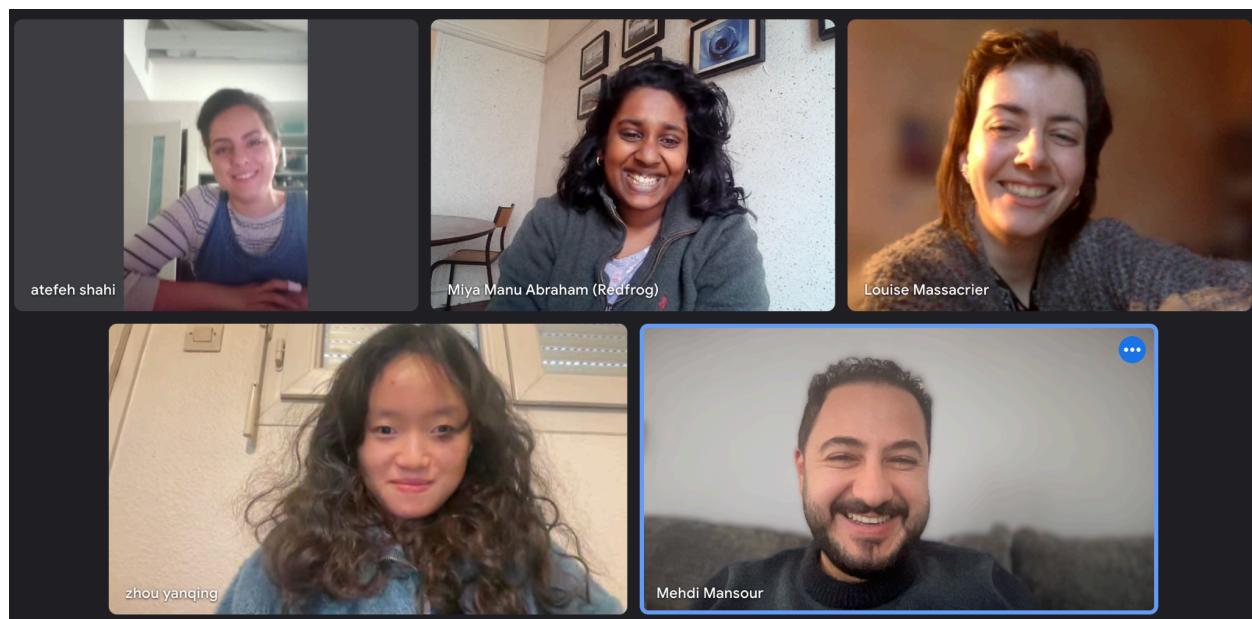


# PERFORMANCE OF BLOCKING ADMINISTRATORS ON THE WIKIPEDIA PLATFORM



## GROUP B1

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## **SUMMARY**

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## **DOCUMENTATION LINKS**

GitHub Repository	<a href="https://github.com/wubba438/Open_Science_B1/tree/main">https://github.com/wubba438/Open_Science_B1/tree/main</a>
Dedicated Google Drive	<a href="https://drive.google.com/drive/folders/1YF57P7z8VN4BntVJtx1WWHr5HYHbdING">https://drive.google.com/drive/folders/1YF57P7z8VN4BntVJtx1WWHr5HYHbdING</a>
Research Summary	In the google drive
Poster	In the google drive

## 1. INTRODUCTION

With the expansive reach of the internet, allowing easy access to information for everyone, Wikimedia, the hosting platform of Wikipedia, has not been immune to its effects. A recent study conducted by Rawat et al. (2019) indicated a significant increase in both the frequency and variety of attacks or online disruptions targeting the platform.<sup>1</sup> These incidents involve various tactics, including Wikihounding, sock puppetry, user talk harassment, and the posting of personal information. In November 2018, the primary image on Donald Trump's page was replaced with an explicit image, resulting in a temporary inclusion of inappropriate content by Apple's virtual assistant Siri when responding to inquiries about the subject.<sup>2</sup>

While Wikipedia upholds numerous policies and guidelines, 'Blocking' is the administrative technique employed to restrict users from editing Wikipedia. This measure can be applied to the user's accounts, IP addresses, or IP address ranges for a definite or indefinite period of time.<sup>3</sup> Blocks may be implemented to prevent imminent or ongoing damage and disruption to Wikipedia, discourage the persistence of current disruptive behavior, and promote a more constructive and congenial editing style in accordance with community norms.<sup>4</sup> It's worth noting, the shift within Wikipedia from its origins as an open community to its current trend toward closure, prompted by such real threats.

This transition has led to a decline in the acceptance of newcomers. Over the past two decades, Wikipedia has moved away from its initial focus solely on building a knowledge base through broad engagement. While this goal remains, it now contends with the imperative of safeguarding the quality of its accumulated knowledge against increasingly determined attacks due to its growing significance. Previously reliant on open policies, Wikipedia now finds itself compelled to adopt new measures of closure, formalizing boundaries, rules, and routines to maintain quality.

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<sup>1</sup> Rawat, C., Sarkar, A., Singh, S., Alvarado, R., & Rasberry, L. (2019). Automatic Detection of Online Abuse and Analysis of Problematic Users in Wikipedia. In 2019 Systems and Information Engineering Design Symposium (SIEDS) (pp. 1-6). Charlottesville, VA, USA. <https://doi.org/10.1109/SIEDS.2019.8735592>

<sup>2</sup> Wikipedians. (2024a, February 3). *Vandalism*. Wikipedia. <https://en.wikipedia.org/wiki/Wikipedia:Vandalism>

<sup>3</sup> Wikipedians. (2024a, February 1). *Blocking policy*. Wikipedia. [https://en.wikipedia.org/wiki/Wikipedia:Blocking\\_policy](https://en.wikipedia.org/wiki/Wikipedia:Blocking_policy)

<sup>4</sup> Wikipedians. (2024a, February 1). *Blocking policy*. Wikipedia. [https://en.wikipedia.org/wiki/Wikipedia:Blocking\\_policy](https://en.wikipedia.org/wiki/Wikipedia:Blocking_policy)

## 2. INITIAL RESEARCH QUESTION

### Initial Research Question

How did the Wikipedians' protection from disruptive behavior using blocking evolve on the English Wikipedia along with the implementation of new regulation policies?

### Limitations of the Research Question

- "Wikipedians' protection from disruptive behavior using blocking": as mentioned in the *Blocking Policy Common rationales for blocks*, blocking has 5 sub categories, protection being only one of them. Does the Wikipedian's protection refer to the protection policy of Wikipedia?
- "Implementation of new regulation policies": new policy count or revision history (updates) of one policy ?
- "How" is looking into defining the link between the 2 entities meaning they are sure there is a link at first between the blocking and the new policies

### Revised Research Question

What is the link between the evolution of the blocked users number and the implementation of new blocking-related regulation policies from the Wikipedia community?

### 3. TESTING REPLICATION FOR [H2]

\*Hypothesis 1 and 2 are not related so we started with replication of Hypothesis 2

#### Initial Hypothesis 2

- From summary: from better codification of regulation, less variance in reason of blocks
- From poster: we expect the rationale for blocking to stabilize over time

- The research methodology is replicable
- Methodology isn't coherent with the hypothesis

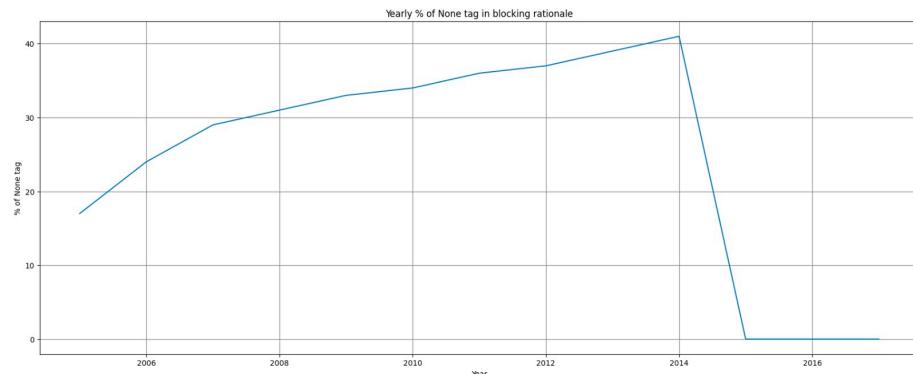


Figure #1: Percentage of None tag in blocking rationale over time (2005-2018)

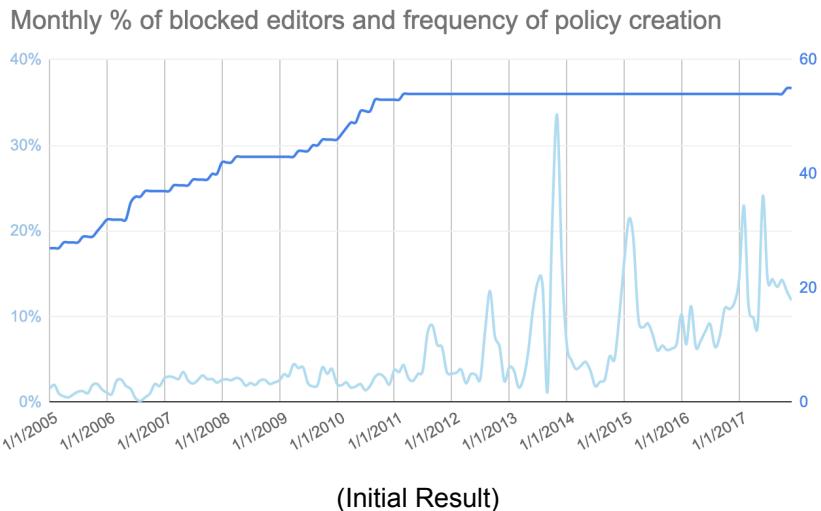
#### Limitations

- The complications stemming from using unmatching wording in the poster and in the summary
- The impossibility of proving or refuting the hypothesis based on the methodology: the only conclusion we can derive from the analysis carried out is that with the introduction of the dropdown menu, more administrators used the tags from the dropdown menu
- The fact that in the administrators, the existence of bot administrators is not considered (1).
  - (1) Initially, the administrator would type the reason manually. A dropdown menu was added later, allowing the admin to select a reason from a list when blocking a user. ([Source](#))

## 4. [H1] BLOCKING POLICY RELATION WITH NUMBER OF BLOCKS

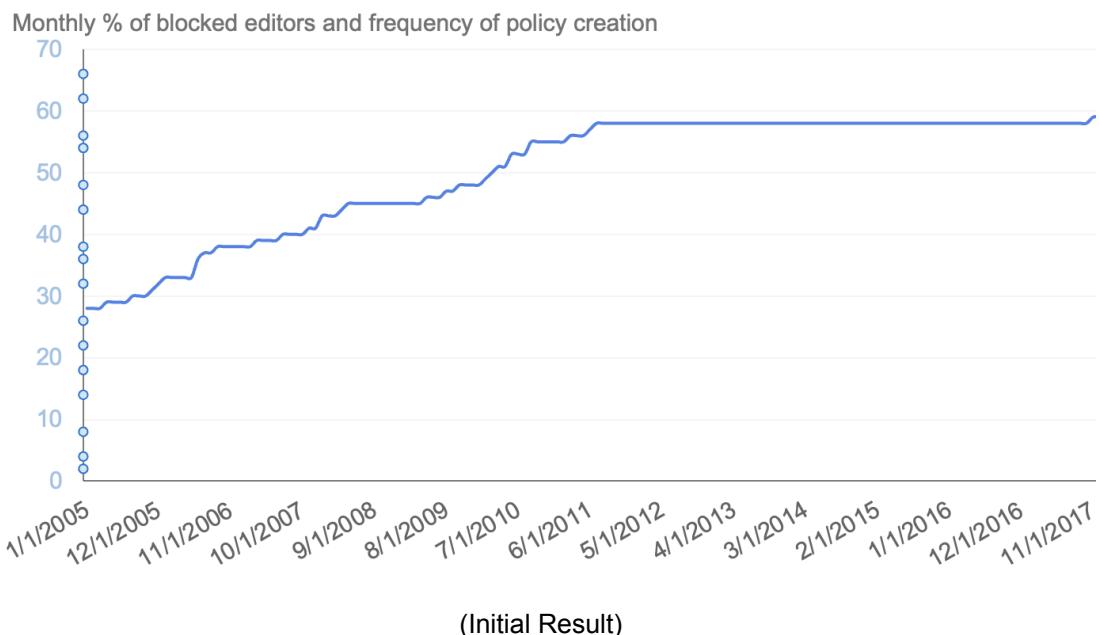
### Initial Hypothesis 1

- From summary: from better understanding of policies by the users, less blocked editors / total editors
- From poster: we expect the total number of blocks (normalized) to diminish over time



### Limitations

- The complications stemming from using unmatching wording in the poster and in the summary
- The impossibility of replication of the same data due to the vagueness of the source of "policy" count.

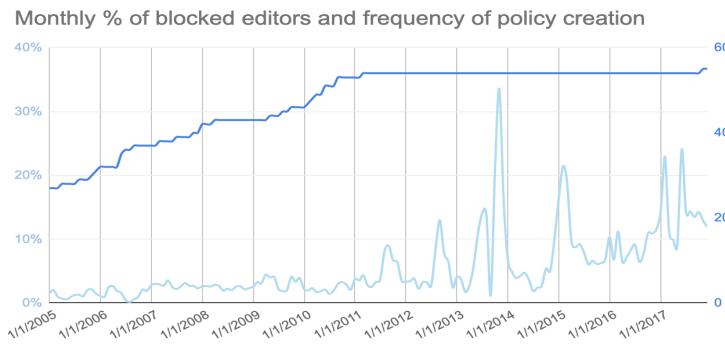


Hypothesis 1:  
 → Understanding the policies

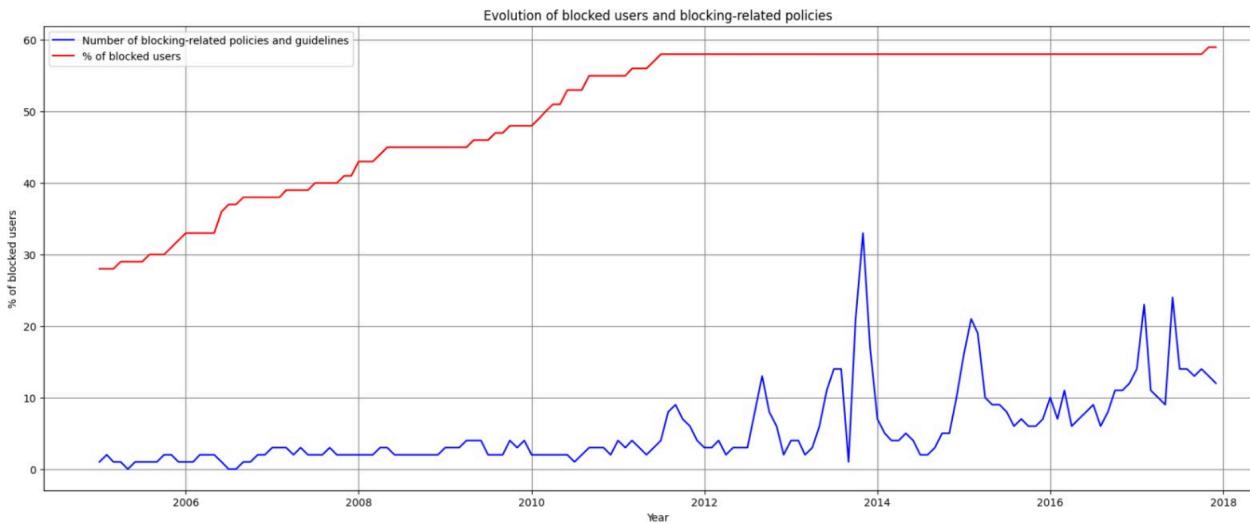
The previous research:

- shows that there was no increase in the number of policies between 2011 and 2017.
- classified the policies into categories, and subjectively identified those that are related to blocking actions.
- did not take into account the updates done on the existing policies.
- Did not implement qualitative analysis on what changes from one version of a policy into another.

Initial Figure 2



Replication of Figure 2 (initial)



In the replication with our own scraped data, we can see the peak just before 2014 as in the initial figure. This peak caught our interest, and we have been thinking about different reasons or causes for the number of blocks to change drastically over time.

We thought about:

1. Growth of the wikipedia community
2. Enforcement of the blocking policy

3. Historical Context
4. Automated Tools

### Testing (1) Growth of the wikipedia Community

→ The change of numbers of users is not relevant: based on the scraped data analyzed, the number of the administrators only kept declining after 2008.

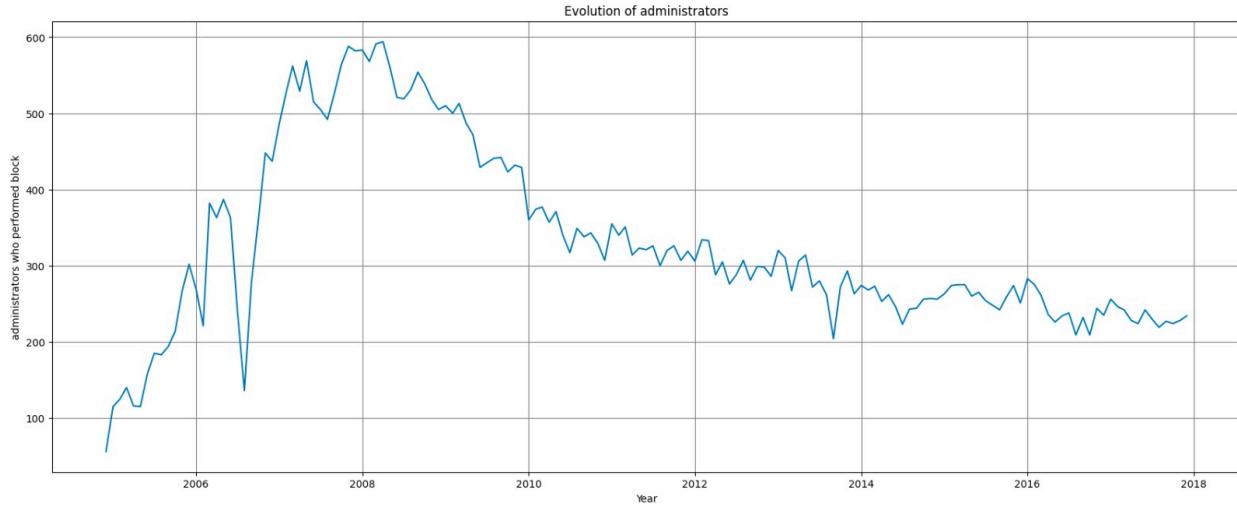


Figure #4: Number of administrators performing blocks over time (2005-2018)

→ The number of editors demonstrates no peaks that correspond to the peaks in the blocks as seen in the figure below

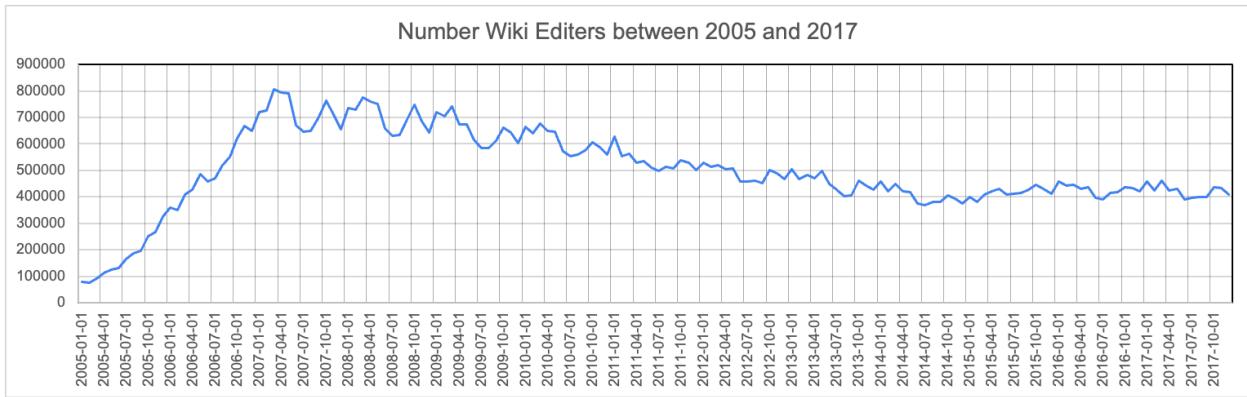


Figure #5: Number of Wikipedia editors over time (2005-2017)

### Testing (2) Enforcement of the blocking policy

→ We suggest a qualitative analysis of the revision history of wikipedia for the blocking policy page.

### Testing (3) Historical context

→ We suggest doing a literature review to have a look at the historical and political events surrounding the peak period of time.

### Testing (4) Automated Tools for blocking

→ We decided to investigate the use of automated tools for performing the blocks. This implies having a look at the administrators action as they are the ones performing the blocks.

## 5. CHARACTERISATION OF ADMINISTRATOR TYPE(s)

### 1. Investigating Administrators identity(ies)

Wikipedia administrators commonly known as admins or sysops, are volunteer editors who have been granted the technical ability to perform certain special actions on the English Wikipedia. These actions include the ability to block and unblock user accounts, IP addresses, and IP ranges from editing, edit fully protected pages, protect and unprotect pages from editing, delete and undelete pages, rename pages without restriction, and use certain other tools. Administrators are regular Wikipedians who have access to maintenance tools, which give them the ability to protect pages, delete pages, and block users. They are also expected to model appropriate standards of courtesy and civility to other editors and are accountable for their actions involving administrator tools. The role of an administrator is not to be a judge but to perform maintenance and administrative tasks on Wikipedia. The community often views administrators as authority figures with strong community support, and in practice, they are the face of authority on Wikipedia, enforcing rules and making decisions based on consensus.

Administrators, often regarded as the traditional enforcers of policy, undergo a process known as Request for Adminship (RfA), as outlined in Andrea Forte et al's paper "Decentralization in Wikipedia Governance" (2009). This process entails nomination by others or self-nomination, followed by a week-long evaluation by the community. During this period, the candidate for adminship engages in answering questions and defending their editing record and contributions. Ultimately, the community reaches a consensus through discussion, and if the RfA is successful, a bureaucrat grants the new user privileges. However, the English Wikipedia has established specific criteria that nominees must meet to be considered eligible. The editing histories of RfA candidates are meticulously scrutinized and analyzed to determine their suitability for the role of administrator.<sup>5</sup>

Bots, however, are automated tools that carry out repetitive and mundane tasks to maintain Wikipedia. They were introduced to make edits rapidly and assist in various editing tasks. The use of bots led to the formulation of a bot policy, which requires that bots be harmless and useful, have approval, use separate user accounts, and be operated responsibly. The Bot Approvals Group (BAG) supervises and approves all bot-related activity from a technical and quality-control perspective on behalf of the community. Admin bots, also known as adminbots, are approved through a specific process and are granted both 'bot' and 'sysop' rights. Their operators are expected to monitor them closely during development and trials, and adminbots should be immediately shut down at the first sign of incorrect behavior<sup>3</sup>

While investigating the Blocks made, it was intriguing to note the presence of both Admin Bots and human administrators in substantial numbers.<sup>6</sup> 9 out of the 870 administrators are bots according to the [Wikipedia Administrator List](#).

*Wikipedia bots* are automated computer programs designed to carry out straightforward and repetitive tasks within the Wikipedia platform. Adminbots, operated by administrators, must undergo the Bots/Requests for approval (BRFA) process before they can be utilized.<sup>7</sup>

<sup>5</sup> Forte, A., Larco, V., & Bruckman, A. (2009). Decentralization in wikipedia governance. *Journal of Management Information Systems*, 26(1), 49–72. <https://doi.org/10.2753/mis0742-1222260103>

<sup>6</sup> Wikipedians. (2024a, February 17). *Bot policy*. Wikipedia. [https://en.wikipedia.org/wiki/Wikipedia:Bot\\_policy#Bots\\_with\\_administrative\\_rights](https://en.wikipedia.org/wiki/Wikipedia:Bot_policy#Bots_with_administrative_rights)

<sup>7</sup> Wikipedians. (2024, February 17). *Bot policy*. Wikipedia. [https://en.wikipedia.org/wiki/Wikipedia:Bot\\_policy#Approval\\_process](https://en.wikipedia.org/wiki/Wikipedia:Bot_policy#Approval_process)

The first instance of incorporating imported text can be identified in February 2002, with the introduction of a glossary of telecommunications terms from the Federal Standard 1037C<sup>8</sup>. Since then, the proliferation of automation in various editing and protective tasks has increased. However, the precise public disclosure of the initial use of Admin bots remains unknown.

Upon examining the first hypothesis in the earlier study or initial research, '[How did the Wikipedians' protection from disruptive behavior using blocking evolve on the English Wikipedia along with the implementation of new regulation policies?](#)', the expectation was that the total number of blocks (normalized) would decrease over time. However, since the data pertaining to this expectation could not substantiate it, our exploration of new directions prompted us to investigate bots.

From our scraped data, we had a look at the most performing administrators over time as well as the administrators containing the word 'Bot' in their names. We identified 3 main block high performing administrators: ProcseeBot, TorNodeBot and AntiAbuseBot.

This identification was made using the code Analyze\_Blocklog data.ipynb [cell 19] from the [back\\_up](#) folder or [Github repository](#).

ProcseeBot	2527093
TorNodeBot	28575
NinjaRobotPirate	1929
AntiAbuseBot	1572
EgressBot	306
AnomieBOT III	153
Water Bottle	20
ListManBot	1
Name: administrator, dtype: int64	

### Limitations

- A bot name doesn't always contain the word 'Bot' in their names.
- A bot performing administrator blocks isn't always registered as an administrator (and thus it won't appear in the Wikipedia Administrators list)
- List of administrators is not updated after 2021

### Further Work

- We propose an identification of the bots per tags chosen to explain the blocks. Indeed, there are 'templated tags' for blocking reasons. The scraped data could be analyzed through this category of 'templated tag' (see right column {{tag}}). It would be necessary to confirm first that those tags only apply to bots. (Their creation dates correspond to the implementation of first bots)

Table 1: Tags and the number of time they were used in the block\_log\_data\_new.csv file  
(from cell 39 of Analyse\_blocklog data\_original.ipynb)

<sup>8</sup> Wikipedian. (2023, October 25). *History of wikipedia bots*. Wikipedia.  
[https://en.wikipedia.org/wiki/Wikipedia:History\\_of\\_Wikipedia\\_bots](https://en.wikipedia.org/wiki/Wikipedia:History_of_Wikipedia_bots)

Tags	Number of use	Tags	Number of use
notadvertising	10	{{uw-uhblock-double}}	44
advertising	2771	{{uw-causeblock}}	1747
no legal threats	2203	{{colocationwebhost}}	1694
legal threats	1917	{{rangeblock}}	428
citing	3137	{{checkuserblock-wide}}	366
arbitration	3276	{{uw-ublock-double}}	221
nothere	10514	{{oversightblock}}	183
biographies	10256	{{webhostblock}}	2845
copyright	10018	{{checkuser block}}	3203
long-term abuse	8944	{{uw-vaublock}}	3669
harassment	7293	{{uw-uhblock}}	12223
three-revert	6806	{{uw-softerblock}}	24100
patent	4559	{{uw-ublock}}	21127
sockpuppetry	4036	{{checkuserblock-account}}	29292
edit filter	12436	{{school block}}	47778
promotion	24205	{{tor}}	42609
edit warring	30054	{{anonblock}}	104141
evasion	64964	{{blocked proxy}}	2638869
disruptive editing	61371		
attack	54351		
vandalism	1463019		
spam	259798		
multiple accounts	150846		

## 2. Characterisation of ProcseeBot, Tor NodeBot and Anti-abuseBot

Specifically, three distinct bots—Procseebot, Tor Nodebot, and Anti-abuse bot—emerged as significant influencers during the timeline we selected for study.

**Procseebot**, under the operation of the user Slakr, is currently inactive. This bot is designed to block open proxies from making edits to Wikipedia pages. This action aligns with both Wikipedia's local policy and Wikimedia's global policy against the use of open proxies. Procseebot gathers information from public proxy lists, verifies if the proxy is open and functional, and, if confirmed, proceeds to implement a block.<sup>9</sup> While we don't have any information about the **Tor Nodebot**, the **Anti-Abusebot**, functioning as an Admin block bot, has been operational since March 2009. It monitors the feeds for activities matching known instances of vandalism and takes responsive actions, including sending alerts on IRC, reverting the edit, reversing the edit while blocking the user, or directly blocking the user.<sup>10</sup>

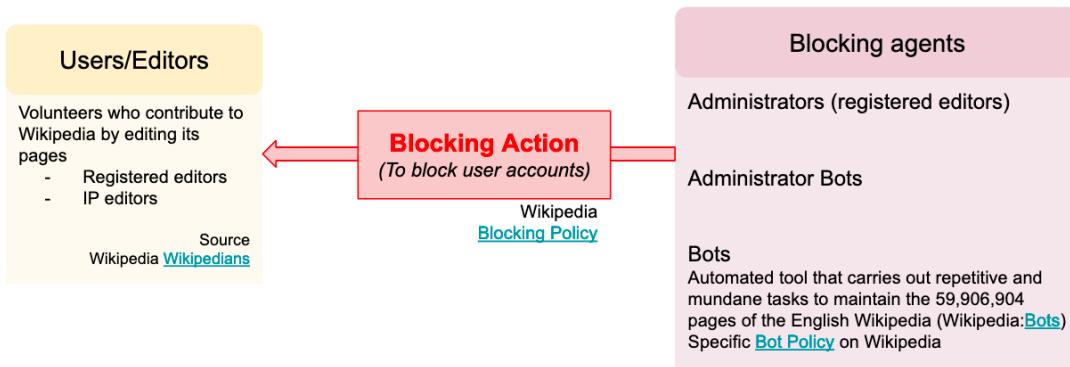
<sup>9</sup> Wikipedians. (2022, May 13). *User:ProcseeBot*. Wikipedia. <https://en.wikipedia.org/wiki/User:ProcseeBot>

<sup>10</sup> Wikipedians. (2023, February 9). *Bots/requests for approval/antiabusebot*. Wikipedia. [https://en.wikipedia.org/wiki/Wikipedia:Bots/Requests\\_for\\_approval/AntiAbuseBot](https://en.wikipedia.org/wiki/Wikipedia:Bots/Requests_for_approval/AntiAbuseBot)

Another interesting factor to note is that while Anti-abusebot is registered as an adminbot, Procseebot is not, it is a userbot. As helpful as bots are, as editors or admins, a study by Halfaker A et al. (2013) draws a beautiful landscape of active-quality participation since 2001 but a very steady decline since 2007. While there could be a debatable number of reasons about this one take is the 'failed socialization systems' and another the increasing conflict regarding the amount of available work.<sup>11</sup> Furthermore a study on the roles bots play on wikipedia by Lei Zheng et al. (2019) emphasizes that although bots can be immensely helpful in editing feeds and preventing vandalism, they are also known for giving misleading feedback or taking inappropriate action.<sup>12</sup>

While administrators play a crucial role in Wikipedia governance, there is a noticeable gap in research on admin bots and their impact on blocking. From a researcher's standpoint, further exploration into the intricate dynamics of admin bots and their potential positive or negative impacts on blocking could provide valuable insights for the continuous improvement of Wikipedia's governance structure.

### 3. Overview of the Blocking Action



<sup>11</sup> Halfaker, A.; Geiger, R. S.; Morgan, J. T.; Riedl, J. (2013). The Rise and Decline of an Open Collaboration System: How Wikipedia's Reaction to Popularity Is Causing Its Decline. *American Behavioral Scientist*, 57(5), 664–688. doi:10.1177/0002764212469365

<sup>12</sup> Zheng, L. (Nico), Albano, C. M., Vora, N. M., Mai, F., & Nickerson, J. V. (2019). The roles bots play in Wikipedia. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), 1–20. <https://doi.org/10.1145/3359317>

## 6. RESEARCH ON ADMINISTRATORS & BLOCKS

### 1. New Research Question

As we encountered a good number of bot administrator status when looking at the Wikipedia List of Administrators ([here](#)), we decided to investigate more closely.

#### New Research Question

What is the link between the blocking events evolution on the English Wikipedia with the number of blocks-performing administrators?

#### H1: The major fluctuations in the evolution of blocking events is due to the act of Procseebot.

If we can see from the data, the blocking events performed by Procseebot account for the major part of the total block events during the peaks, and the blocking events excluding those carried out by Procseebot do not differ significant from those from other periods, we can prove that the peaks are mainly due to the use of Procseebot.

### 2. Evolution of blocked users by any Administrators over time (2005-2018)

*Using our scraped data, the shape of the graph is similar to the one produced by the previous team. However, We know that the admins blocking users here are both humans and BOTs.*

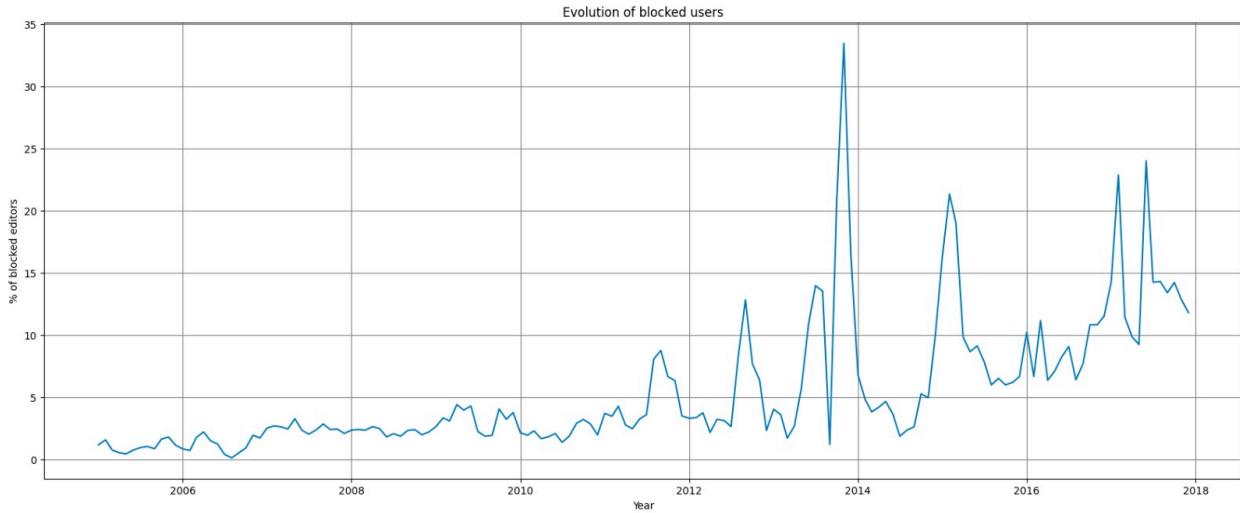


Figure #6

### 3. Evolution of blocked users by Human Administrators only over time (2005-2018)

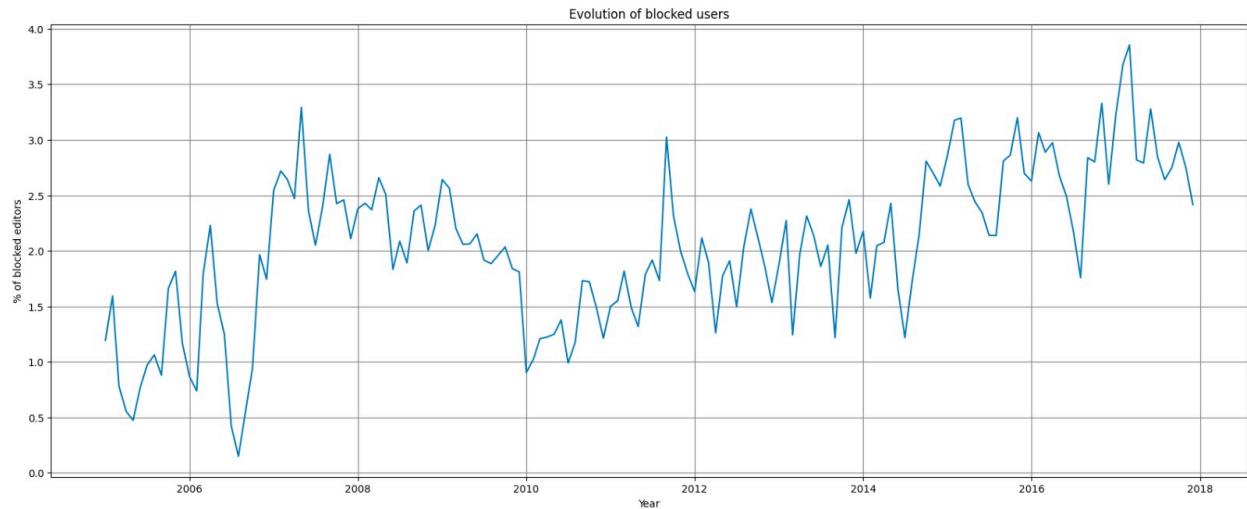


Figure #7

### 4. Evolution of blocked users with and without ProcseeBot (2005-2018)

*It is clear that the % of blocks performed by human administrators is always below 4% of wikipedia editors, and its variation is not significant in comparison to the blocks done by BOTs. This result excludes the role of announced policies and the drop down menu from the analysis of the increase in the number of blocks .*

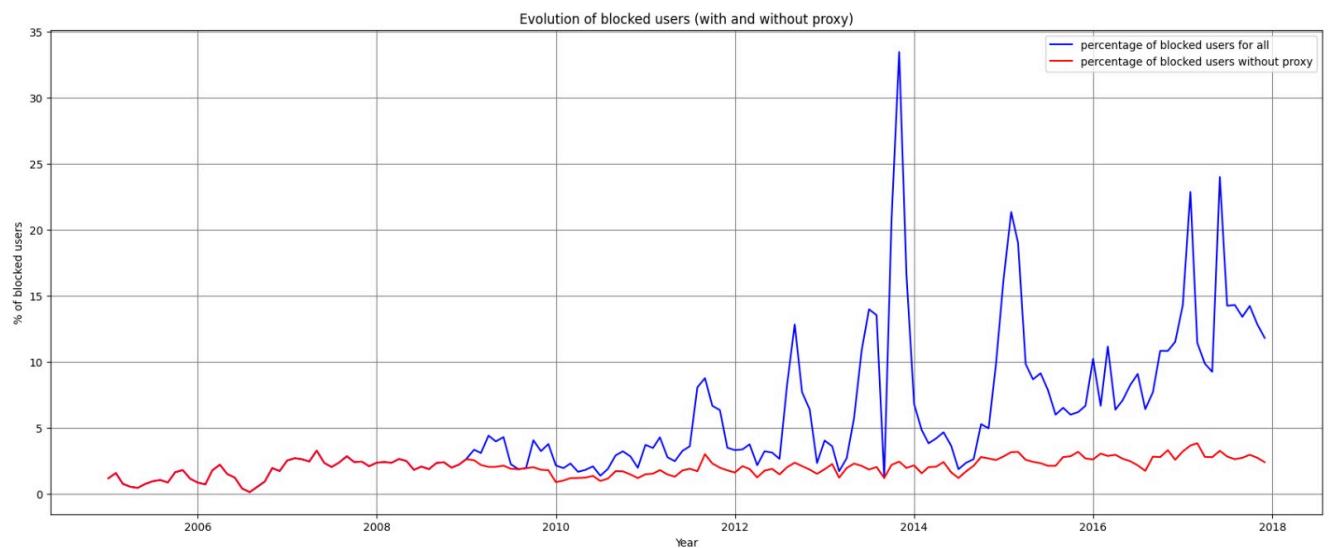
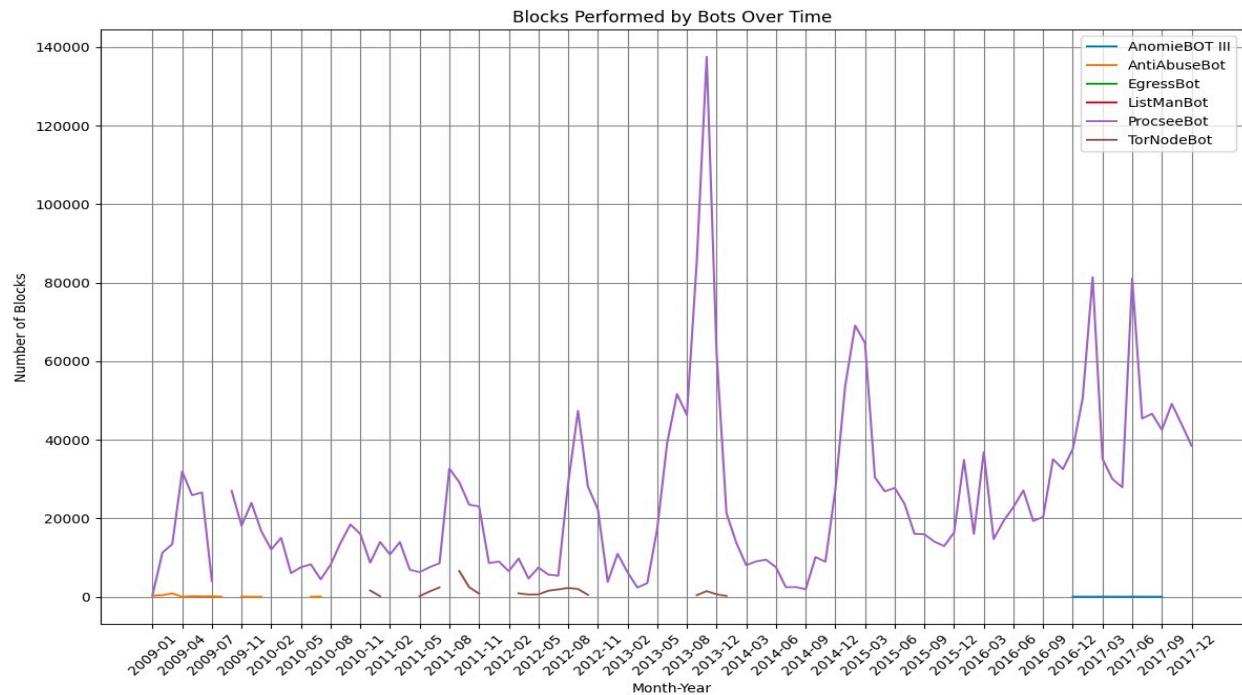


Figure #8

### 5. Evolution of blocked users per Bots only over time (2005-2018)

*The plot shows that the peaks taking place in the previous slide (and study) is due to the existence of admin BOTs, neither the human admins, nor the policies. Specifically, the peaks are due to work of ProcseeBot.*



**Figure #9**

### Limitations

- Lack of Data about Editors' Bots
- Lack of qualitative analysis of Wikipedia policies from a content perspective
- Need for a better strategy to identify the bots
- Underlying the number of blocks due to the usage of VPN rather than the content of change the editors are making to the page

## 7. OPEN SCIENCE PRACTICES ASSESSMENT

### 1. Previous Research

OPEN DATA ASSESSMENT	
Data Source	Comment
Scraped data is from Wikipedia API ( <a href="https://en.wikipedia.org/w/api.php">https://en.wikipedia.org/w/api.php</a> )	Can be updated but took a long time to be scrapped again and years 2022-2023 couldn't be downloaded in time.
Other data are from <a href="#">Wikimedia Statistics</a>	Wikimedia Statistics is an open platform, data can be updated.

OPEN ACCESS ASSESSMENT		
Documentation	Link	Comment
GitHub repository	<a href="#">GitHub</a>	It was hard to get a coherent and quick overview of the project as all the links are spread around in the different files (there is no specific place to access them all).
Google Drive	<a href="#">Folder</a>	
Research Summary	<a href="#">File</a>	
Poster	<a href="#">Poster_Pdf</a>	

REPLICABILITY	
Documentation	For each plot, a first assessment of the files available for replicability was done (see appendix #3 Logbook). Tests for replicability turn out to highlight some lack of precision and missing information (source of data for example) to be able to complete the figures.
Replicability appears not to have been tested by peers before (no trace of it)	-

### 2. Our Research

OPEN DATA	
Our data	How to update the data
Our scraped data is from Wikipedia API ( <a href="https://en.wikipedia.org/w/api.php">https://en.wikipedia.org/w/api.php</a> )	By scraping again using the Fetch_Block_Log_data.ipynb code (in <a href="#">Open Science B1</a> folder)
Other data are from <a href="#">Wikimedia Statistics</a>	By getting the updated data from <a href="#">Wikimedia Statistics</a>

## OPEN ACCESS

Find our documentation	Link
On the GitHub repository	<a href="https://github.com/wubba438/Open_Science_B1/tree/main">https://github.com/wubba438/Open_Science_B1/tree/main</a>
On the dedicated Google Drive	<a href="https://drive.google.com/drive/folders/0AHoFsmLXOb3AUk9PVA">https://drive.google.com/drive/folders/0AHoFsmLXOb3AUk9PVA</a>
Research Summary	<a href="https://docs.google.com/document/d/1BR6MDzRiLKveJmU6k0DKSMIGgYFLgSNY6ZbTeNSw3c4/edit?usp=sharing">https://docs.google.com/document/d/1BR6MDzRiLKveJmU6k0DKSMIGgYFLgSNY6ZbTeNSw3c4/edit?usp=sharing</a>
Poster	

## OPEN SOURCE

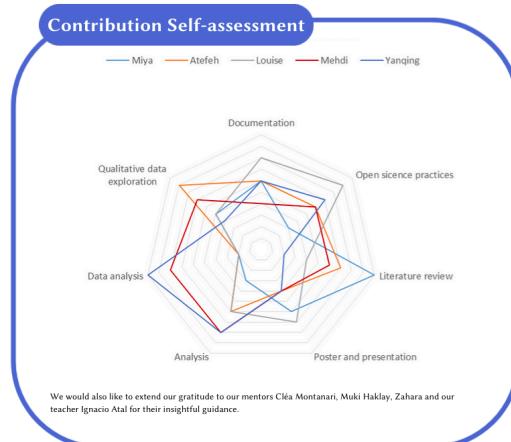
License: [GNU GPL v3.0](#)

## REPLICABILITY

Documentation	See Part 8 [GRAPHS REPLICABILITY] of the Summary which sums up the necessary information to replicate our figures.
Peer tested	The replicability was tested with a peer on a Mac OS (haven't tested it on Windows)

This project was a **collective thinking** journey as all of us got to play diverse roles depending on the needs at a specific time. We made sure to implicate everyone in the decision making and in choosing the direction the research should take. Here are few of the tools we used to ensure that:

- Shared Repository in the group
- Shared repository among the Wikipedia groups
- Regular checks with others on our understanding of vocabulary (common literacy)



## 8. BIBLIOGRAPHY

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## 9. APPENDIX #1 | HOW TO REPLICATE

### Scraped Data Table Informations

	title	action	user	timestamp	comment	duration	flags	expiry
0	Angela	block	Angela	2004-12-23	Checking the block messages still work ok in 1.4	infinity	NaN	NaN
1	Dori	block	Dori	2004-12-23		testing	infinity	NaN
2	Brion VIBBER	block	Brion VIBBER	2004-12-23		testing	infinity	NaN
3	#13255	unblock	Angela	2004-12-23		me	NaN	NaN
4	#13254	unblock	Angela	2004-12-23		NaN	NaN	NaN

Title (USER) = the user being blocked

Action = block or unblock - we will only focus on block

User (ADMINISTRATOR) = the person(administrator) implementing the block

Timestamp = the block event date

Comment = blocking rationale

Duration = blocking scheduled duration

flag= mysterious information

Expiry = sometimes, a timestamp

→ For better clarity, we changed the names ‘title’ to ‘user’ and ‘user’ to ‘administrator’

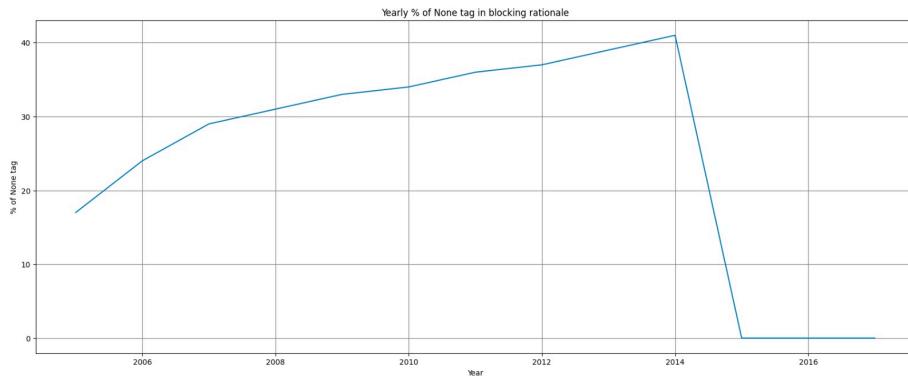
(as seen below). Note: administrator refers here to all those performing the blocks (human administrators, bot administrators and bots)

	users	action	administrator	timestamp	comment	duration	flags	expiry
0	Angela	block	Angela	2004-12-23	Checking the block messages still work ok in 1.4	infinity	NaN	NaN
1	Dori	block	Dori	2004-12-23		testing	infinity	NaN
2	Brion VIBBER	block	Brion VIBBER	2004-12-23		testing	infinity	NaN
3	#13255	unblock	Angela	2004-12-23		me	NaN	NaN

\*Note: you may encounter the name back\_up folder which corresponds to the Open\_Science\_B1 Google Drive folder.

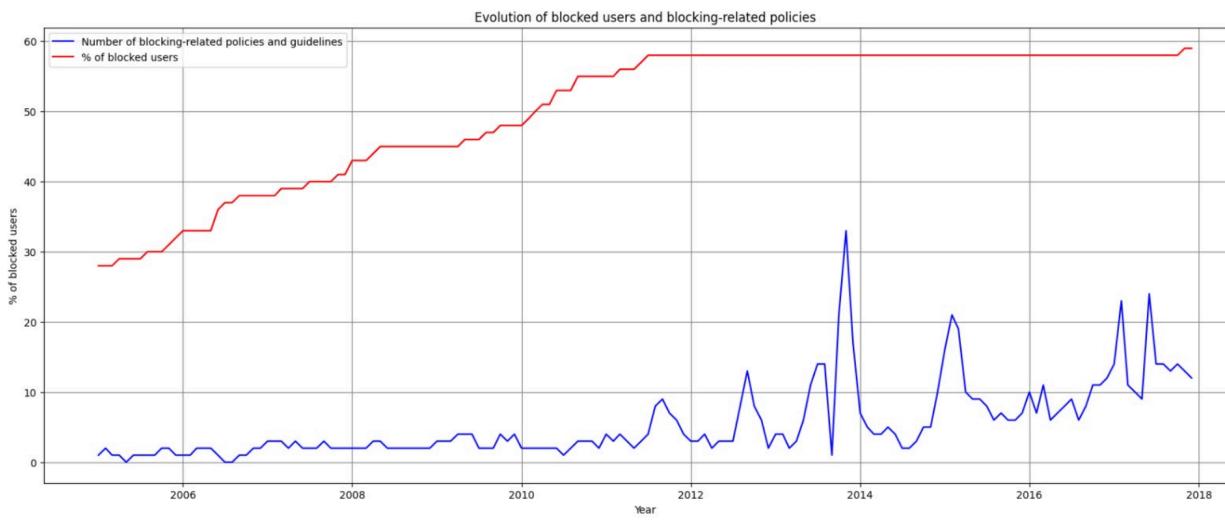
## How to replicate the Figures

**FIGURE #1 | Percentage of None tag in blocking rationale over time (2005-2018)**



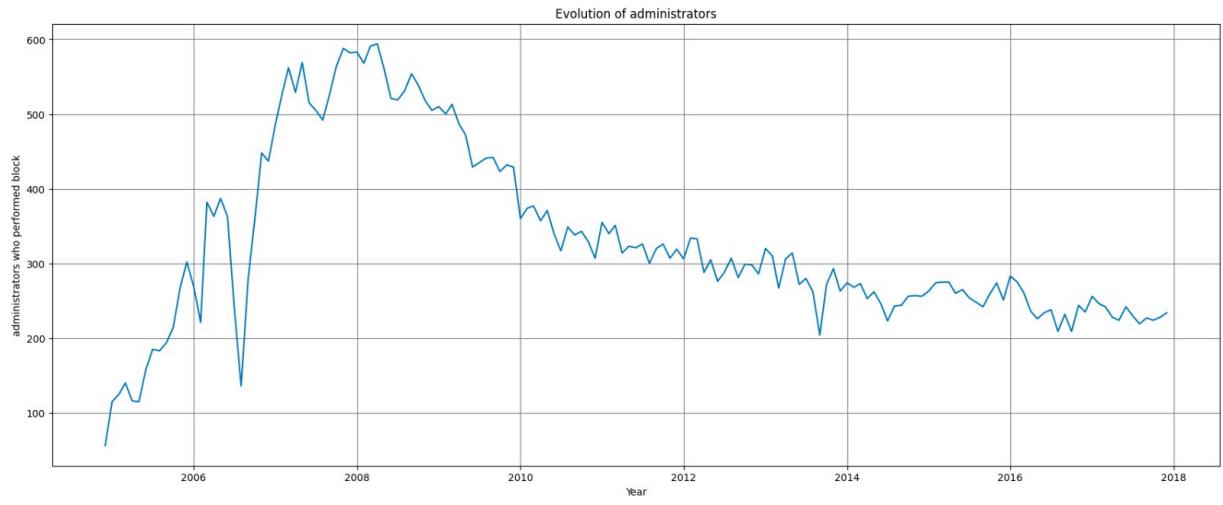
Source Data	Raw Data file	Cleaned Data file	Code	Methodology
Wikipedia Open_Scienc e_B1 folder	See folder scraped_data0	Block_log_data_ new.csv (in data_original folder)	Analyse_blocklog data_original.ipynb (in back_up folder)	Run code until [cell 67]

**REPLICATION OF FIGURE 2 (INITIAL) | Evolution of blocked users and blocking-related policies**



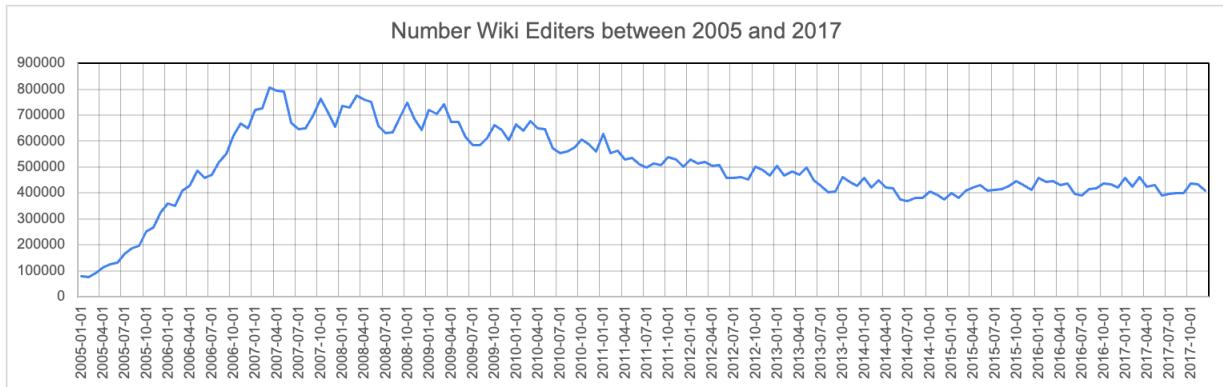
Source Data	Raw Data file	Cleaned Data file	Code	Methodology
Wikipedia Open_Scienc e_B1 folder	See folder scraped_data0	Freq_policies_ monthly.csv (in data_original folder)  Block_log_data_ new.csv (in data_original folder)	Analyse_blocklog data_original.ipynb (in main folder)	Run code until [Cell 35]

**FIGURE #4 | Number of administrators performing blocks over time (2005-2018)**



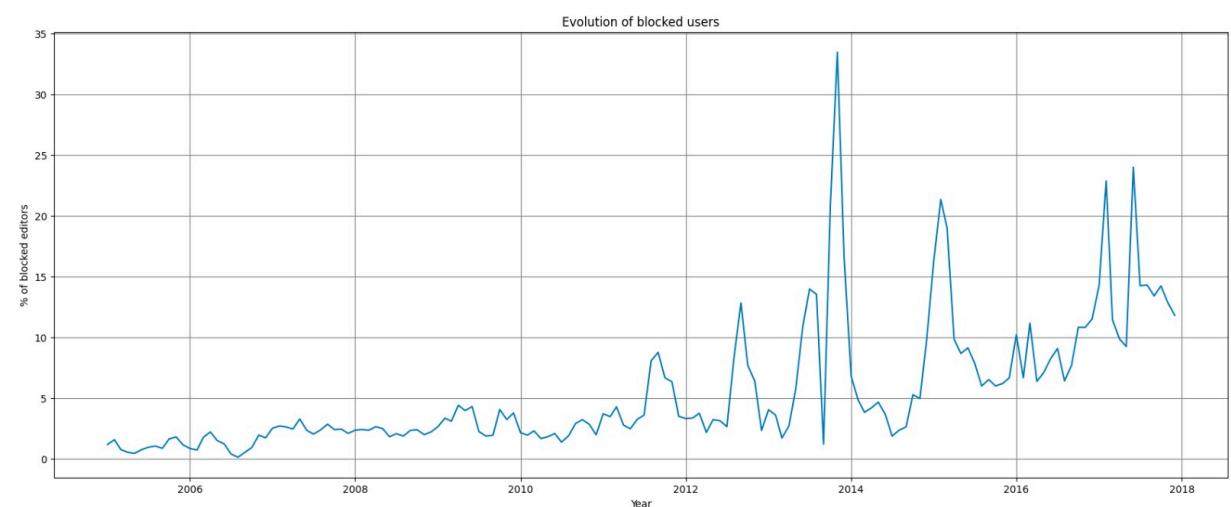
Source Data	Raw Data file	Cleaned Data file	Code	Methodology
Wikipedia Open_Science_B1 folder	See folder scraped_data0	Block_log_data_ new.csv (in main folder)	Admin_Analysis_Blo cklog_Data.ipynb (in main folder)	Run code until [cell 23]

**FIGURE #5 | Number of Wikipedia editors over time (2005-2017)**



Source Data	Raw Data file	Cleaned Data file	Code	Methodology
<a href="#">Stats.wikime dia</a>	Csv file from Stats.wikimedia	MonthlyEditAndE ditorsFrom2004- 2017.csv (in data_original folder)	na	Figure can be extracted directly from stats.wikimedia website

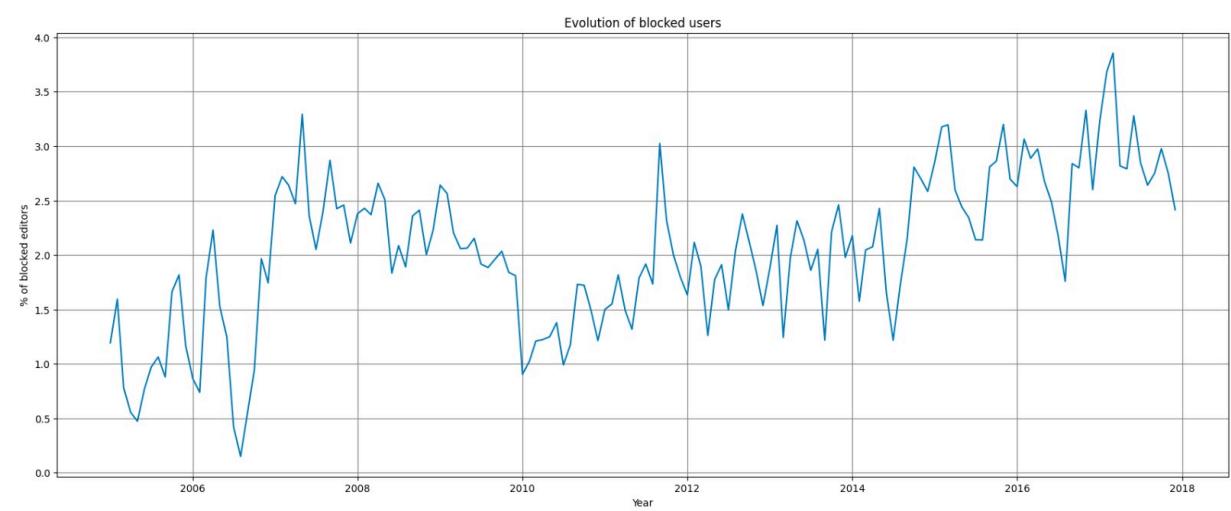
**FIGURE #6 | Evolution of blocked users by any Administrators over time (2005-2018)**



\*blocked users = blocked editors

Source Data	Raw Data file	Cleaned Data file	Code	Methodology
Wikipedia Open_Scienc e_B1 folder	See folder scraped_data0	Block_log_data_ new.csv (in main folder)	Analyse_blocklog data_original.ipynb (in main folder)	Run code until [Cell 29]

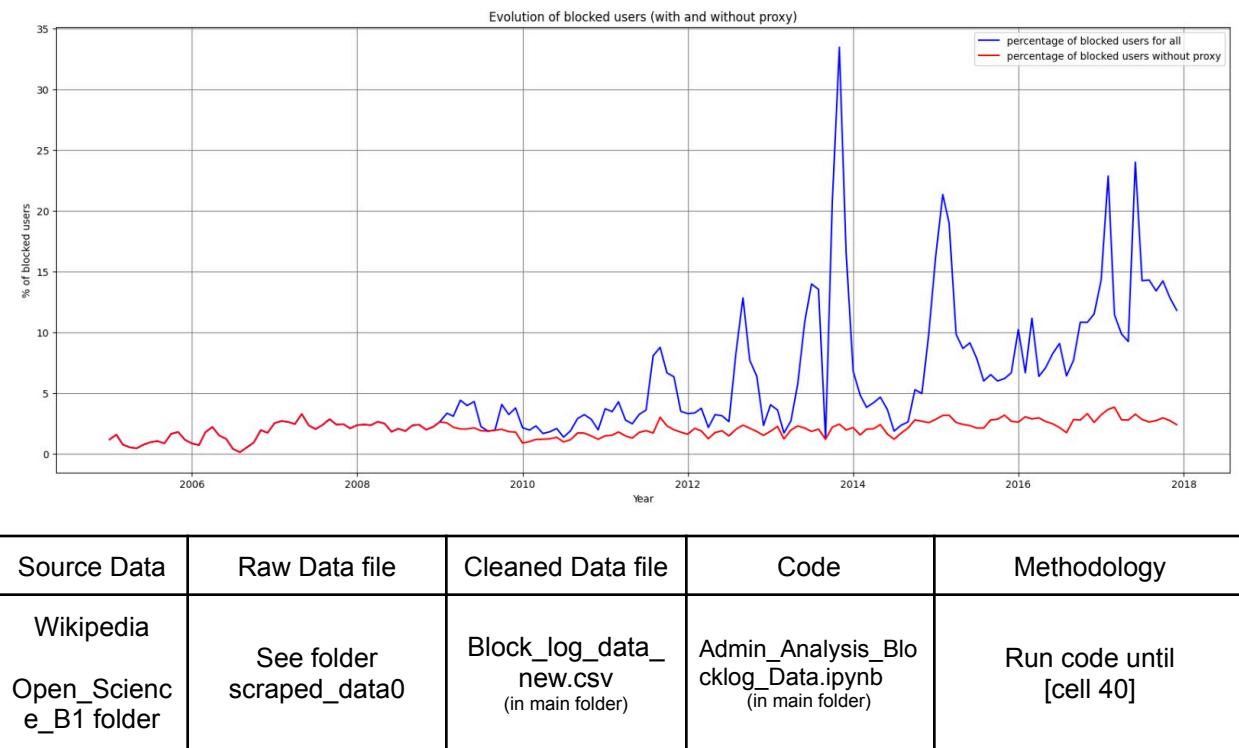
**FIGURE #7 | Evolution of blocked users by Human Administrators only over time (2005-2018)**



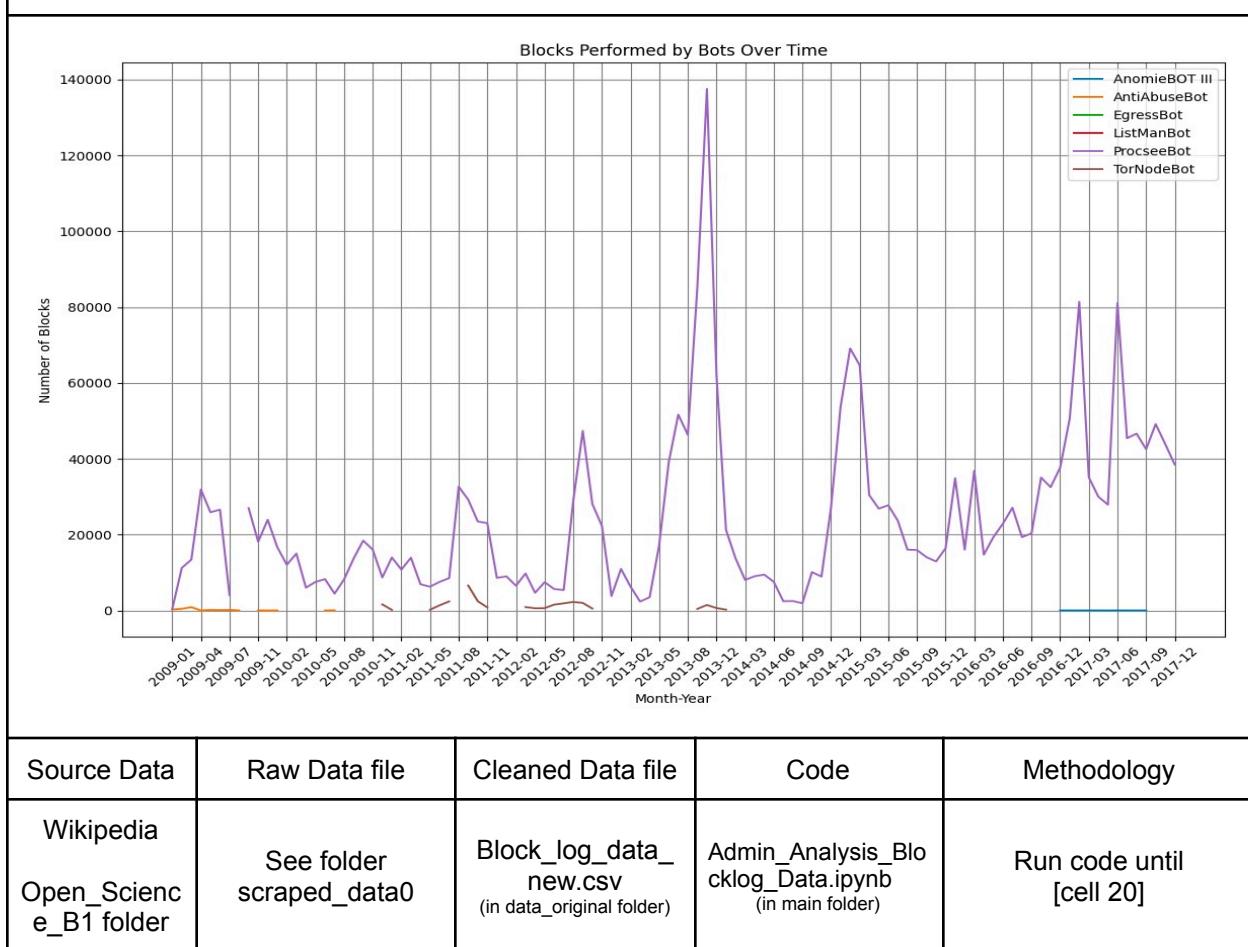
\*blocked users = blocked editors

Source Data	Raw Data file	Cleaned Data file	Code	Methodology
Wikipedia OR Open_Scienc e_B1 folder	See folder scraped_data0	Block_log_data_ new.csv (in main folder)	Admin_Analysis_Blo cklog_Data.ipynb (in main folder)	Run code until headline 'exclude procseebot'

**FIGURE #8 | Evolution of blocked users with and without ProcseeBot (2005-2018)**



**FIGURE #9 | Evolution of blocked users per Bots only over time (2005-2018)**



## 10. APPENDIX #2 | PEER ASSESSMENT OF REPLICABILITY

To ensure best replicability of the work, one of our peers reviewed the replicability of the project, taking notes of the improvements to be made for better understanding. You can see below an example of the grid and changes that were suggested.

Previous	Change to make
File : Analyse_blocklog data.ipynb	
Change Name of file Analyse_blocklog data.ipynb	Admin_Analysis_Blocklog_Data.ipynb
Title: "identify bots administrators (not tagged as administrators maybe)	Identify Bots among Administrators* (*all those performing blocks = blocking agents)
Cell 20	Switch of the line for total accumulation <pre># ax.plot(total_blocks_accumulation.index.astype(str),           total_blocks_accumulation, label='Total Blocks', linewidth=2,           linestyle='--', color='black')</pre>
Cell 39	Spelling Proxybot → ProcseeBot
Last title: chaek the correlation between the numbers of blocking events and	Remove the last title
In Read.me	
Add paragraph with info on the back_up folder	<ul style="list-style-type: none"> <li>• Data_original : all data before our analysis</li> <li>• Data_results : all outputs we generated with the analyzing notebook</li> <li>• Scrapped_data: empty folder to store the new user scraped data</li> <li>• Scrapped_data0: the raw scraped data that we collected</li> </ul>
Install dependencies	Explain further the 2 options to install everything that is documented in the requirements.txt file
Precisions for Codes	Codes Analyse_blocklog data_original.ipynb and Admin_Analysis_Blocklog_Data.ipynb are using the block_log_data_new.csv file (our scraped data). If you are working

	with your own scraped data, please feel free to change the code according to the name of your new csv file.
Add replication steps	<p>1. Replicating the figures (.....) using our scraped and cleaned data:</p> <ul style="list-style-type: none"> <li>a. Download the back_up folder from the Google Drive</li> <li>b. Open your python software (Visual Code for us) and open the folder back_up: you will see the data files displayed.</li> <li>c. Create and activate a virtual environment (code) into the terminal</li> <li>d. Install dependencies : make sure you install everything documented in the requirements.txt file (code)</li> <li>e. Run the codes from the folder back_up (see summary appendices for How to replicate specific figures)</li> </ul>

## 11. APPENDIX #3 | LOGBOOK

30/01/24

### INFOS

**2007:** first year of implementation of the dropdown menu

### SUM-UP OF THE FIGURES TO REPRODUCE (and associated files)

	Initial figure and file
<p><i>Figure 1: cumulative frequency of blocking-related policy pages creation. As it will be explained in the data section, we were not able to use the data before Dec 2004, so our scope was reduced to 2005-2017</i></p>	<p>Initial figure and file</p> <p>File:</p> <ul style="list-style-type: none"> <li>(1) Blocking policy-related pages creation timeline on English Wikipedia.xlsx</li> <li>(2) freq_policies_monthly.csv</li> </ul> <p>Source: Wikiblame tool</p> <p>Script: excel</p>
<p><i>Figure 2: evolution of the monthly percentage of blocked users over a number of editors compared to the cumulative frequency of policy creation</i></p>	<p>Files:</p> <ul style="list-style-type: none"> <li>(1) block_log_data_cleaned.csv</li> <li>(2) MonthlyEditAndEditorsFrom 2004-2017.csv</li> <li>(3) H1_Blocked users vs total editors.csv</li> </ul> <p>Source: Wikimedia Stats</p> <p>Script: Excel, no access to plotting</p>
<p><i>Figure 3: cumulative frequency of tags in the dropdown menu Ipbreason-dropdown</i></p>	<p>File:</p> <p>Blocking rationales dropdown menu tags creation timeline.csv</p>

	<p>Source: Wikiblame tool</p> <p>Script: excel but no access to graph plotting</p>
<p><i>Figure 4: ratio of “None” tags for all block events compared to the number of available blocking reasons in the dropdown menu, from year 2005 to 2017 (scope of our work)</i></p>	<p>Files:</p> <ul style="list-style-type: none"> <li>(1) block_log_data_cleaned.csv</li> <li>(2) Blocking rationales dropdown menu tags creation timeline.csv</li> </ul> <p>Source: Scrapping + Wikiblame tool</p> <p>Scripts:</p> <p><a href="#">Fetch_Block_Log_data.ipynb</a></p> <p><a href="#">Analyze_Blocklog data.ipynb</a></p>
Figure poster 1	<p>File: Blocking policy-related pages creation timeline on English Wikipedia.xlsx</p> <p>Script: Excel</p>
Figure poster 2	

31/01/24

KEEPING TRACK OF DATA RELATED ISSUES: see [Table](#) Yanqing  
 KEEPING TRACK OF FILES: see [Table](#)

**RESEARCH PLAN DEVELOPMENT**  
 (to be follow for the next days)  
 1. Data Scraping from 2004 to 2023

- a. Table of encountered issues and troubleshooting in script and scraped data (Yanqing)
- b. Formatting of the data methods
- c. Cleaning of the data: producing the script (?) Yanqing

## 2. Data Analysis from 2004 to 2023

- a. Figure 2: first curve (*monthly percentage of blocked users over a number of editors compared*)
  - to give the quantitative evolution of blocked users on Wikipedia
  - need to check if they count the number of blocks (one filled form with a comment from the administrator) OR if they count the number of blocked users (looking into their names)
- b. Figure 2: 2d curve (*cumulative frequency of policy creation*)
 

Working with the original file (name), we looked into how they found the number of 58 policies regarding the blocking policy (which has only one page on Wikipedia). We were not able to explain how they reached this number considering their choice of counting the number of outgoing links from the Blocking policy page.

As an alternative, we propose to look into the revision history of the [Blocking policy page](#), where we can access the number of edits, the content of the edits (what got changed). This type of data allows us to look into setting a methodology to do a qualitative analysis of the evolution of the blocking policy through its page content history.
- c. Other figures: Access to other data from policies to update (monthly editors)

## 3. Peak Analysis

Looking into the peaks taking the peak of 2013 as our case study: In the timelapse of 4 months (from xxx to xxx), we can see that the *monthly percentage of blocked users over a number of editors compared* is reaching a high peak around 33%. As it corresponds to a time where there is no added policy (even if we questioned the 58) we think that looking into the scraped data in more details might give us a better understanding of what could explain the peak.

The analysis would look into the defined time period of minimum to minimum, here from xxx to xxx.

- a. Figure A: Number of administrators who blocked / numbers of blocked users from the scraped data per month
  - Number of administrators/Number of total administrators compared to number of blocked users/ Number of total editors*
  - Number of administrators performing blocks: scraped data
  - Number of total administrators: [link](#)
  - Number of blocked users: scraped data
  - Number of total editors: [link](#) (wikimedia stats)
- b. Figure B: Proportion of each blocking reason (from the dropdown menu) per month during the peak period.
  - Blocking reasons total tags: [Ipbreason tags dropdown menu](#)
  - Blocking reasons: scraped data
- c. Duration of blocking → need to look into the blocking duration policy updates
  - Duration of blocks policy ([link](#))
  - How can we access the revision history of the sub sub category Block duration?

- d. Figure C: Relation between the duration (hard block or not) and the type of comments (blocking reasons)
  - Blocking reasons total tags: [Ipbreason tags dropdown menu](#)
  - Blocking reasons: scraped data
  - Duration: scraped data but too messy
- e. We will design a qualitative analysis methodology to understand the changes which happened before/during/after the peak in terms of blocking policy. For that we plan in looking at the revision history of the Blocking policy page during the **xxx period** of 2013

#### COMMENTS FROM MENTORS

- Regarding the peak analysis, it could be interesting to look if there were any deletion of blocking-related policy
- Defining research question and hypothesis so that research work is coherent
- Always think about how you can test the replicability of your research
- Diversity angle: could look at the diversity of users involved in the blocks (maybe it is many blocks but one user or not?) // same for administrators
- Could look into any major external events during the peak period
- Make sure the qualitative work corresponds to the research question
- Clear definitions of: a block, an administrator, an editor, a user

01/02/24

What actions could be done for better understanding of the wikipedia system:

- Trying to report on wikipedia
- Contact administrators from wikipedia

#### RESEARCH DEVELOPMENT - SUMMARY STRUCTURE

##### **1. RESEARCH QUESTION**

Initial Research Question: How did the Wikipedians' protection from disruptive behavior using blocking evolve on the English Wikipedia along with the implementation of new regulation policies?

Unclear Definitions for: Wikipedian's protection ( → protection policy?) / Disruptive behavior / Blocking / Implementation of new regulation policies / 'How'

##### **2. BLOCKING POLICY RELATION WITH NUMBER OF BLOCKS**

H1: the blocking policy is affecting the blocking performance

Looking at figure 2: suspicious peak in figure 2 → why did it happen? Is it linked to the policies? Here we have a plateau → looked into how they got the data → Don't agree with the 58:

- How did they extract it?
- Not representative of the changes as these policies might have been updated (see revision history)

From "How" to "what" is influencing the blocks, we thought about:

1. Growth of the wikipedia community, the change of numbers of users is not relevant (?)
2. Automated tools for blocking
3. Enforcement of the blocking policy → qualitative analysis of the revision history of wikipedia for the blocking policy page
4. Historical context → lit review (too long)

As the enforcement of the blocking policy doesn't seem to be linked to the blocks peak, we went back to the scraped data and the principal actors of the blocking action: users and administrators. Looking more closely at the administrators as they are the one performing the blocks we wanted to understand better what they are.

### **3. CHARACTERISATION OF ADMIN STATUS**

From the Wikipedia administrators list (873 ??? limitations in years): we discovered that some are bots. We started looking into the scraped data and if there were any bots. (basically looking at the most performing blocking administrators)

→ We found that the most performing one is the ProcseeBot (19/01/2009)

What is ProcseeBot?

Blocked users being removed because they used a VPN (biases for blocking assessment ??)

Associated tag: {blocked proxy} + Not registered as Bot

### **4. DEFINITION OF THE BLOCKING ACTION AND ITS ACTORS (OVERALL SYSTEM OF BLOCKING)**

Schematics

1 block → 1 user → 1 specific duration

About bot blocking agents: // HOW TO SPOT BLOCKING BOTS

- Number of usernames which registered role is bot + administrator:
- Looking at the scraped data, there are other administrators who are bots not being registered as 'administrator' + Not all bots have "Bot" in their usernames! (Ex: CanisRufus)  
→ How to spot all the bots in the scraped data?
- Looked into the tags they are using → assumption: templated tags are used only by bots which could allow us to search blocking agents bots per tags

### **5. BOTS POLICY HISTORY ON WIKIPEDIA (LIT REVIEW)**

### **6. H2: CHARACTERIZATION OF ADMINISTRATORS & BLOCKS**

Decided to concentrate on the peak end of 2013

H2: Introducing bot admin, increased number of blockage in wiki editors taking peak of 2013 as example

H2\*: number stays the same

1. Graph 1: % of blocks performed by total of blocking agents (curve with the peak in 2013)
1. Graph 1: % of blocks performed by human
2. Graph 2: % of blocks performed by bots (does it shadow figure 2 ??)

When filling the categories, please think about adding:

- Limitations
- Related OS practices
- Files / Scripts Names