies makes allowances for removal of content for copyright violations, libel, and—more broadly—for content that is deemed *un-encyclopedic* by community members. The decision of whether or not a piece of content (e.g. text, images or audio/video files, or an entire article) is sufficiently encyclopedic usually depends on whether the editors involved in editing that particular article believe that the content contributes to Wikipedia's informational value, and whether it is in line the both Wikipedia's content standards and its overall mission. These standards are documented in a collection of community-created *policy pages* that describe everything from heuristics for inclusion and exclusion (e.g. "Wikipedia is not a publisher of original thought," "Wikipedia is not censored") to guidelines for user behavior and style guides. The collaborative process of discussing (and sometimes, debating[25]) the contents of a Wikipedia article generally takes place on that article's *talk page*, an open forum for threaded, asynchronous discussion linked to the article and available under the 'discussion' tab at the article's top.

Wikipedia policy may be implemented inconsistently because the task of interpreting and enforcing Wikipedia's standards for inclusion is left to the judgment of editors working either individually or collaboratively in talk page discussions[4,26]. Decisions regarding the inclusion of potentially offensive images have proven particularly problematic in this regard. At any given time, Wikipedia contains a number of controversial images that have been added because they were deemed informative in the context of the article, despite the fact that some readers and editors find them offensive. Examples of this include the images displayed on the articles *Autofellatio* and *Cum Shot*. In other cases, editors have decided *not* to include controversial images, as in the case of the Wikipedia article *Abortion*, where the prevailing consensus is that images of aborted fetuses are not appropriately encyclopedic, despite recurring attempts to include such imagery in the article.

In May 2008, the website *WorldNetDaily* reported Wikipedia to the FBI for publishing the album cover of the German rock group Scorpions' 1976 album *Virgin Killer*, which contained a sexualized image of a partially naked minor. In December of that year, the British Internet Watch Foundation added the article to its internet blacklist, citing legal concerns, which resulted in the article being blocked by many major British ISPs. Despite the controversy, Wikipedia editors maintained an anti-censorship stance, arguing that Wikipedia "favors inclusion in all but the most extreme cases,"<sup>v</sup> and that the image was suitably informative in the context of the article.

Other image censorship conflicts have had religious roots, such as the inclusion of the controversial photograph *Piss Christ*—which depicts a crucifix floating in a vessel of urine—in the article about that photograph. Some Christian readers and editors have objected to the presence of this image on Wikipedia, while others have argued that it makes sense to include the picture itself in an article about the picture, and assert that its exclusion would violate the website's *Censorship* policy.

These examples illustrate one of the challenges of trying to build an encyclopedia for everyone. National, religious and cultural differences can lead to conflicting ideas of what content Wikipedia should publish and how that content should be presented. The task of dealing with the presentation of controversial content is complicated further by cultural differences between the core community of active Wikipedia editors ('Wikipedians') and Wikipedia's global readership. Although the English Wikipedia, as the largest and most visible language edition, is read by people from many different socioeconomic, cultural, ethnic and national backgrounds, the majority of English Wikipedians are male, young and either North American or European.<sup>vi</sup>

Some Wikipedians assert that the lack of national, ethnic and cultural diversity among the website's regular contributors has created a systematic bias on the website, which manifests in a preponderance of articles focused on American and European concerns and the presence of a western bias throughout Wikipedia. In response, these editors have created an ongoing user-driven project, or 'wiki-project,' called *Countering Systemic Bias*—dedicated to documenting and correcting instances of western bias in the slant and coverage of site content.

Despite concerns on the part of community members and a growing list of international controversies, no one has yet undertaken a systematic examination of the root causes and manifestations of cultural bias on Wikipedia. However, other Wikipedia research has determined that editing and

communication practices on Wikipedia are culturally-mediated[21]. Previous research on socio-technical systems for communicating and collaborating online has demonstrated that such systems hold the potential for unacknowledged, embedded cultural bias, even in systems that are designed to be to be “culture-free”[18] and broadly inclusive.

We posit that cultural assumptions exist in both the social (user-generated) and technical (software-based) features of Wikipedia. One way to surface these sources of bias is to examine the technologies, policies and practices that are employed by editors as they collaboratively create articles on culturally controversial topics. In this paper, we use the handling of one particularly famous controversy as a lens for examining Wikipedia’s potential for bias, and its consequences: the case of the Wikipedia article dedicated to the international controversy over a set of caricatures of Muhammad published in the Danish newspaper *Jyllands-Posten*. Since the article *Jyllands-Posten Muhammad Cartoon Controversy* was created in early 2006 the decision undertaken early on to include a detailed image of the controversial cartoons at the head of the article has proven to be both divisive within the editorial community and provocative for readers. Despite this, the cartoons have remained at the top of the article for years, and any attempt to move or remove them has been quickly reverted. Repeated attempts to rekindle debate over the cartoons’ presence and placement or to otherwise mitigate their visual impact have been made by individual editors over the course of the article’s history without success.

To explore how Wikipedians deal with cultural conflicts, we examine the early history of this article, when the talk page debate was most active, and the circumstances surrounding the choice to include the Muhammad cartoons. We draw on Carlile’s[5] work on collaboration in product development teams and conceptualize the different culturally-mediated understandings of the Muhammad cartoons and their significance to different editors as “knowledge boundaries.” We then analyze a set of socio-technical mechanisms used by the editors in the debate, and evaluate how well these boundary objects spanned cultural boundaries and facilitate knowledge transformation among collaborators.

We find that although these objects were created to facilitate collaborative knowledge production, they were not effective at resolving conflicts between editors and fostering the creation of new knowledge in *Jyllands-Posten Muhammad Cartoon Controversy*. We discuss how embedded cultural assumptions in the nature of these objects and their strategic use by certain editor groups reinforced existing cultural boundaries rather than spanning them,

and created barriers to compromise and consensus. This inherent bias has repercussions for Wikipedia’s ability to capture the knowledge assets of both current and potential editors, especially those who do not share the dominant cultural values of the Wikipedia community. We show how Wikipedia’s *Consensus* and *Censorship* policies, coupled with an open technological architecture in which anyone’s edit can be almost instantly reverted by another editor, were used to prevent editors with minority views from influencing article content against the opposing will of a determined majority. We argue that these and other technologically-mediated practices run counter to Wikipedia’s goal of multicultural inclusiveness and may ultimately make the community less able to elicit contributions from new editors and provide a readable product that accurately captures the knowledge of its editors and meets the complex information needs of its global audience.

## 2. Cultural Antecedents of Wikipedia

Even though official Wikipedia policy states that “Wikipedia is not a democracy,” the policies that govern the website reflect concepts rooted in western democratic institutions and ideals. Although editors generally attempt to reach a stable consensus decision on issues related to article content, Wikipedia’s decision-making process is ultimately based on majority rule. The community even officially employs binding voting and polling as mechanisms for some administrative decisions. Likewise, the community’s disdain for expertise<sup>vii</sup> mirrors American egalitarian ideals that have been noted since at least the nineteenth century[8]. Wikipedia’s abhorrence of censorship likewise is rooted in foundational Enlightenment ideals such as freedom of speech and freedom of the press. These central concepts are explicated in the rules and principles that editors have created to govern themselves and have documented in special wiki pages with names like “Assume Good Faith,” “Ignore All Rules,” and “Neutral Point of View” to.

Wikis have been shown to be effective tools for collaborative knowledge sharing in communities with widely dispersed membership and flexible hierarchies, where explicit and implicit knowledge sources are likely to be distributed rather than centralized. Because they are designed to a) keep the barriers to contribution low, b) encourage non-hierarchical hyperlinking[16], and c) log and archive all content revisions to maximize transparency, wikis can be ideal for capturing the unique knowledge assets of each user, facilitating easy knowledge transfer between members, and foster the collaborative creation of common goods[26].

However, although Jimmy Wales has said “the wiki editing tool is neutral to social structures<sup>viii</sup>,” the technical features of wikis actually possess a strong cultural component. The same technical features that contribute to Wikipedia’s success also reveal its embedded cultural values. Wikipedia’s open editing model embeds western notions of equality directly into the technology itself by allowing any editor to create, delete or modify the content of an article. This simple but powerful mechanism, intended to keep barriers to contribution low and encourage consensus-based decision-making, has other consequences: in situations where consensus agreement cannot be reached but there is a clear majority opinion, the ability to easily revert another editor’s work allows for another western cultural phenomenon described by Enlightenment thinkers: tyranny of the majority.

Wikipedia’s broad, interpretively flexible, and largely non-binding policies and guidelines function as boundary objects within the community, allowing editors to negotiate the contingencies that arise in the course of collaborative work. Star and Greisemer[22] described boundary objects as

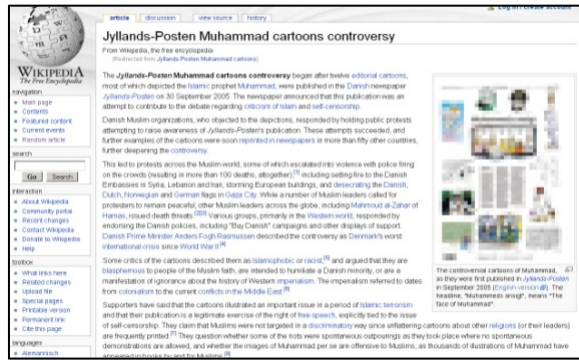
*“both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual site use.”*

Although much of the research on boundary objects in brick-and-mortar organizations uses the term to refer to physical artifacts (such as graphs, documents, models and maps), ideals, unwritten community norms and historical events can also serve as boundary objects. Online, boundary objects take virtual forms—such as forums, electronic documents, and cyberinfrastructure[9][6].

Carlile[5] emphasizes the role of boundary objects in spanning what he terms “problematic” knowledge boundaries: those that arise between individuals with different perspectives, roles and goals who must work together to create common ground and reach mutually acceptable decisions. In a longitudinal study of product development teams, he identified boundary-spanning objects acting at three different (though complementary and often interwoven) levels: *syntactic*, *semantic*, and *pragmatic*. Of these three, *pragmatic*-level boundary objects were shown to be the most critical for decision-making, because they played an integral role in facilitating perspective-taking, compromise and the knowledge transformation at problematic boundaries between team members with different expertise, vocabularies or values.

Although boundary objects are often described in the context of cooperative decision-making as mechanisms for negotiating common meanings or communicating points of view, work by Carlile[5] and others[15] demonstrates that boundary objects can be used strategically as well. The presence of potential *pragmatic*-level boundary objects in an organization does not guarantee effective boundary-spanning: boundary objects can also be used to undermine a decision-making process and block effective collaboration. Diamant[9] conceptualized the elements of cyberinfrastructure as boundary objects used by stakeholders engaged in the translation work of negotiating meanings and priorities across institutional and disciplinary boundaries. He found that although the use of these boundary objects often helped surface cultural and interpretive differences between actors, this sometimes resulted in heated conflicts rather than compromises. Similarly, Carlile[5] relates a story about the use of boundary objects in a design meeting: in this scenario, one designer who had given a presentation which included a slide of a high fidelity CAD (Computer-Assisted Design) prototype remarked on the dual strategic uses of CAD as a boundary object: “CAD can be an effective communication tool in one meeting, then a ‘bludgeoning tool’ in the next.” Research on Wikipedia has shown that Wikipedia policies are often used in this way. Kriplean[14] found that in talk page discussions citing a Wikipedia was often a power play, where the editor’s motivation for invoking the rule was not to educate, articulate a perspective or inform decision-making but rather to threaten another editor with sanction or silence opposition.

Mason[17] utilized Carlile’s three-tiered boundary object framework in an analysis of the role of boundary objects facilitating collaboration across cultures in the knowledge management systems (KMSs) of over a dozen major organizations. Motivated by previous research[19] which suggested that organizational KMS’s can reflect the cultural bias of and contain unacknowledged mechanisms for enforcing conformity to the dominant organizational culture, he examined the extent to which these systems contained pragmatic-level boundary objects that could be used to a) effectively span knowledge boundaries between members from different cultural backgrounds, b) promote equal access to organizational resources, and c) facilitate equal opportunities for contribution among all members. Mason found that the components of organizational KMSs were seldom sensitive to even basic cultural issues such as the native language of the organization’s members, and that assumptions of participation built into those systems failed to take into account both cultural communication norms and



**Figure 1:** The *Jyllands-Posten Muhammad Cartoon Controversy* article in March 2009.

participants’ capabilities. He concluded that although the social and technical structures of organizational KMSs are often assumed to be “culture-free,” hidden biases and a lack of “culturally sensitive access mechanisms” within the KMSs can act as invisible barriers to participation for individuals who do not share the values of the dominant organizational culture—resulting in a) organizations losing access to the knowledge assets of these members, and b) the members of the organization losing out on the benefits of participation in the organization’s established knowledge-sharing system.

### 3. Case study

In socio-technical systems the affordances of the software and the practices of the community are intimately linked. This is especially true of Wikipedia, where the majority of the site’s content, conduct and construction is under the direct control of community members. Any analysis of boundary objects on Wikipedia must account for both software-based and community-created aspects of the objects that span (or fail to span) knowledge boundaries between editors engaged in the collaborative work of creating an article. The debate on *Jyllands-Posten Muhammad Cartoon Controversy* provides a rich case study of boundary object use and cultural boundary spanning behavior in social media knowledge management because Wikipedia’s global reach facilitated direct encounters among participants from different cultural backgrounds, and editors engaged in the debate over including the Muhammad cartoons explicitly articulated their cultural values.

The controversy that *Jyllands-Posten Muhammad Cartoon Controversy* (Figure 1) documents received significant worldwide news coverage in late 2005 and early 2006 soon after the cartoons were first published. Muslims and non-

Muslims criticized the provocative cartoons for their depiction of Muhammad (in itself a transgression in some Islamic sects), as well as his depiction in a satirical context and, in the case of two of the cartoons, in a context that explicitly associated Muhammad with Islamic terrorism. Others, Muslim and non-Muslim alike, viewed the publication of the images as a legitimate instantiation of the ideal of freedom of the press.

The *Jyllands-Posten* article presents an especially compelling case study because in addition to documenting a controversial topic, the article itself has become a site of controversy. The most controversial aspect of the article—the inclusion of a large thumbnail version of the original cartoons at the head of the page—spurred several online petitions for its removal, which gathered almost half a million signatures. In 2006, the Bagdad Museum Project created an online exhibit<sup>ix</sup> based on the article, which consists of PDF archives of the complete editorial discussion pages and snapshots of the article itself at several point in its evolution (although, significantly, leaving out the offending images themselves). In his introduction to the exhibit, Project Chairman John Simmons states that the *Jyllands-Posten Muhammad Controversy* “reveals the mechanics of the clash of civilizations.”

### 4. Analysis

In a previous research study [18] we examined the rhetorical appeals made by hundreds of editors debate on the *Jyllands-Posten Muhammad Controversy* talk page. This study found that editors on different sides of this debate argued that the cartoons should be either retained or removed, or proposed compromise solution. The frequency with which editors on different sides employed different types of appeals demonstrated that they held different *values hierarchies*[20] indicating a sharp divide in the socio-cultural values across groups. The study also found that more experienced Wikipedians tended to support the retention of the cartoons rather than removal or compromise. These veterans also cited Wikipedia policy more frequently than other editors, and were more likely to assert that there was an established consensus that the cartoons should remain in their current size and prominent location on the page, in spite of the fact that only 55% of the arguments made in the debate reflected this absolutist position.

In contrast to this, editors who argued for the cartoons’ removal or for a compromise solution that would mitigate the visual impact of the cartoons and let readers chose whether or not to view them (such as moving the cartoons lower down on the page, or

placing them behind a hyperlink) tended to appeal to other sociocultural values that were not Wikipedia-specific, such as cultural sensitivity and inclusivity, human decency, and readers' expectations. This analysis exposed tensions between the stated values of Wikipedia—to serve as a free online resource that everyone in the world can freely use and contribute to—and the values in practice within the relatively small and homogenous group of core Wikipedia contributors, who sometimes prioritize values such as freedom from censorship over multicultural inclusivity.

The current study builds on these results. We concentrate our qualitative analysis on those editor comments within the talk page debate that contained appeals related to specific aspects of Wikipedia's community identity. Our examination of these comments allows us to identify the important social structures and technical features of Wikipedia that served as sites of boundary negotiation in *Jyllands-Posten Muhammad Cartoon Controversy*: Wikipedia's policies on *Consensus* and *Censorship*, and sociotechnical practices such as reverts, archives, blocks and bans.

We investigate whether these policies and practices were used, as Carlile describes, to span pragmatic knowledge boundaries between participants who expressed different culturally-mediated understandings of the significance of the cartoons and to help create a new, shared understanding and a sense of common purpose. Our analysis shows that policies, practices and technical mechanisms of Wikipedia that are intended to facilitate productive collaboration, perspective-taking and consensus-based decision-making do not always make effective boundary-spanners. Indeed, we show how these mechanisms were frequently used strategically in the *Jyllands-Posten* debate in order to a) re-frame the debate in a manner that served the interest of the majority, b) discourage participation by peripheral participants, and c) actively block participation by those with minority views. We found that in general these boundary objects were deployed more frequently by more experienced editors, the majority of whom who wanted to keep the cartoons in their current position at the top of the article. This suggests that Wikipedia's processes and technologies for promoting broad participation, knowledge transformation and consensus-based decision making can break down in instances of cultural conflict. In the following sections we present these findings in greater detail.

The anonymized quotes in the following sections are taken directly from the talk page debate. Quotes are attributed according to the editor's stance in the debate: either *For* retention of the cartoons, *Against* their inclusion on Wikipedia in any form, or in favor of

some *Compromise* solution. Underlined text indicates a hyperlink.

#### 4.1. Re-framing the debate: Consensus and Censorship

*"[Editor name], please do not blank content against solid consensus. Thank you."* – *For* Editor

*"...I agreed to accede to the community consensus. I thought then, and think now, that Wikipedia should not be censored[sic]. If the community disagrees, and determines that censorship is good for Wikipedia, then I will not fight the implementation of that consensus. But I will not pretend to like it or agree with it."* – *For* Editor

Although Wikipedia policies are intended to aid productive collaboration by facilitating the creation of common ground, the use of policies in the *Jyllands-Posten* debate shows that these mechanisms can also be used to reject attempts at compromise and re-frame the debate in ways that favor certain editors' positions and values. These policies can hinder boundary spanning by allowing majority participants to characterize the issues under discussion in a way that puts minority groups at a disadvantage, particularly in cases where the knowledge boundaries between participants reflect different culturally-mediated understandings of what content the encyclopedia should include.

Editors in favor of keeping the Muhammad cartoons at the top of the article, the majority group, used Wikipedia's *Censorship* policy to re-frame the talk page debate in a way that furthered their cause. As illustrated by the second quote above, one successful strategy involved interpreting *Censorship* in a way that characterized their opponents objections and compromise proposals as standing at odds with the Wikipedia's overall mission. *Censorship* was also used to veto a variety of compromise solutions proposed during the course of the image debate. These compromise solutions were intended to mitigate the visual impact of the cartoons, while still making them available to readers who wished to view them. One proposed solution involved including a disclaimer at the top of the article alerting readers to the presence of the offensive image further down the page. In this case, one editor argued that no separate disclaimer was necessary, since

*"We have tons of articles like this, and we expect that our readers will have the intellect and maturity to understand that in an encyclopedia insulting images are discussed and studied in a dispassionate and*

*neutral fashion. Our content disclaimer specifically states that we include images that some people may dislike.” – For Editor*

Citation of Wikipedia’s *Consensus* policy was again observed in use as a preemptive strategy for framing the nature of what was ‘at stake’ the debate. Once the image had achieved a stable presence in its current position at the top of the page, editors often cited *Consensus* policy to curtail further discussion of its removal, even though the fact that there was continuing debate over the subject of the cartoons’ presence and placement indicated that no true consensus had yet been reached.

#### **4.2. Cutting Short Discussion: Polls and Archiving**

*Compromise Editor: “...as there are those that are genuinely very offended, I don't understand why there would be opposition to at least moving the images further down the page...”*

*For Editor: “Please see the archived talk; this has been extensively discussed and polled. Plenty of good arguments for and against in there; little need to re-hash everything.”*

Wikipedians use informal mechanisms like creating polls and archiving inactive discussion threads to aid decision-making. Polls allow editors to quickly gauge the level of support for a specific proposal among the current participants. The practice of archiving older discussion threads (moving them off the main talk page into sub-pages) allows editors to keep the current talk pages to a manageable length, and to differentiate between active and inactive discussion threads. However, in the Muhammad cartoon debate, these mechanisms were also used to shut newly-arrived editors out of the discussion and to prematurely close certain topic.

As the *Jyllands-Posten* debate continued and drew in more participants, the page was archived at regular intervals in order to keep the talk page from getting too long. Inactive discussion threads were moved to nearby sub-pages, where they were kept for reference purposes and not intended to be edited. As new members joined in the discussion of whether or not to include the cartoons, editors made hyperlinked references to these archive pages to bring new arrivals up to speed on the course of the debate up to that point. However, as the example above illustrates, these archive pages were sometimes used strategically to keep perennial issues from being raised again by newly-arrived and peripheral participants. *For* editors

used the rationale that the topics had already been discussed, and were therefore closed, whether or not the topic under discussion had actually been resolved.

The archiving mechanism was also used to shift certain discussion topics away from the main talk page. Discussions around the broader cultural or political significance of the cartoons’ publication (by both Wikipedia and *Jyllands-Posten*) were moved to a special *Arguments* archive, even if those discussions were still active. This allowed editors in the majority, who tended to be more experienced Wikipedians and have greater technical expertise, to regulate the discussion topics that appeared on the main talk page, and to mute discussion threads that they deemed unproductive.

Editors in favor of keeping the cartoons also frequently referred new arrivals to the discussion archive page containing four straw polls. *Straw polls* are an unofficial mechanism Wikipedians use to assess whether there is consensus in support of a specific editing decision, by means of an informal vote. During a poll, currently active editors are asked to give a yes/no answer to a specific question, or to select among two to three options and to then offer a brief explanation for their choice. Once a set interval of time has passed, the poll is archived for future reference. However, like the *Consensus* policy, during the *Jyllands-Posten* debate past polls were often cited as a means of curtailing attempts to revive debates over issues that the citing editor considered already settled. In the example above, an editor who has been an active participant in the debate for several days responds to a new arrival to the discussion by linking to a poll taken on the previous day, which showed strong support for keeping the cartoons but not complete agreement.

Straw polls are not official Wikipedia policy, and their use as a mechanism for determining consensus on article pages is cautioned against because it is easy to interpret them as true and binding votes, in which the decision with the highest tally is the winner. Wikipedia policy discourages voting as a consensus-seeking practice because a winning vote gives an air of permanence to a decision even though it represents only a snapshot of the consensus at a single point in time—and a central tenet of Wikipedia’s consensus policy is that *consensus can change*. However, in the case of the *Jyllands-Posten* debate, these straw polls were referenced in subsequent discussions as having settled the issue of the cartoons’ inclusion and placement, despite expressed misgivings on the part of some editors about the fairness and accuracy of the polling.

The practices of using the results of past *straw polls* and archives of past discussions as evidence of a current consensus for the inclusion of the Muhammad

cartoons shows how these objects can be imbued with a sense of finality that runs contrary to their expressed purpose. The permanence of digital artifacts like polls makes their citation an effective tactic for undermining continued attempts at knowledge transformation and for preempting dissent by newly arrived participants. The polling and archiving engaged in by the *For* editors served to minimize the impact of participants with minority views and to strategically regulate the range of topics available for discussion by other participants.

### 4.3. Blocking Participation: Reverts and Vandalism

*"[Against Editor A] has violated 3RR and had already been warned. I posted a note at [WP:ANI/3RR](#), and hopefully someone will now block him. I agree that the 3RR rule has been woefully enforced in this article, and that the removers have been given unbelievable latitude to try to force their will onto the article."* – For Editor

*"[Against Editor B] continues to remove the images of the cartoons from the article, and inserts text claiming that showing these images will lead to a "clash of civilizations" with 1.3 billion Muslims. We need people to keep an eye on the article and make sure the image remains."*

Under certain circumstances, violation of Wikipedia policies can lead to users being blocked from editing or banned from the site by Wikipedia *administrators*: veteran editors endowed with special technical privileges. Two of the primary activities that can lead to an editor being blocked or banned are known as edit warring and vandalism. In the *Jyllands-Posten* debate, *For* editors (especially administrators, who were almost universally in favor of retaining the cartoons) were able to use their numerical advantage and technical privileges to block or ban editors who disagreed with them by characterizing the activities of their opponents as edit warring and vandalism, effectively preventing the continued participation of those who disagreed with the majority view.

On Wikipedia, any editor who disagrees with a content change can revert it. If their revert is subsequently reverted by someone else without discussion, those editors are said to be engaged in an *edit war*. Edit wars are considered unproductive, and Wikipedia has policies against them. One of these policies is the *three-revert rule*, often referred to as 3RR, which states that no single editor can revert any other editors' changes on a given article more than three times in a 24 hour period. Editors who violate

this rule are subject to having their accounts frozen for a period of time, usually 24 hours for a first offence, during which they cannot edit any article or participate in any talk page discussions on Wikipedia. Subsequent violations may result in longer blocks, or in the offending editor being banned from editing completely and their username deleted.

Vandalism is the act of maliciously adding, changing or deleting the contents of a Wikipedia article in violation of Wikipedia policy. Because *Consensus* is one of Wikipedia's primary policies, editing an article against an established consensus is sometimes seen as grounds for blocking or banning by administrators.

*3RR* and *Consensus*, taken together, are intended to preventing edit wars and to guide editors towards working through disagreements and achieving mutually-acceptable compromise. In the Muhammad cartoon debate, however, these policies were used to great effect by the editors in the majority to block participation from minority editors. Because the editors in favor of keeping the cartoons asserted that their decision represented consensus, they were able to characterize their opponents edits (such as deleting the cartoons, or moving them down the page) as vandalism and revert them without being accused of engaging in edit warring. And because of their numerical advantage, *For* editors could take turns reverting the edits of minority editors whenever the cartoons were deleted, and thus manage to avoid being individually censured for violating *3RR*. The minority editors, on the other hand, were numerically fewer and therefore much more likely individually to violate *3RR* and be blocked from editing the page. They were also more likely to be blocked or banned generally, since attempts to implement compromise solutions could be characterized as vandalism.

## 5. Conclusion

The boundary objects described above, and many others, played numerous subtle and intricate roles and were employed in a variety of ways during the *Jyllands-Posten* debate. No policy, practice or technical feature of Wikipedia was used strategically all of the time, and there were good-faith attempts by participants on all sides to take the perspective of the other and attempt to bring the debate to a mutually-acceptable conclusion. However, the most revealing findings from this case study are the ways in which certain *pragmatic*-level boundary objects native to Wikipedia are sometimes used against their intended purpose: to re-frame the debate in terms that favor some participants over others, to regulate available and acceptable discussion topics, and block participation by editors that hold minority views.



The majority editors' stacked the deck in their own favor using their numeric superiority, technical proficiency and greater knowledge of Wikipedia policy making true knowledge sharing and perspective-taking both unnecessary and infeasible. They succeeded at *reinforcing*, rather than reconfiguring, cultural knowledge boundaries through mechanisms such as straw polls, *Consensus*, *3RR* and discussion archives which were specifically created to coordinate distributed knowledge sharing and communal decision-making *across* boundaries.

Wikipedia's great potential as a platform for capturing and curating the world's knowledge lies in its powerful mechanisms for facilitating contribution of a wide variety of people with different interests, perspectives and experience. To further this goal, everything on Wikipedia—from the software to the community—is designed to be shaped by its users. However, this study suggests that even Wikipedia's radically open, user-driven contribution model is not truly "culture-free:" Wikipedia's strong anti-censorship stance and its open editing policy both reflect assumptions about how knowledge should be collected, curated and made available that are based on western socio-cultural values and political institutions. Values such as free speech, majority rule are embedded in the software, and the policies and of the community. As a result, boundary objects in the form of ideals, technologies and community practices contain an implicit set of cultural biases. These value-laden mechanisms can be employed strategically by editor to push their own agenda, even in the face of a vocal and determined minority. The way culturally controversial articles are dealt with on Wikipedia reveals that the same mechanisms used to facilitate collaboration and engage participation in Wikipedia and other social media can also be effectively employed to block compromises, derail discourse and undermine the process of accessible and egalitarian knowledge creation.

Recent research has shown that the English language Wikipedia has experienced a drop-off in the number of new editors who become core-contributors to the site[23]. An active editor base is necessary for maintain the quality of the knowledge already captured within Wikipedia, as well as to assure its continued growth. We believe that increased awareness of the cultural biases embedded within Wikipedia is vital for attracting new editors from traditionally under-represented groups. The results of this case study are instructive because they indicate that one consequence of unacknowledged bias is to facilitate the misappropriation of objects intended to foster cross-boundary collaboration.

Without effective mechanisms for resolving cultural controversies Wikipedia is in danger of losing access to the valuable knowledge assets of a significant set of potential contributors—and may have trouble succeeding in its mission of being a true "encyclopedia for everyone." However, even if the Wikipedia community makes a concerted effort to address cultural biases (along the lines of the wikiproject *Countering Systemic Bias*), it will not end cultural controversies on the website. In the *Jyllands-Posten* controversy, some readers and editors who weighed in on issue would not be satisfied with any compromise solution that still allows readers the option to view the cartoons: they object to the publication of these cartoons (and, in fact, to any images of Muhammad) in any form whatsoever.

Although designing a solution to the broader ideological conflict between free expression and cultural sensitivity is certainly beyond the scope of this paper, design solutions can play a role in making online resources like Wikipedia better able to meet the complex information needs of a global audience.

Taking advantage of the flexibility of the Wikimedia software platform, researchers, developers and Wikipedia editors have created a number of bots, toolbars and dashboards to help readers and editors alike customize their experience of Wikipedia. These add-ons allow editors to work on the projects they are most interested in[7], help them better understand their environment and trust their collaborators[24]; they help readers assess the trustworthiness of the information they read[1], and assist in navigational and browsing tasks. Although no assistance tools have yet been created to provide "culturally sensitive access mechanisms"[17], the multiplicity and variety of existing customization options illustrates the potential for the development of increasingly sophisticated tools for shaping how Wikipedia articles are presented to readers and editors from different cultures.

Wikipedia also has robust social mechanisms in place to coordinate large-scale cooperative endeavors, such as user-guided 'wikiprojects' like the one mentioned above. Design strategies that takes advantage of both the *technological* and *social* affordances of Wikipedia could prove effective. For instance, a tool that filtered offensive images, backed by a database of known offensive images maintained by dedicated Wikipedia editors, could mitigate cultural conflicts like the one surrounding the *Jyllands-Posten Muhammad Cartoon Controversy*. Users and organizations could 'opt in' to such a service, allowing them to filter anything they found objectionable. Such self-censorship could not only help avoid incidents of national and organizational censorship, it might also reduce instances of conflict on controversial article

pages, which are often plagued by vandalism and edit wars.

Although it is impossible to make the social processes and technical affordances Wikipedia “culture-free,” and equally impossible to completely avoid offense and conflict, the promise of the Wikipedia experiment, the site’s value as an knowledge resource, and the opportunities it provides to users all over the world, make seeking solutions to issues related to cultural conflict an increasingly worthwhile endeavor.

## 6. Bibliography

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<sup>i</sup> <http://www.alexa.com/siteinfo/wikipedia.org> collected June 13th, 2011 from Alexa.com

<sup>ii</sup> All subsequent mentions of Wikipedia refer the English Wikipedia, unless otherwise specified

<sup>iii</sup> [http://en.wikiquote.org/wiki/Jimmy\\_Wales](http://en.wikiquote.org/wiki/Jimmy_Wales)

<sup>iv</sup> [http://en.wikipedia.org/wiki/Blocking\\_of\\_Wikipedia\\_by\\_the\\_People's\\_Republic\\_of\\_China](http://en.wikipedia.org/wiki/Blocking_of_Wikipedia_by_the_People's_Republic_of_China)

<sup>v</sup> <http://www.econtentmag.com/Articles/News/News-Feature/Wikipedia-Weighs-Information-Against-Indecency-49659.htm>

<sup>vi</sup> <http://www.wikipediastudy.org/>

<sup>vii</sup> Sanger, Larry: “Why Wikipedia Must Jettison its Anti-Elitism”

<http://www.kuro5hin.org/story/2004/12/30/142458/25>

<sup>viii</sup> [http://en.wikinews.org/wiki/Interview\\_with\\_Jimbo\\_Wales](http://en.wikinews.org/wiki/Interview_with_Jimbo_Wales)

<sup>ix</sup> <http://www.baghdadmuseum.org/wikipedia/>