



Collaboration of open content news in Wikipedia: The role and impact of gatekeepers

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Wikipedia plays a key role as a source of news



corona stats



Source: Wikipedia

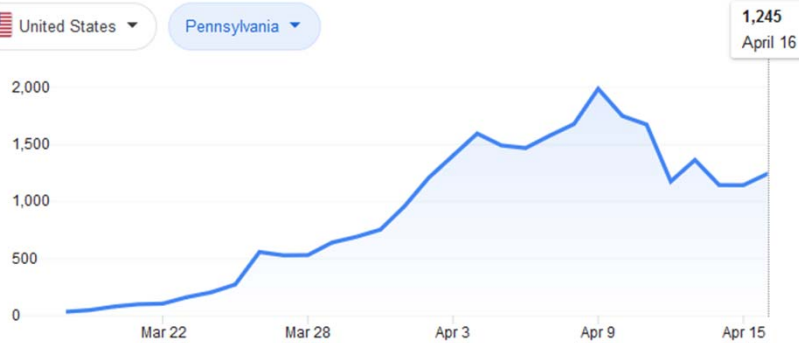
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Statistics

New cases

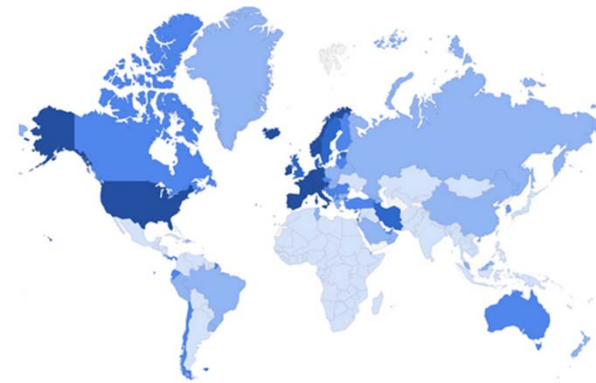
United States

Pennsylvania



New cases are the confirmed cases reported since the previous day
Updated less than 10 mins ago · Source: [Wikipedia](#) · [About this data](#)

Coronavirus (COVID-19) map



[View full map](#)

Source: [Wikipedia](#) · [About this data](#)

4/29/2020

Wiki Workshop 2020

This is probably no surprise to anyone: same news reported differently in different newspaper at the same time

The US is halting funding to the WHO. What does this actually mean?

US President Donald Trump **stunned world leaders and health experts** on Tuesday when he announced he was halting funding to the World Health Organization, in the middle of the global coronavirus pandemic.

He first threatened to do so last week, accusing the WHO of mismanaging the spread of the novel coronavirus, and of not acting quickly enough to investigate the virus when it first emerged in China in December 2019.

<https://www.cnn.com/2020/04/15/world/trump-who-funding-explainer-intl-hnk/index.html>

Trump announces US will halt funding to World Health Organization over coronavirus response

President Trump announced at the White House coronavirus news briefing in the Rose Garden on Tuesday that the United States will immediately halt all funding for the World Health Organization (WHO), **saying it had put "political correctness over lifesaving measures."**

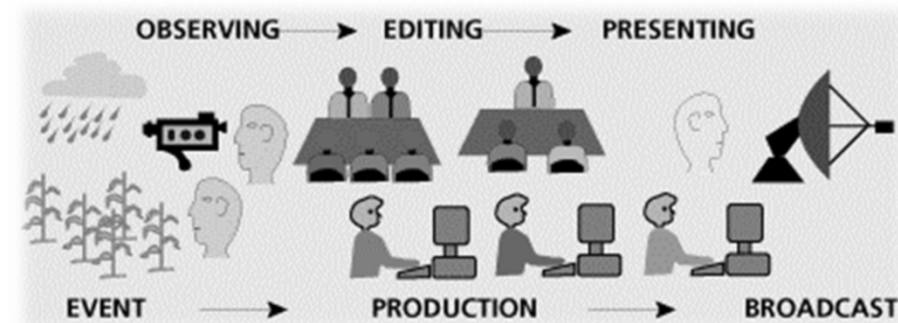
Also at the briefing, the president said plans to ease the national economic shutdown were being finalized, and that he would be "authorizing governors to reopen their states to reopen as they see fit." At the same time, Trump made clear that he was not going to put "any pressure" on governors to reopen.

<https://www.foxnews.com/politics/trump-announces-funding-to-world-health-organization-who-halted>

We know a lot about process of news reporting in traditional media

Specific point of view and information gets selected and crafted for publication

- Addressing physical limitation such as column space, or air time
- Promote the news outlet agenda



This is done by journalists, editors, and media owners known as “**gatekeepers**”

Process by which “the billions of messages that are available in the world get cut down and transformed into the hundreds of messages that reach a given person on a given day”



Gatekeepers are influential in news reporting

- **Responsible for quality control:** ensuring that the piece is newsworthy and the facts are verified
- **Responsible for polarization:** skewing certain information based on the news outlet agenda

News reporting process in Wikipedia

In the news

Coronavirus pandemic

[Disease](#) · [Virus](#) · [Testing](#) · [Timeline \(April\)](#) · [By location](#) · [Impact](#) · [Deaths](#) · [Portal](#)

- Thirty-eight people are killed in **a tornado outbreak** (*satellite image shown*) in the Southeastern United States.
- The High Court of Australia quashes the conviction of Cardinal **George Pell** for child sex abuse and orders his acquittal.
- **Cyclone Harold** impacts the Solomon Islands, Vanuatu, Fiji and Tonga, killing at least thirty people.

Recent deaths: [Norman Hunter](#) · [Adam Alsing](#) · [Kerstin Meyer](#) · [Jacques Blamont](#) · [Moraes Moreira](#)

Other recent events



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Portal:Current events

From Wikipedia, the free encyclopedia

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Topics in the news

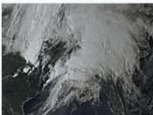
Coronavirus pandemic

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Southeastern US severe weather

April 17, 2020 (Friday)

[edit](#) [history](#) [watch](#)

Armed conflicts and attacks

- The United Nations human rights office says that Myanmar is carrying out daily airstrikes in Rakhine and Chin states and that at least 32 civilians (mostly women and children) have been killed since March 23. The **Arakan Army** declared a month-long ceasefire to fight the COVID-19 pandemic, but the military rejected the ceasefire saying a previous ceasefire had not been respected by rebels. [\(Reuters\)](#)[ⓘ]

April 16, 2020 (Thursday)

[edit](#) [history](#) [watch](#)

Health and environment

- [2019–20 coronavirus pandemic](#)

Time: 13:15 UTC | Day: 17 April

April 2020						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

[More April 2020 events...](#)

4/29/2020

Wiki Workshop 2020

This process is rather different than traditional news reporting

- Editors are the **general public**
- There is a **high degree of collaboration, coordination, and communication** involved in the process of selection and crafting of news



The Wikipedia news reporting process is still not a complete egalitarian process

Wikipedia news reporting involves gatekeepers

But, we know less about this process

- Who are the gatekeepers in Wikipedia?
- How much power do they have?
- How do they influence the content?
- How is the high degree of collaboration in Wikipedia interacts with gatekeeping process?



Identifying Wikipedia gatekeepers

Based on gatekeeping theory, we know that gatekeepers are

- Opinion leaders
- Control the quality of information
- Content producers
- Highly autonomous in choosing the information

Translating that to Wikipedia editing

Opinion leaders

- Substantive experts
- Participation in communication and coordination on Talkpages

Control the quality of information

- Adding high quality information: edits that persist over time

Content producers

- High number of edits and large amount of modified content

Highly autonomous in choosing the information

- Degree of diversity in choosing sources of information: internal and external wiki links

We can use these as features to identify gatekeepers in Wikipedia

Next step is assessing the power of gatekeepers

- A big assumption: if we have identified gatekeepers correctly, we should be able to see the impact of their actions in the future
- Conducting a lagged regression analysis to assess the relationship between gatekeeping in time T and outcome measures in time $T+1$
 - H1: Content added by gatekeepers in time T is more likely to last in time $T+1$
 - H1a: Content added by gatekeepers in time T is more likely to grow in time $T+1$
 - H2: Higher number of new articles are created by gatekeepers
 - H2a: Article created by gatekeepers in time T are more likely to grow in time $T+1$
 - H3: Gatekeepers are more likely to succeed in “winning” the discussion and edit wars

Assessing impact of gatekeepers on content polarization

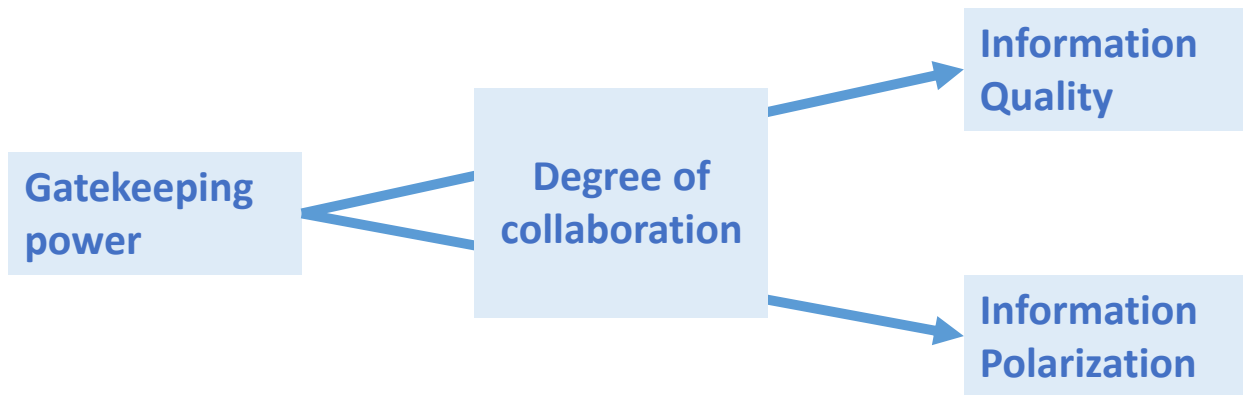
Polarization: taking sides in framing of the news

1. Selection: cover only limited point of view
 - Diversity of internal and external links news source URLs (political polarization scores suggested by prior work)
2. Language: use of biased language
 - Dictionary based language analysis (e.g. fortunately, regret, avoid, praise, ...)
 - Use of terms associated with particular political belief (e.g. pro-life vs. pro-choice)

Lexicon Name	Description	Example Terms
Words to Watch	Style words that may introduce bias (Wikipedia [79])	<i>fortunately, notable, often, speculate</i>
Hedges	Used to reduce one's commitment to the truth of a proposition (Hyland [43])	<i>apparent, seems, unclear, would</i>
Assertives	Complement clauses that assert a proposition (Hooper [42])	<i>allege, hypothesize, verify, claim</i>
Positive Words	Positive sentiment terms (Liu et al. [56])	<i>achieve, inspire, joyful, super</i>
Negative Words	Negative sentiment terms (Liu et al. [56])	<i>criticize, foolish, hectic, weak</i>
Factives	Terms that presuppose the truth of their complement clause (Kiparsky and Kiparsky [50])	<i>regret, amuse, strange, odd</i>
Implicatives	Imply the truth or untruth of their complement, depending on the polarity of the main predicate (Karttunen [46])	<i>avoid, hesitate, refrain, attempt</i>
Report Verbs	Used to indicate that discourse is being quoted or paraphrased (Recasens et al. [67])	<i>praise, claim, dispute, feel</i>
Strong Subjectives	Add strong subjective force to the meaning of a phrase (Riloff and Wiebe [69])	<i>celebrate, dishonor, overkill, worsen</i>
Weak Subjectives	Add weak subjective force to the meaning of a phrase (Riloff and Wiebe [69])	<i>widely, unstable, although, innocently</i>

What is the role of collaboration

- Collaboration can lead gatekeeping towards positive impact
- Support high quality production
- Reduce polarization



Appreciate your questions, comments, and feedback

Particularly:

- Operationalization of gatekeeping in Wikipedia
- Assessing the power of gatekeepers
- Role of collaboration in gatekeeping of news

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