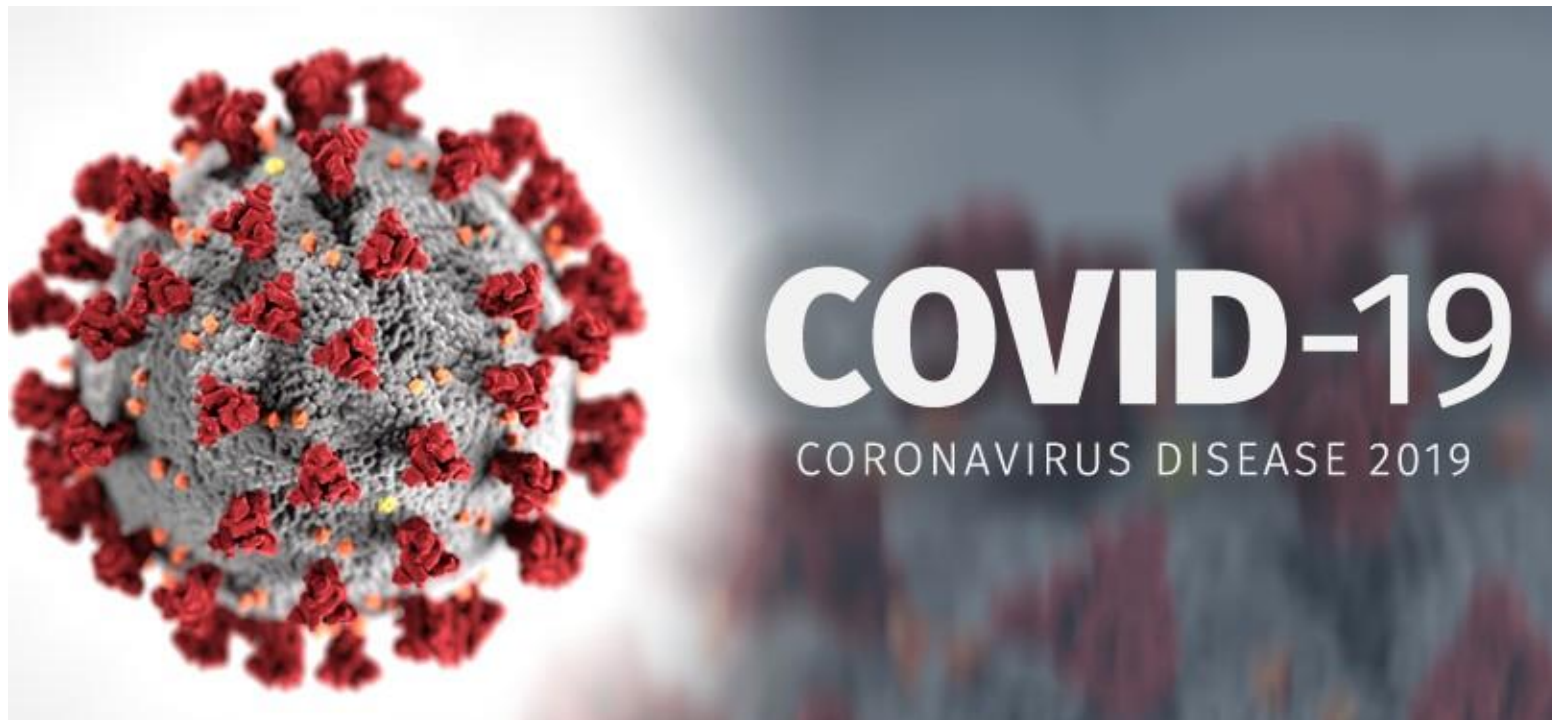


Conspiracy theories about Covid-19



Conspiracy theories around Covid-19:

- Origin of the virus
- Use of chloroquine to fight the virus
- Vaccine race
- Effectiveness of wearing the mask
- ...

Social networks ideal place for the diffusion of conspiracy theories?

Study Objectives:

- Identify the actors and public figures involved in conspiracy theories
 - The actors who spread these theories
 - The targets of these theories
- Diffusion of conspiracy theories around Covid-19:
 - Community effect?
- Identify the topics covered in conspiracy theories around Covid-19
 - Textual analysis: Youtube

Contents

- Background, current events and research framework
- Statistical analysis on Twitter
- Textual analysis on Youtube
- Conclusion

The media talks about conspiracy theories to denounce them

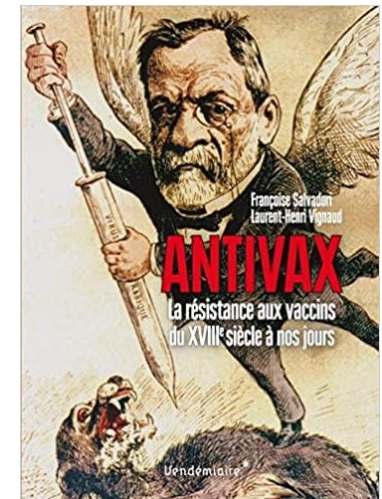
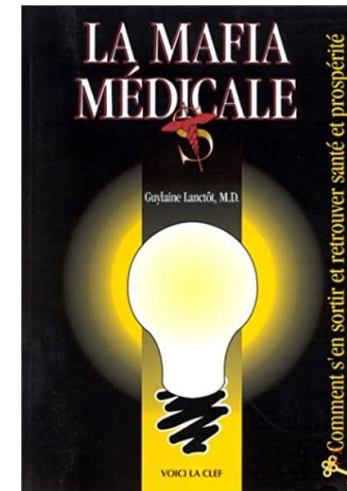
- Example with an article from *Le Monde* (March 28, 2020)

L'épidémie de Covid-19 et la popularité des théories complotistes en France

Le documentaire « Hold-up » en est l'exemple le plus récent : les thèses conspirationnistes sont devenues « mainstream ».

Conspiracy theories did not start with the 2020 pandemic

- Vaccines and conspiracy theories: example with the essay by ex-doctor Guylaine Lanctôt, *La Mafia Médicale* (1996)



Conspiracy theories studied in the Twitter section:

- 5G and Covid-19
- Bill Gates and the origin of the virus
- Hydroxychloroquine

Vaccine-related theories: not studied

- Too broad a theme
- Does not concern only Covid-19

Research media: Twitter and Youtube

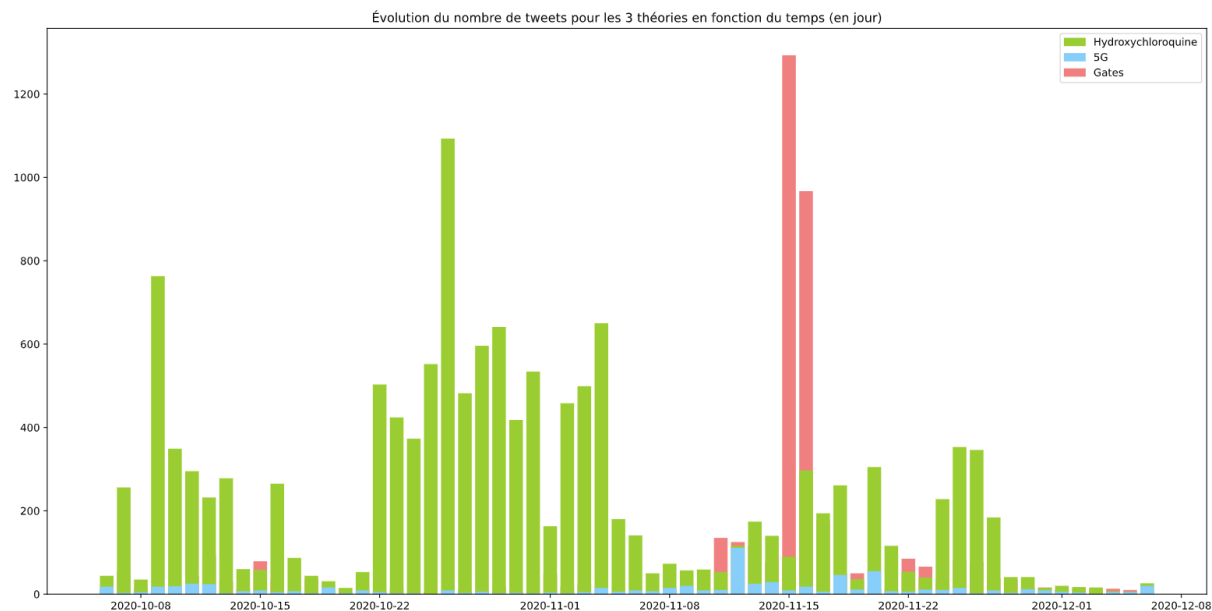
Working method:

- First tool tested: Gazouloire
 - Problems: Gazouloire uses Python 2
- Second tool tested: Tweepy (retrieving tweets from keywords)
 - only retrieves 100 tweets from one week ago
- Tool used: Twitter API
 - 50 queries maximum: create 8 developer Twitter accounts to suck up enough tweets

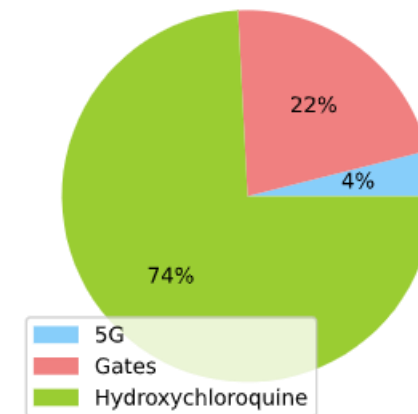
- Code to launch Twitter queries:

```
curl --request POST \
  --url https://api.twitter.com/1.1/tweets/search/30day/dev30Days.json \
  --header 'authorization: Bearer
AAAAAAAAAAAAAAAAAAAAALB7JgEAAAAAnmfvk1wZB6e1kRxyhFqXz6gPZrw%3
D0uEiTXM6WCeiJFe2JHGZFIJ60VpI57FJwkhjreUUWWT89E3z7H' \
  --header 'content-type: application/json' \
  --data '{
    "query": "hydroxychloroquine coronavirus lang:fr",
    "maxResults": "100",
    "fromDate": "20201120000",
    "toDate": "20201121159"
  }' > 12Nov_00_12.json
```

Results and Analysis:

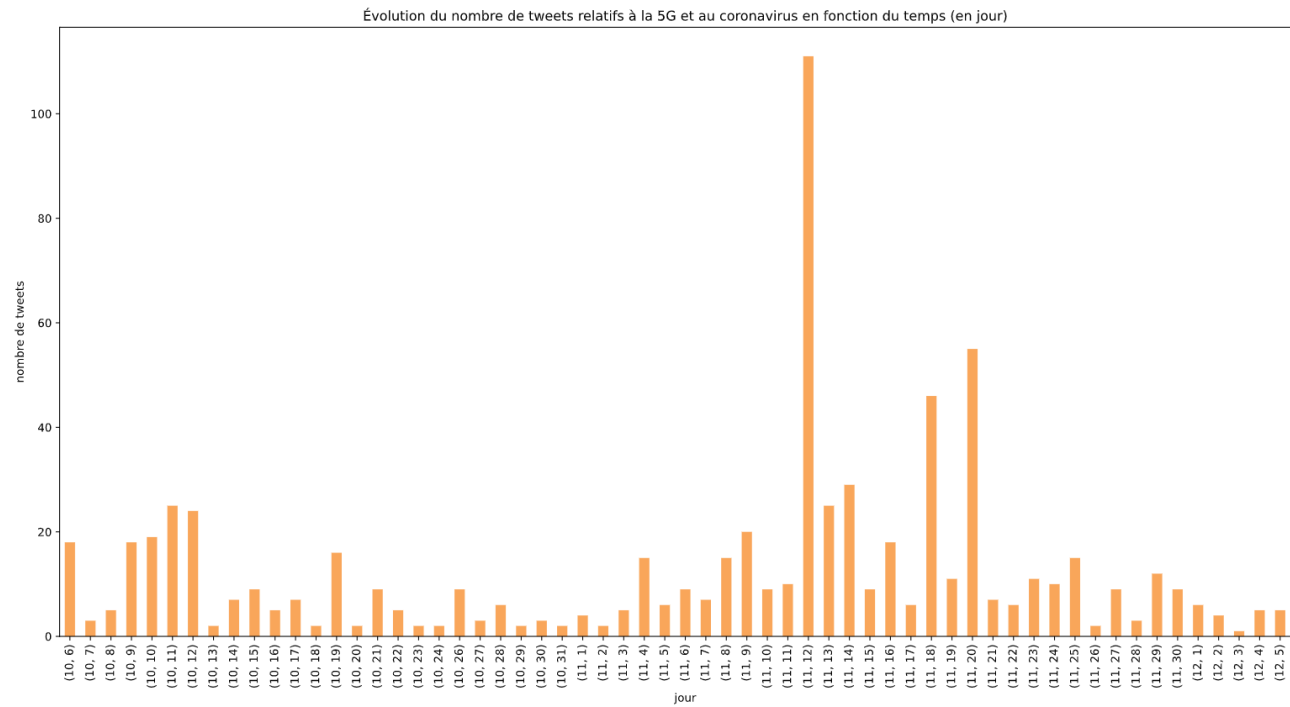


Proportion de tweets par théorie (en pourcentage)



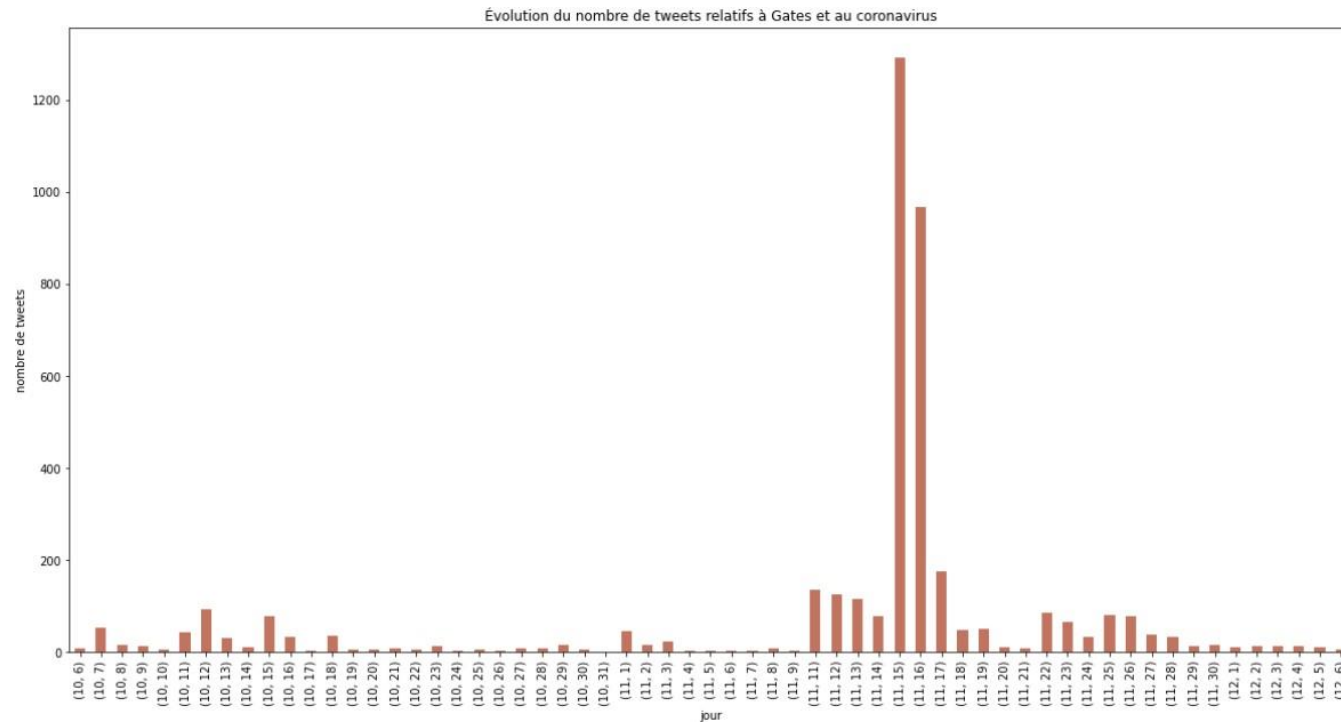
Evolution of the number of tweets related to 3 theories and the coronavirus

Results and Analysis:



Evolution of the number of tweets related to 5G and coronavirus

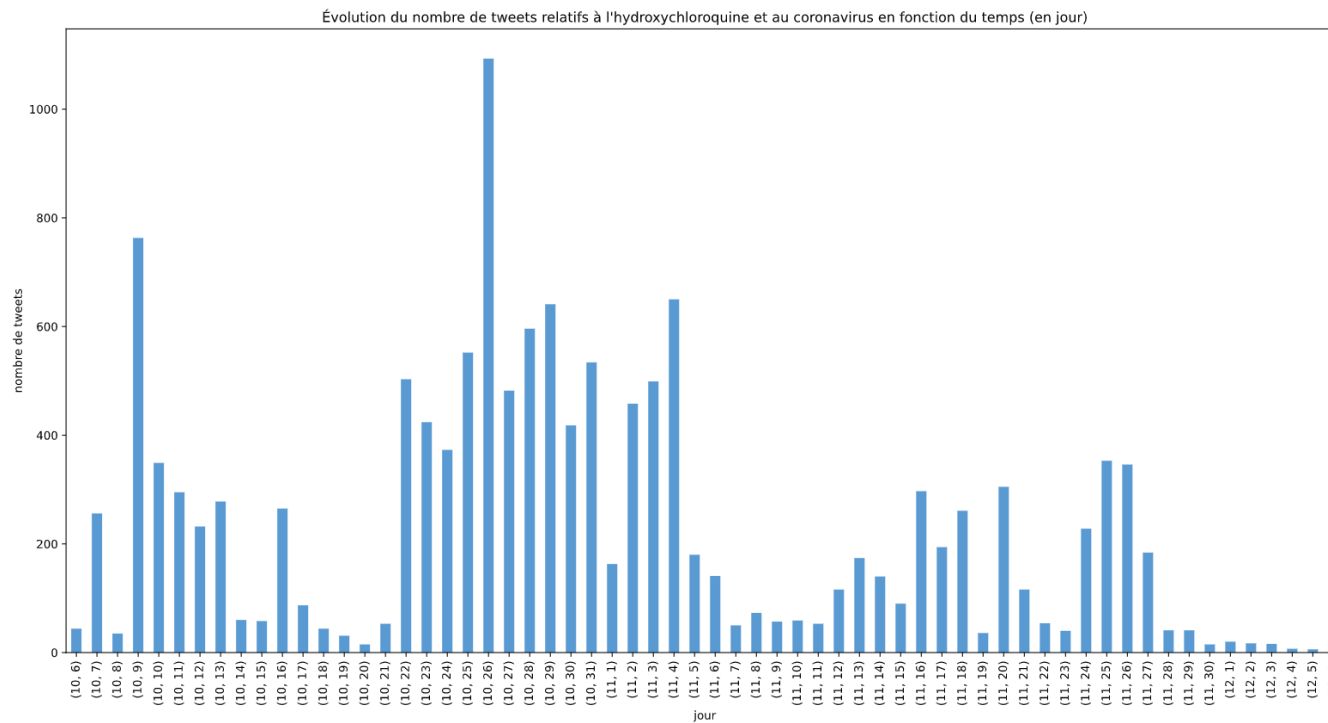
Results and Analysis:



Evolution of the number of tweets related to Gates and the coronavirus

Dutheil/Lauby/Missaoui/Viera

Results and Analysis:



Evolution of the number of tweets related to hydroxychloroquine and coronavirus

Dutheil/Lauby/Missaoui/Viera

Results and Analysis:

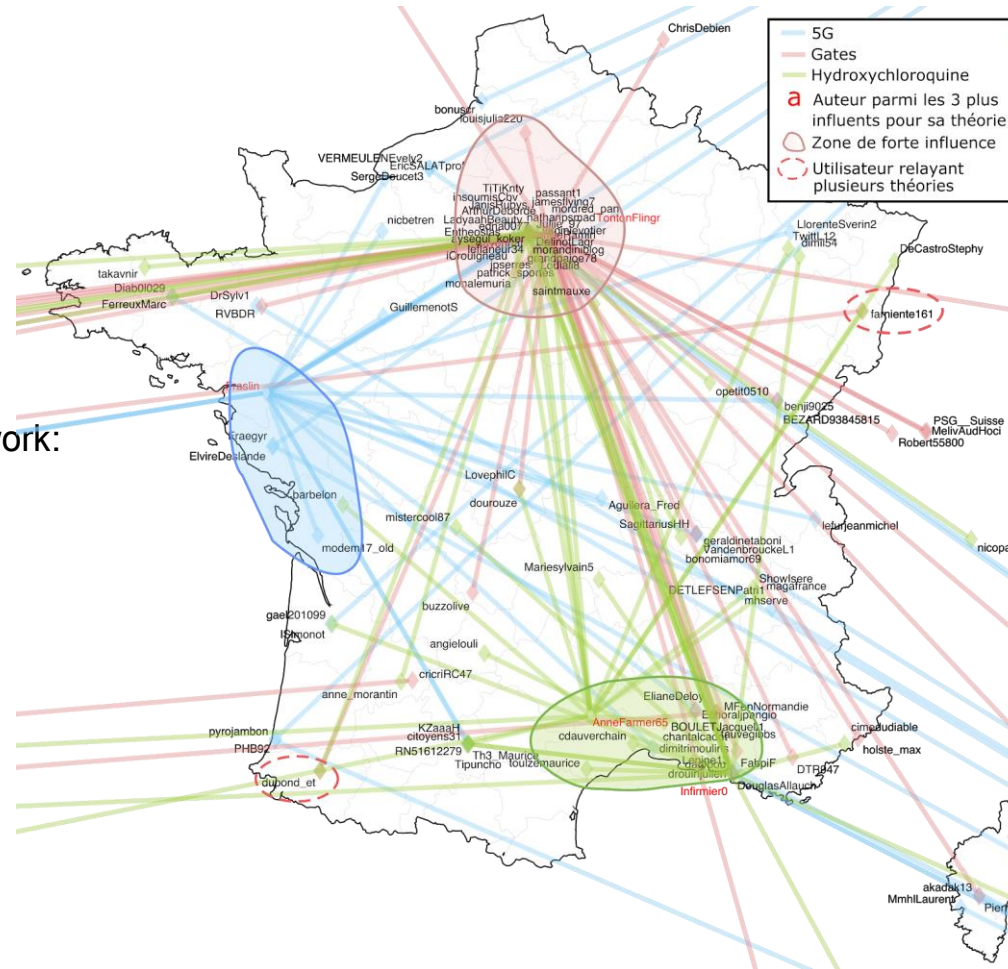
Theory	Author
5G	Fraslin
	RaoulDidierOff
	BobTheCentrist
Gates	UncleFlingr
	PATRIOTOSORUS
	lafontaine_lj
Hydroxychloroquine	Nurse0
	AnneFarmer65
	morandiniblog

Results and Analysis:

Theory	Author	Number of arcs	Location
5G	Fraslin	21	Nantes, France
	RaoultDidierOff	18	Tel Aviv, Israel
	BobTheCentrist	9	Koszalin, Poland
Gates	UncleFlingr	35	Paris, France
	PATRIOTOSORUS	7	Bryce, Utah, USA
	lafontaine_lj	5	Quebec, Canada
Hydroxychloroquine	Nurse0	19	Marseille, France
	AnneFarmer65	15	Le Caylar, France
	morandiniblog	12	Paris, France

Results and Analysis:

Mapping the conspiracy network:



Dutheil/Lauby/Missaoui/Viera

Main relays of conspiracy theories around Covid-19 :

- Not the traditional online media
- A number of users particularly followed
- Creation of a "conspiracy community"

Propagation of theories in a geographical area:

- All the more so as the individuals in this area feel concerned, worried or ill-informed about the subject

Mechanisms that allow these theories to spread so much :

- Textual analysis on Youtube

Working method:

- Youtube:
 - Videos mostly critical of conspiracy theories
 - Hard to find conspiracy videos

- Three selected videos:
 - **"Hold-up"**, a free report on the "WhataBeautifulWorld Youtube Channel".
 - **"When conspiracy theorists doubt the existence of Covid-19"** on the channel "FRANCE 24
 - **"Covid-19 we are saved the vaccine-viagra arrives"** on the channel "Riposte Laïque

- Tools used:
 - Youtube Data Tools: "Video Info and Comments Module" option
 - RStudio: performing the text analysis

Video 1: "hold-up " theorists



Video 2: "When conspiracy
doubt the existence o
Covid-19 "

Dutheil/Lauby/Missaoui/Viera



Video 3: "Covid-19: we are saved
the viagra vaccine is coming

Results and Analysis:

1) Lexical field of fear



Video "hold-up



Video " When conspiracy theorists doubt the existence of Covid-19 "

Dutheil/Lauby/Missaoui/Viera



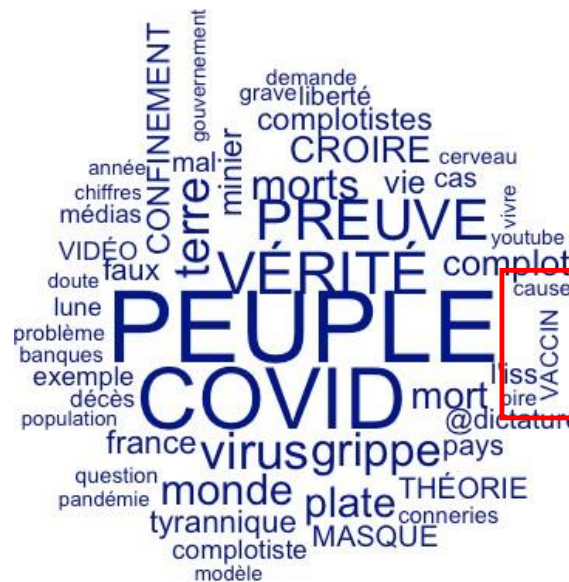
Video " Covid-19 : we are saved the viagra vaccine is coming "

Results and Analysis:

2) Vaccine: a recurring conspiracy theme



Video "hold-up



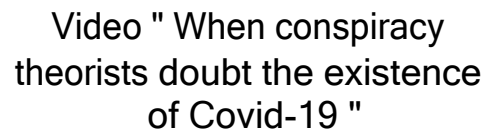
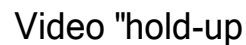
Video " When conspiracy theorists doubt the existence of Covid-19 "

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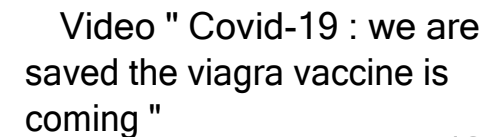


Video " Covid-19 : we are saved the viagra vaccine is coming "

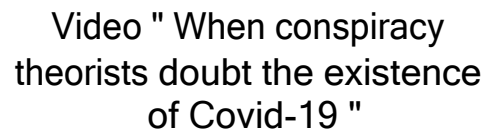
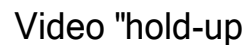
3) Highly criticized government



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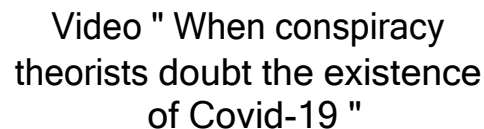
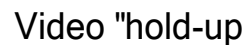


4) Actors in the conspiracy theory: Trump, Macron, Bill Gates

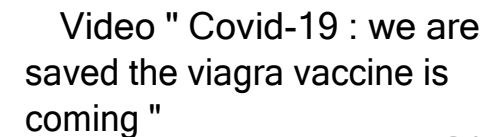


Video " Covid-19 : we are
saved the viagra vaccine is
coming "

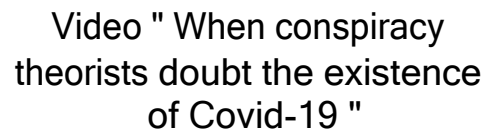
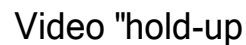
5) Other conspiracy theories: flat earth, masks, moon...



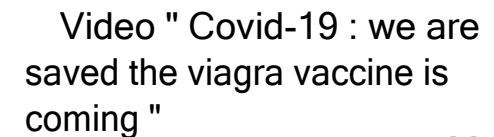
Dutheil/Lauby/Missaoui/Viera



5) Other conspiracy theories: flat earth, masks, moon...



Dutheil/Lauby/Missaoui/Viera



Social networks

- A breeding ground for conspiracy theories
 - Freedom of expression, anonymity, ...
 - Reaction to current events, governmental measures
- Propagation of theories
- Diffusion of theories mostly
 - Within the conspiracy community itself "Community" effect
 - Other users of social networks little affected by theories
- Actors of conspiracy theories
 - Public figures: Donald Trump, Bill Gates, ...
- Recurrent themes of theories around the Covid-19
 - Government Criticism
 - Fear of the virus
 - Vaccine
 - ...

Social networks fight against the spread of conspiracy theories

- Twitter's algorithms: labelling tweets deemed "conspiracy", "fake news"
- Algorithms of Youtube: Highlighting or not of videos in relation to the subject