Peer Produced Friction:
How Page Protection on Wikipedia Affects Editor Engagement and Concentration

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Background: Wikipedia

Wikipedia's Moment of Truth

Can the online encyclopedia help teach A.I. chatbots to get their facts right — without destroying itself in the process?

The New York Times Magazine

- **Participatory, emerging encyclopedia**

- **Anyone can edit Wikipedia**

- **Massive amount of highly formatted information**

Background: Page protection

Admin **locks** article

Anyone can place a **request for page protection (RFPP)**

Motivation

Friction. Design that make an interaction more effortful

interaction from state A to B

Friction

Motivation

Friction. Design that make an interaction more effortful

Full Trash - - - - - - - - - - - - - - - - - → **Empty Trash**

Background

Content moderation introduces barriers while a user is trying to create a lasting contribution to the platform

Blocking interventions [1,2]
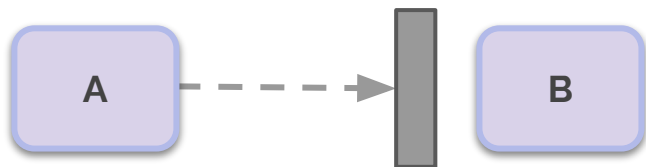
Page Protection

1. Registering for an account
2. Obtaining editing experience

[1] Chandrasekharan et al. 2017. You Can't Stay Here: The Efficacy of Reddit's 2015 Ban Examined Through Hate Speech. *CSCW*
[2] Jhaver et al. 2021. Evaluating the Effectiveness of Deplatforming as a Moderation Strategy on Twitter. *CSCW*

Motivation

Page protection on Wikipedia is a **friction** that represents an **intentional tradeoff** between open participation and information quality

"Stop the disruption while still allowing productive editors to make changes."

- Wikipedia Page Protection Policy

Is page protection achieving its intention?

RQ1. What motivates editor requests for page protection?

RQ2. Does editor participation change consistently on protected pages?

RQ3. How does the concentration of editing contributions change after page protection?

Data Source

Wikipedia articles in the Internet Culture category (n=6,264)

- Cover phenomena on the Internet
  - Memes, content creators, online events
- Uniquely Participatory
  - Lower barriers to technical knowledge
  - Prevalent throughout the Internet ecosystem

So Wikipedia Speedruns Exist...

1.4M views • 1 year ago

Ludwig ✓

#ludwig #speedrun **#wikipedia**.

So Wikipedia Speedruns Exist...

1.4M views • 1 year ago

Ludwig ✓

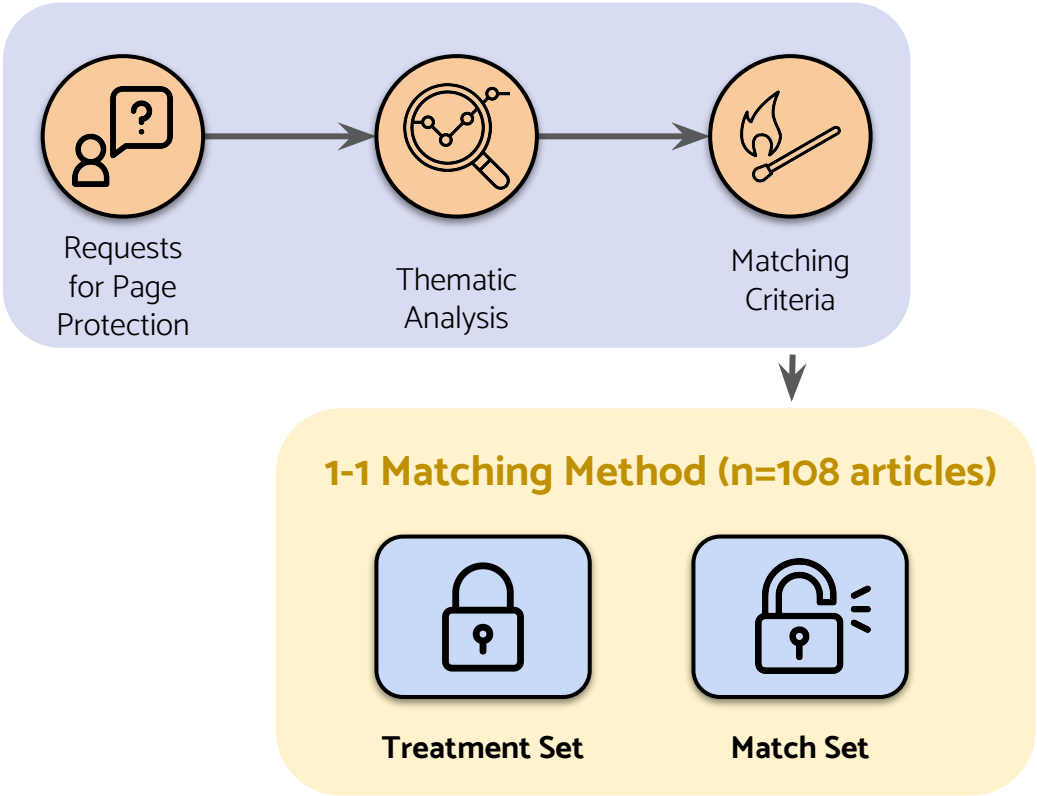**#ludwig** #speedrun **#wikipedia**.

How Hasan's Community Edited Wikipedia to Pretend They're Not Racist
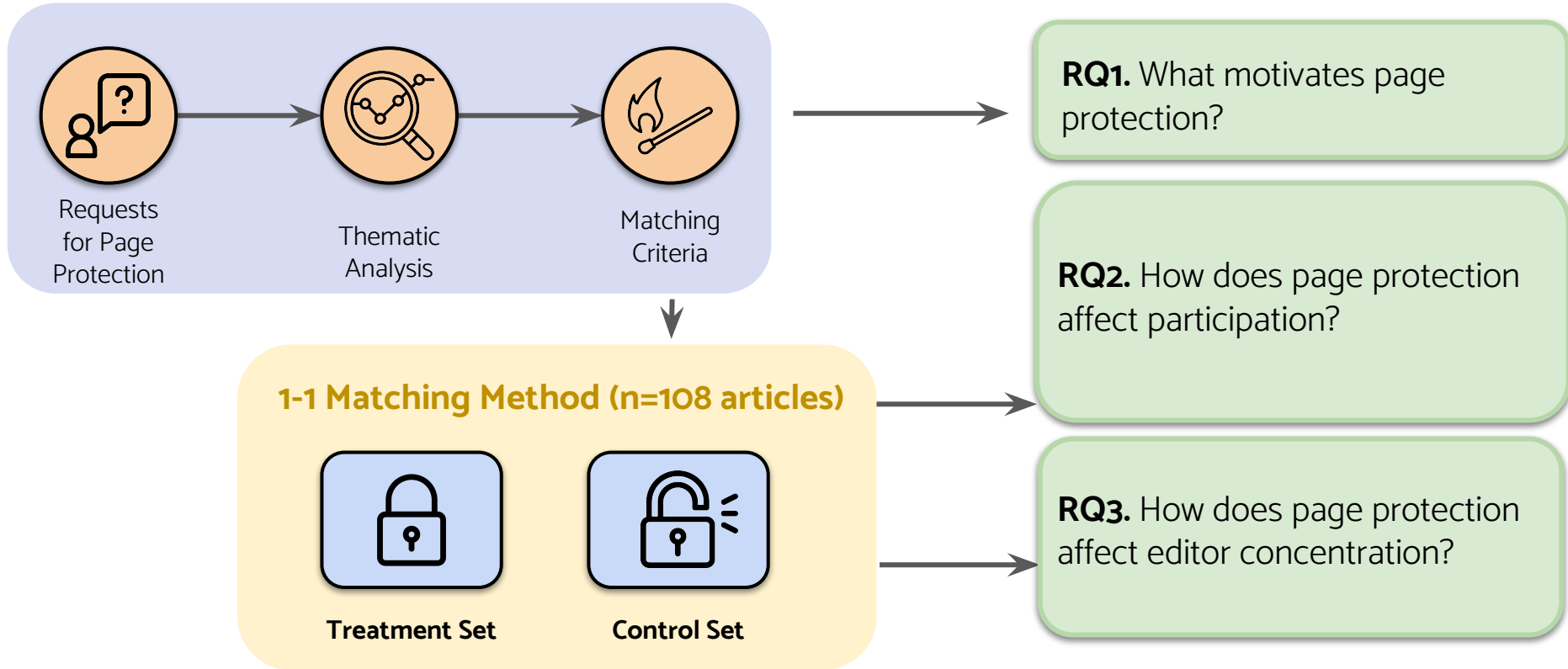
12K views • 1 year ago

Chud Logic

Hasan's Community, Desperate to be able to use slurs against minorities, changes **Wikipedia** to remain Just. Streamed: Sept 24.

Quasi-Causal Mixed Methods

Requests for Page Protection → Thematic Analysis → Matching Criteria

↓

1-1 Matching Method (n=108 articles)

Treatment Set

Match Set

Quasi-Causal Mixed Methods

Requests for Page Protection → Thematic Analysis → Matching Criteria

1-1 Matching Method (n=108 articles)

Treatment Set · Control Set

RQ1. What motivates page protection?

RQ2. How does page protection affect participation?

RQ3. How does page protection affect editor concentration?

Matching Criteria

Protection decisions can be fairly represented by **matching criteria** thus creating an **article vector**
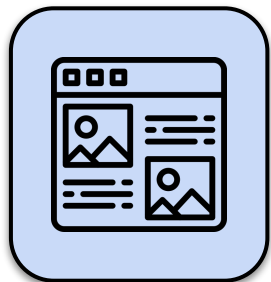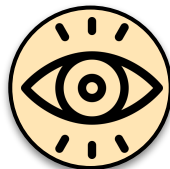
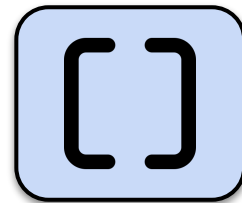Active Age of Article

Anonymous (IP) users

Vandalism instances pre-protection
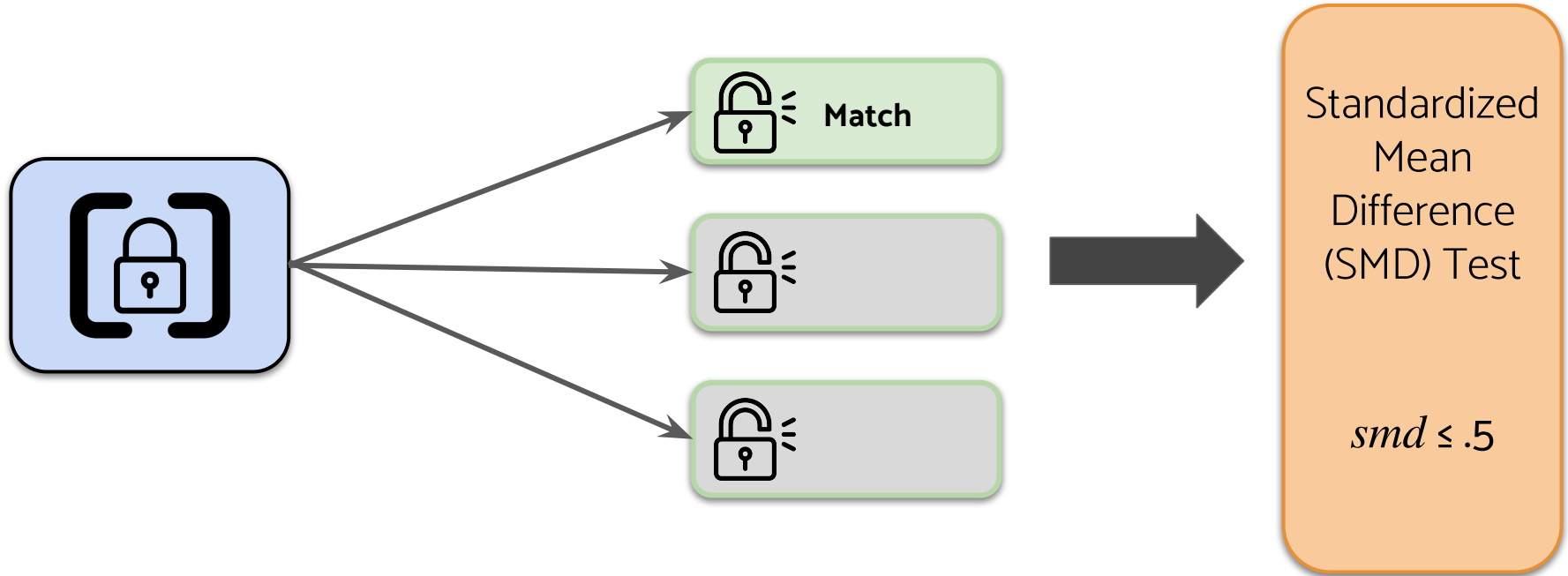
No. of edits 30 days pre-protection

No. of pageviews 30 days pre-protection

1-1 Matching

Protected article vectors match to **unprotected article vectors** with the highest cosine similarity

RQ2. Does editor participation change consistently on protected pages?

Intuition. Page protection should decrease the number of editors
- Blocks IP users
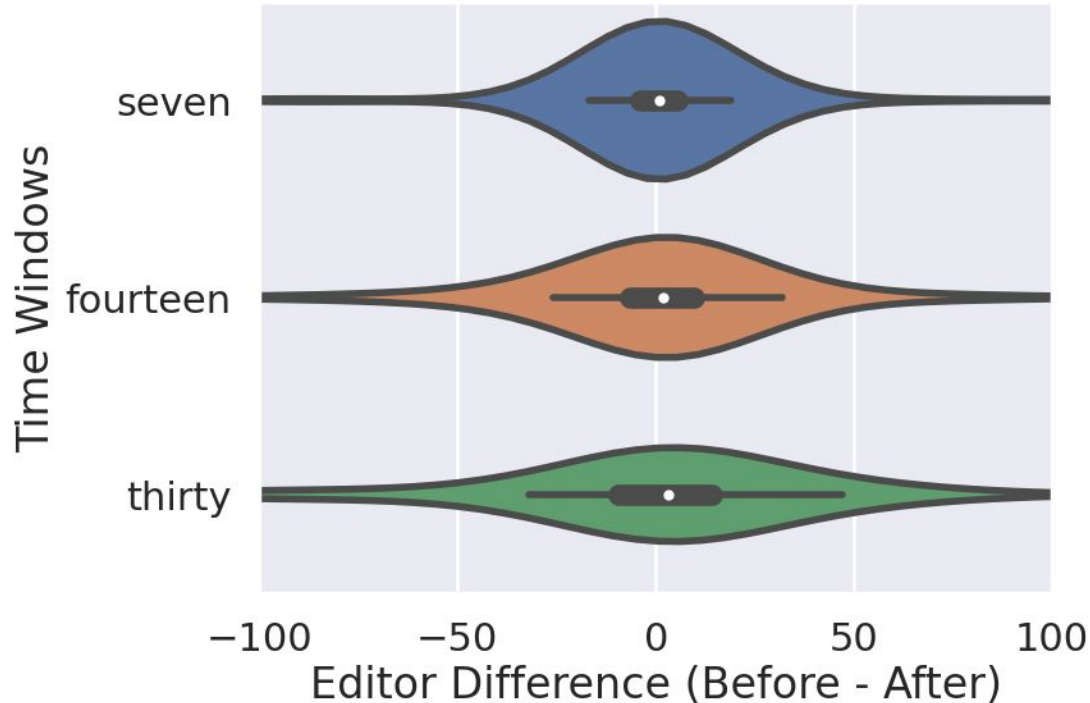- Used on high activity articles

🔍 *Editor participation.*
Difference = # pre-protection editors - # of post-protection editors

🔍 *Consistency.*
Mean, std deviation, kernel density estimate

RQ2. Does editor participation change consistently on protected pages?

Change to no. of editors is inconsistent both in terms of **direction** and **magnitude**

RQ3. How does the concentration of editing contributions change after page protection?

Ideal. Minimal changes in editor concentration

🔍 *Hoover Index.* Proportion of all edits that would have to be redistributed to achieve a state of perfect equality

Worst Case Scenario. Oligarchy of the "Wikipedia bourgeoisie" [4]

🔍 *20:20 Ratio.* Ratio of edits between the top 20% of contributors and the bottom 20%

Kittur, et al. 2007. Power of the few vs. wisdom of the crowd: Wikipedia and the rise of the bourgeoisie. *The World Wide Web journal of biology*

RQ3. How does the concentration of editing contributions change after page protection?

Hoover Index
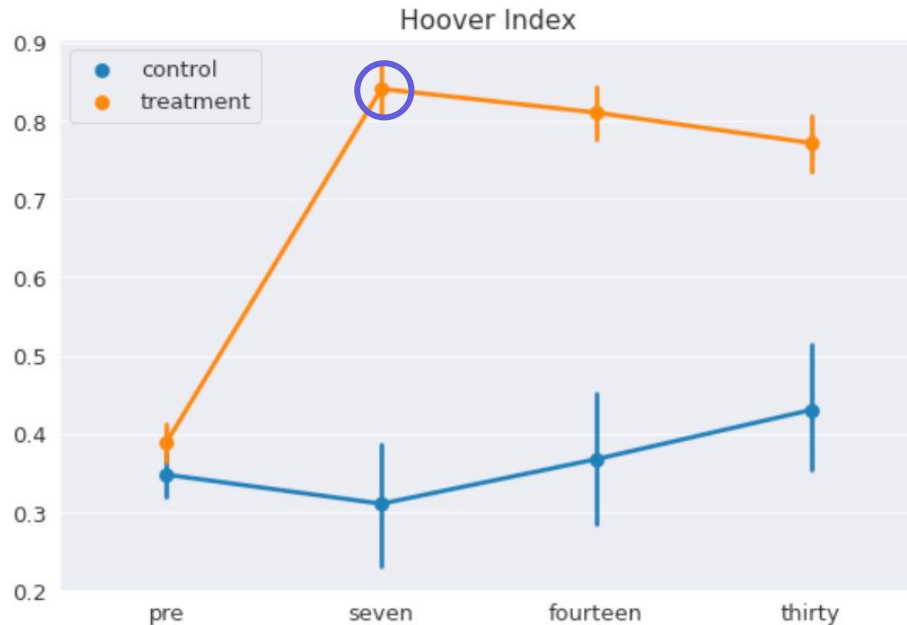
Seven days after page protection **84% of edits would need to be redistributed** amongst the editor population to achieve perfect equality

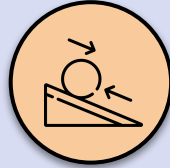# RQ3. How does the concentration of editing contributions change after page protection?

Cumulative 20:20 Ratio
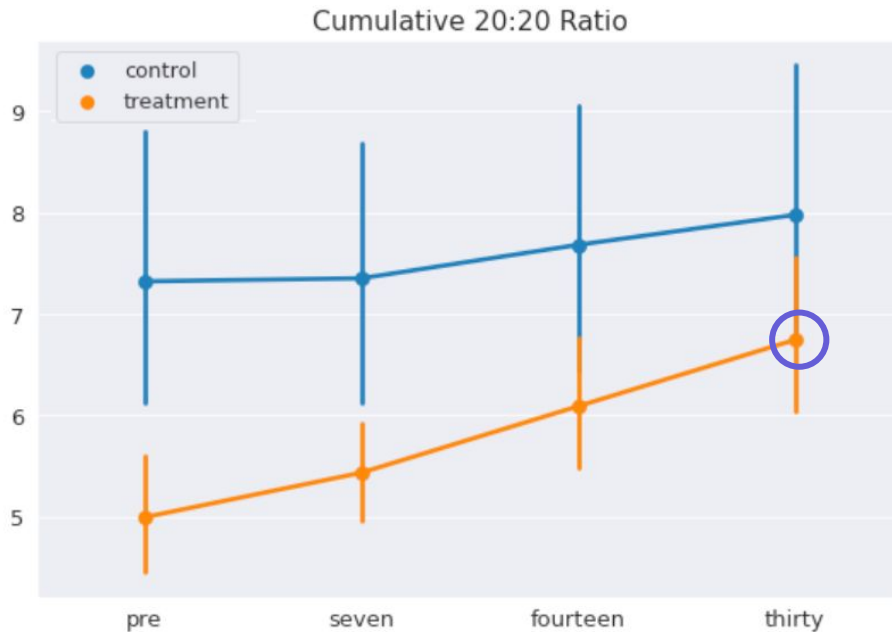
Thirty days after page protection, **heavy editors edit 7 times as much as light editors**

Contribution

Page protection is a blunt instrument
it is both heavy-handed and imprecise in its effects

Moderation as friction
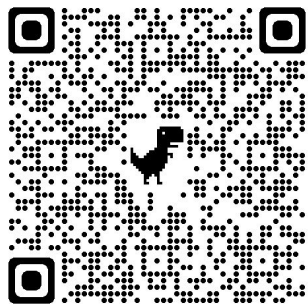interventions lie on a spectrum with *object* and *coefficient* of friction

Peer Produced Friction
peer production platforms exert non-democratic but participatory means of control

Thank you!

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Pdf of paper at **leahajmani.com**

Peer Produced Friction: How Page Protection on Wikipedia Affects Editor Engagement and Concentration

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Peer production systems have frictions–mechanisms that make contributing more effortful–to prevent vandalism and protect information quality. Page protection on Wikipedia is a mechanism where the platform's core values conflict, but there is little quantitative work to ground deliberation. In this paper, we empirically explore the consequences of page protection on Internet Culture articles on Wikipedia (6,264 articles, 108 edit-protected). We first qualitatively analyzed 150 requests for page protection, finding that page protection is motivated by an article's (1) activity, (2) topic area, and (3) visibility. These findings informed a matching approach to compare protected pages and similar unprotected articles. We quantitatively evaluate the differences between protected and unprotected pages across two dimensions: editor engagement and contributor concentration. Protected articles show different trends in editor engagement and equity amongst contributors, affecting the overall disparity in the population. We discuss the role of friction in online platforms, new ways to measure it, and future work.