Bringing Talk Pages to The Front: An Interface Design

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Introduction

The development of Wikipedia depends on its quite radical construction process, reflected in its motto “the free online encyclopedia that anyone can edit,” which contributes the tremendous success of Wikipedia as an online source and community. On the other hand, Wikipedia’s policies and guidelines give rise to relatively conservative standards for knowledge inclusion. For instance, certain types of knowledge considered “invalid” by Wikipedia policies tend to be rejected, including knowledge from oral histories, emerging scientific studies and personal experiences [Gallert et al.2016]. The tension between radical construction process and conservative standards for knowledge inclusion is manifested through disputes among editors on the talk pages, as they refer to Wikipedia policies and disagree about whether particular knowledge should be included in the article pages or not. Figure 1 shows an example.

Figure 1: Part of an example dispute on talk page

Talk pages at the “back end” tend to be overlooked by Wikipedia readers and other stakeholders [Barrett2008]. However, talk page disputes provide valuable insights to knowledge diversity, article trajectory, and knowledge construction process. Editors communicate their diverse perspectives in disputes, and failing to include knowledge they disputed about potentially results in biased exposure to collective knowledge, lack of useful information, and even knowledge gaps [Koerner2019|Miquel-Ribé and Lainado2020|Miquel-Ribé2019]. Hence, to avoid these negative impacts, we recognize the need to develop an interface design as an exploratory work which aims to guide stakeholders’ attention to talk page disputes more directly.

Prior work on pluralism and feminist epistemology [Bardzell2010] suggests designs that enable diverse perspectives and attend to knowledge production process in a more transparent way. Menking and Rosenberg [Menking and Rosenberg2021] also envision an interface design that provides more transparent connections between “back end” and “front end.” Inspired by prior work, this workshop paper aims to surface disputed knowledge to improve transparency of knowledge construction process in Wikipedia. By understanding how Wikipedia policies affect knowledge on article pages during a dispute and bringing this process to be more visible to the “front end” in summary within hover boxes, we emphasize the importance of the process of knowledge construction on top of the specifics of individual contributions, which we believe will benefit Wikipedia community.

Our approach

In this section, we describe our approach: First, we identify disputes in articles’ talk pages; Then, we detect and summarize the effects of these disputes on the corresponding articles; Last, we sketch out our design ideas for displaying the summary to article viewers and editors.

0.1 Identifying disputes

Conceptually, we define dispute as “a prolonged discussion by a number of different people on the same subject” [Bykau et al.2015]. Computationally, we apply several filters to identify relevant threads:

- Top 20% threads in the number of comments under the same header which involves more than 2 editors
- Link to Wikipedia policies or mentioning Wikipedia policies in the threads
- At least one editor in the thread make a revision to the article within the same timeframe as the thread’s occurrence
We consider articles under the section of Science, Biology or Health found in Wikipedia:List of controversial issues [Wik2024] as our initial sample, and end up with 3396 talk page threads (8.78% of all talk page threads in selected articles) in our dataset.

0.2 Summarizing effects of controversies

We will look at the article page revisions from editors who participated in the thread within the time duration when each dispute happened, i.e., the effects of disputes to article during and after the disputes happened. Then, we will summarize the effects by assigning text summarization tasks to Large Language Models such as GPT4.0. We will prompt engineer along with specific information as the inputs to generative AI, including the entire thread, and edit history from editors.

0.3 Displaying information

To make the process for knowledge rejection impacted by Wikipedia policies more visible to editors, we design a hover box which consists the summary generated by generative AI (Fig. 2) and the link to the specific thread. We will search by keywords to locate the section in the article page where the dispute centers around. We will then highlight the text in article page, with a hover box pops up when article viewers and editors hover over. They will also be able to click on the link to the particular thread.

Figure 2: Interface design with dispute summary

0.4 Future Analysis

To evaluate our design, we plan to recruit 5 Wikipedia experts and conduct a small group panel, asking specific questions about the interface. These qualitative results will help us understand our design from the expert perspective, which will teach us valuable lessons such as Wikipedians’ comfort level with generative AI to complete tasks such as summarization of disputes between editors. More importantly, they help us to evaluate whether this interface design makes knowledge construction pro-

References


