Automated inference of point of view from user interactions in collective intelligence venues
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An authorship signal for collective intelligence
Collective intelligence processes are behind many of the most useful online services.

We propose a generative model of point of view learning from disagreements. We train on the full history of English Wikipedia—340 million edits by 31 million users on 9 million pages—using reversals as a signal of disagreement. These reversals are implicitly categorized as “POV reversals” between two users on the same topic and a different point of view, or as non-POV reversals between users editing on different topics or the same POV. This categorization depends on the topic and point of view inferred for each in any pair of dueling edits. The model can be extended to other forms of collective intelligence by inferring disagreements (e.g., sentiment analysis from text).

Shifting over time
An authorship signal allows us to summarize the point-of-view makeup of a collective intelligence product. We find demographic shifts which have changed the nature of conflict on several popular pages. Early Wikipedia editors were generalists, by necessity considering the relatively few active editors. This is reflected in a broad ideological dispute spanning many controversial topics (“early conflicts”). As more editors joined the encyclopedia, editors began to specialize more, and this resulted in more specialized conflicts (e.g., modern wars).

Evaluation
Our evaluation focuses on differentiating pairs of users who have negative relationships from those who do not. A good point-of-view model should be able to effectively label such pairs.

Example topics
With a full labeling of the content on a page according to point of view, we can easily query for interesting or potentially hazardous patterns of activity. For example, we looked for pages which were part of a controversial grouping, having many POV reversals, while at the same time being dominated by a single point of view, indicative of little controversy on the page itself.

Finding one-sided articles
With a full labeling of the content on a page according to point of view, we can easily query for interesting or potentially hazardous patterns of activity. For example, we looked for pages which were part of a controversial grouping, having many POV reversals, while at the same time being dominated by a single point of view, indicative of little controversy on the page itself.

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