

# **Viral Tweets, Fake News and Social Bots in Post-Factual Politics: The Case of the French Presidential Elections 2017**

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20th Euprera Congress, Aarhus, 27-29th September 2018

# Post-Factual Politics in the Age of Social Media

1. **Algorithms based on popularity rather than veracity**, linked to a business model based on **views** and **likes**, where **novelty** and **sensationalism** are of the essence;
2. **Social trends of “whistle-blowing”** linked to conspiracy theories and a pejorative image of corporate or institutional communication, which cast doubt on the neutrality of traditionally so-called expert figures, such as independent bodies or academics;
3. **Algorithm-fuelled social dynamics on social networking sites** which structure publics by similarity, leading to a **fragmented digital public sphere** where like-minded individuals congregate digitally, providing an “echo-chamber” effect susceptible to encourage even the most extreme political views and the “truths” upon which they are based.



**HOAX-NET  
INFO**

**TOUJOURS VERIFIER  
LA VERACITE D'UNE  
INFO AVANT DE LA  
PARTAGER !**



**Présidentielle: Onze fake news qui circul...**

En cette période d'entre-deux-tours les fausses rumeurs sur l...

20MINUTES.FR



**CrossCheck**

Travailler ensemble pour donner des informations authentiques

[En savoir plus sur le projet CrossCheck](#) - [Visit English version of this page](#)

## BLOG EN DIRECT - RSS



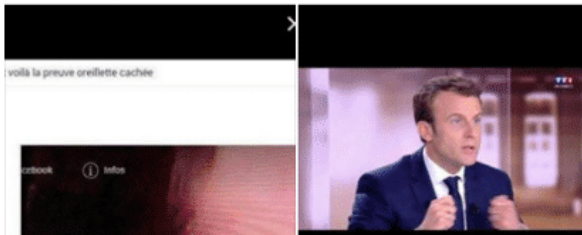
### Emmanuel Macron avait-il une oreillette pendant le débat du 3 mai?

Posted on May 5, 2017



**OPEN YOUR EYES** a ajouté 3 photos.  
8 h ·

Pas de fiches pour Macron mais une oreillette ? bizarre ...



Crosscheckée par



SHARE

## DES QUESTIONS



**Emmanuel Macron avait-il une oreillette pendant le débat du 3 mai?**



**Emmanuel Macron a-t-il ouvert un compte offshore?**



**Brigitte Macron a-t-elle lancé une consultation sur Twitter qui a tourné**



**Macron annonce  
une loi contre  
les « fake news »**



# Political Social Bots on Twitter

Increasingly widespread around the world, over at least the last decade.

Kremlin bot army (Lawrence Alexander on GlobalVoices.org; Stukal et al., 2017).

DFRLab (Atlantic Council)



A “social bot” is:

“a computer algorithm that automatically produces content and interacts with humans on social media, **trying to emulate and possibly alter their behavior.**”

(Ferrara, Varol, Davis, Menczer, & Flammini, 2016, p. 96)

## French Presidential Election (April/May 2017)

Oxford Internet Institute (Howard et al., 2017a; 2017b)

Atlantic Council (DFRLab, 2017)

First Monday (Ferrara, 2017)

Data For Democracy (Schaffer et al., 2017)



# Political Bots during the French Presidential Elections

"The proportion of traffic originating with highly automated accounts doubled between the first and second round of voting." (Howard, P. N., Bradshaw, S., Kollanyi, B., & Bolsolver, G., 2017: 1).

16.4% of identified robot-generated content during the second round (*ibid.*).

Schaffer et al. suggest both pro-Macron and pro-Le Pen bots.

# Political Bots during the French Presidential Elections

"some of the bot accounts we uncovered were created at the beginning of November 2016, shortly before the 2016 U.S. Presidential election, and used only for a week to support of alt-right narratives; then they “went dark”, showing no activity till early May, in support of alt-right agenda and the MacronLeaks disinformation campaign in the context of the 2017 French Presidential election.”

Ferrara, 2017: 9.

# Going Viral: Political Hashtags



Hashtag	Occurrences
#macronleaks	106 523
#jamaismacron	79 038
#toutsaufmacron	41 379
#sortonsmacron	31 554
#macrongate	24 935
#dangermacron	20 768
#stopmacron	11 078
#imposturemacron	5 832
#pascomplicedemacron	5 698
#macroncestnon	5 649
#lepennon	44 525
#7maicontrelepen	17 871
#sortonslepen	9 064
#jamaislepen	6 290
#toutsauflepen	5 775

What goes viral, who is spreading it, and is it fake?

Alhabash, S., & McAlister, A. R. (2015). Redefining virality in less broad strokes: Predicting viral behavioral intentions from motivations and uses of Facebook and Twitter. *New Media & Society*, 17(8), pp.1317-1339.

## Corpus :

- Messages sent from the candidates' official Twitter handles
- Spelling variants of candidates' names, without @ or #
- # based on candidates' names
- Messages containing one or more of 204 selected #, linked to major political themes.

**Over 50M tweets, including 48 879 949 in French, over the period.**

# Between the Two Rounds

Sub-corpus delimited by date: between 23rd April and 7th May:

Candidats qualifiés pour le second tour :



Marine Le Pen



Emmanuel Macron

10 762 515 tweets



# “Viral” Tweets during the French Elections (P2)

Number of times retweeted	Number of tweets
> 1000	1201
> 2000	348
> 3000	197
> 5000	85
> 10 000	35

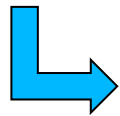
Dual manual coding with 28 categories

**Botometer**<sup>®</sup>  
An OSoMe project (bot•o•meter)






Need to pre-select likely accounts in order to use the algorithm  
(processor capacity)

Identify accounts in our corpus that retweeted >100 times one  
or more of the 1201 tweets that were retweeted > 1000 times  
between the two rounds

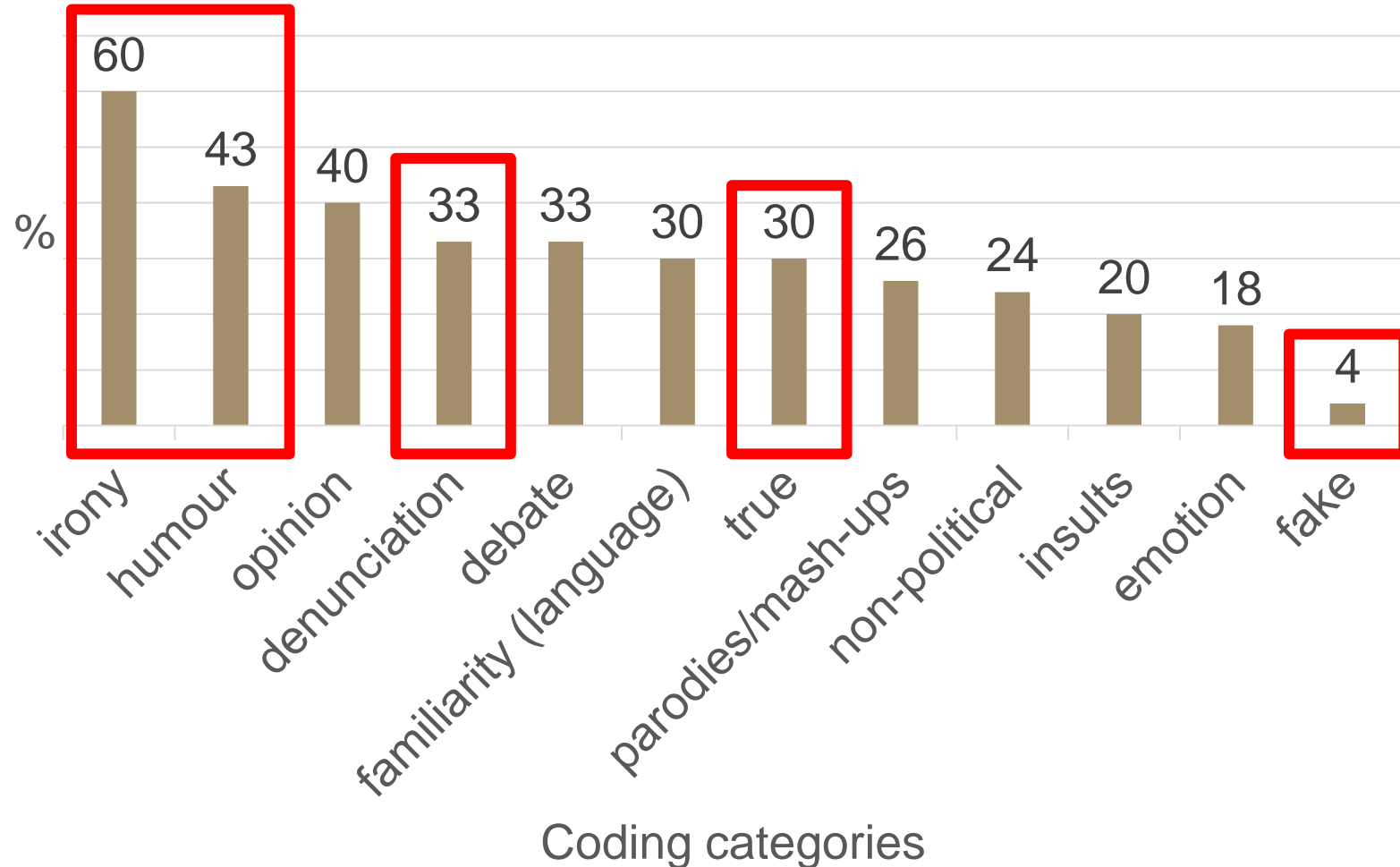


1077 “suspicious” Twitter accounts

# Bot Detection (selection of accounts with singular characteristics)

Tool	Criteria of analysis	Result obtained
	<div>Profile</div> <div>Geolocalisation data</div> <div>Characteristics of activity</div>	Probability of automation
	+	
	+	

# Viral Tweets in Round 2 (n=197)



## Cluster 1 :

from_user	user_id	nbrt	nbrtjour	nbtweetp2	proba	maxrateh	htnb	cluster	botometer
Degage_Hollande	277	1394	99	1464	0.66	118	189	1	4.1/5
Manuel_Hollande	639	1073	76	1078	0.66	113	155	1	3.7
Macron_Jamais	622	1481	105	1706	0.61	88	242	1	4.3



## Cluster 3 : the human



from_user	user_id	nbrt	nbrtjour	nbtweetp2	proba	maxrateh	htnb	cluster	botometer
Degage_Hollande	277	1394	99	1464	0.66	118	189	1	4.1/5
Manuel_Hollande	639	1073	76	1078	0.66	113	155	1	3.7
Macron_Jamais	622	1481	105	1706	0.61	88	242	1	4.3
mrricmas	724	1594	113	5688	0.5	188	276	3	0.4



# Bots Acting Human and Humans Being Bots

Account automation tools:

twtdominator (<https://dominatorhouse.com/twtdominator/>);

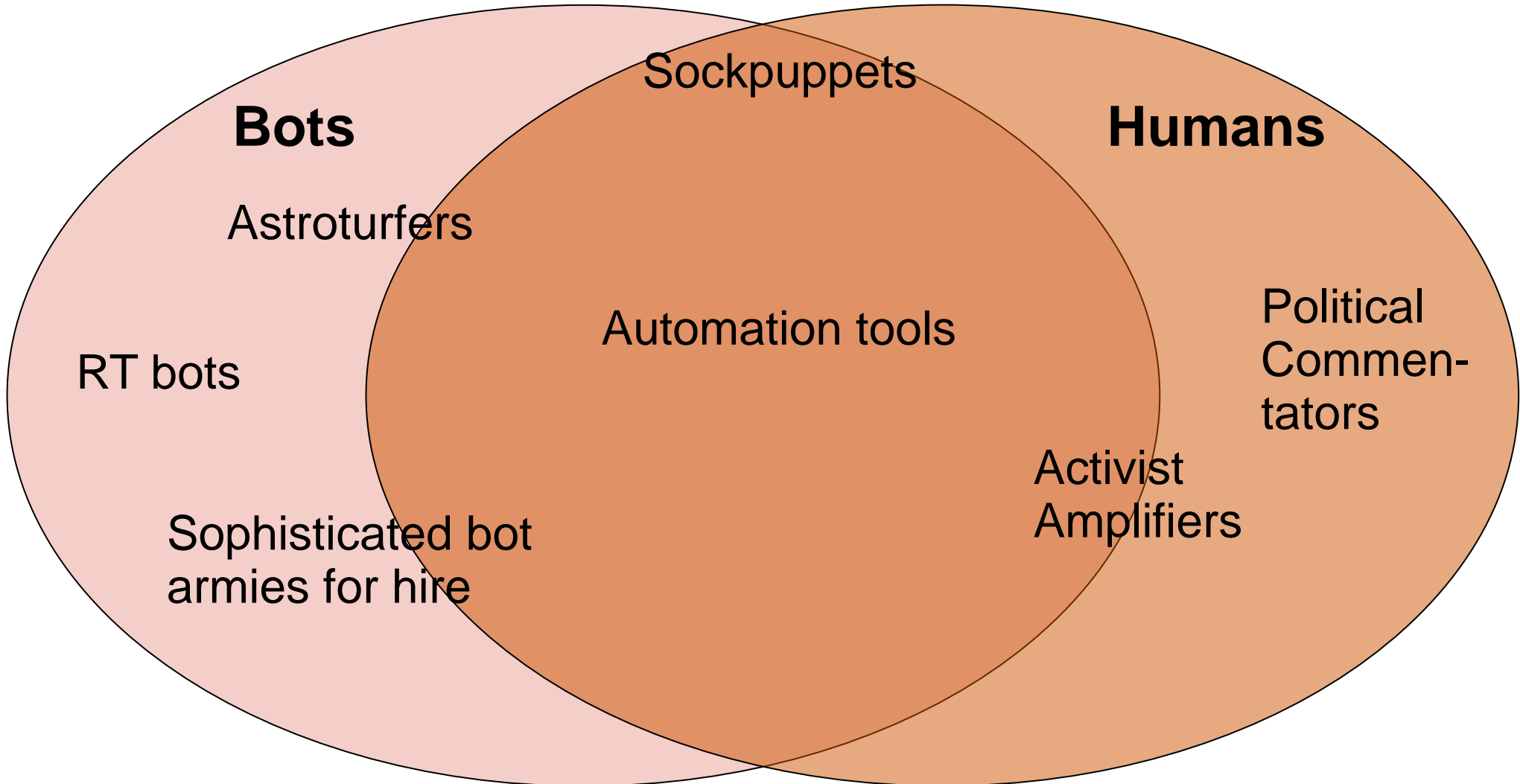
TweetAttacksPro 4 (<http://www.tweetattackspro.com/>);

FollowingLike (<http://www.followinglike.com/>);

HootSuite (<https://hootsuite.com/>);

Social Bakers (<https://www.socialbakers.com/>).

# Profiles of Bot-like Behaviour



RQ: What goes viral, who is spreading it, and is it fake?

Fake news vs. “junk” news:

“various forms of propaganda and ideologically extreme, hyper-partisan, or conspiratorial political news and information. Much of this content is deliberately produced false reporting. It seeks to persuade readers about the moral virtues or failings of organizations, causes or people and presents commentary as a news product. This content is produced by organizations that do not employ professional journalists, and the content uses attention grabbing techniques, lots of pictures, moving images, excessive capitalization, ad hominem attacks, emotionally charged words and pictures, unsafe generalizations and other logical fallacies.”  
(Howard *et al.*, 2017, pp. 3–4).

RQ: What goes viral, who is spreading it, and is it fake?

- Sophistication of algorithms:

“Increasingly sophisticated automation techniques can make reliable detection very difficult indeed.” (Wojcik, S., Messing, S., Smith, A., Rainie, L., & Hitlin, P., 2018: 25)
- Ambiguity of human behaviour

## Recommendations for Political Public Relations Professionals

- Importance of non-factual information
- Beat the bots
- Artifice and algorithms vs timely responses using codes and memes
- Humour, irony and satire: old forms through new channels

- Bessi, A., & Ferrara, E. (2016). *Social Bots Distort the 2016 US Presidential Election Online Discussion* (SSRN Scholarly Paper No. ID 2982233). Rochester, NY: Social Science Research Network.
- Davis, C. A., Varol, O., Ferrara, E., Flammini, A., & Menczer, F. (2016). BotOrNot: A System to Evaluate Social Bots. In *Proceedings of the 25th International Conference Companion on World Wide Web* (p. 273–274). Republic and Canton of Geneva, Switzerland: International World Wide Web Conferences Steering Committee.
- Ferrara, E. (2017). Disinformation and social bot operations in the run up to the 2017 French presidential election. *First Monday*, 22(8), 33 pages.
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- Howard, P. N., Bolsover, G., Kollanyi, B., Bradshaw, S., & Neudert, L.-M. (2017). *Junk News and Bots during the US Election: What Were Michigan Voters Sharing Over Twitter?* Data Memo 2017.1. Oxford, UK: Project on Computational Propaganda.
- Howard, P. N., Bradshaw, S., Kollanyi, B., & Bolsolver, G. (2017a). *Junk News and Bots during the French Presidential Election: What Are French Voters Sharing Over Twitter?* (COMPROM DATA MEMO No. 2017.3). Oxford Internet Institute.
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- Varol, O., Ferrara, E., Davis, C. A., Menczer, F., & Flammini, A. (2017). Online Human-Bot Interactions: Detection, Estimation, and Characterization. In *Proceedings of the Eleventh International AAAI Conference on Web and Social Media (ICWSM 2017)*.
- Woolley, S. C., & Howard, P. N. (2016). Automation, Algorithms, and Politics: Political Communication, Computational Propaganda, and Autonomous Agents — Introduction. *International Journal of Communication*, 10(0), 9.
- Woolley, S. C., & Howard, P. N. (2017). *Computational propaganda worldwide: Executive summary*. Oxford Internet Institute, University of Oxford.
- Wojcik, S., Messing, S., Smith, A., Rainie, L., & Hitlin, P. (2018). *Bots in the Twittersphere*. Pew Research Center.



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# Online Campaign Events during the French Elections (P2)

DFR Lab: « Le Pen's Online Army ».

#Whirlpool

#LeDébat

#Macrongate / #Bahamas

#MacronLeaks













"the MacronLeaks disinformation campaign was limited mostly to an English-speaking audience, and failed to percolate in the French-speaking Twitter community."

(Ferrara, 2017: 12)

## Botometer®

An OSoMe project (bot•o•meter)

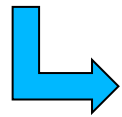


>		@JAM_MASCI	0.6 / 5		×
>		@POferriesupdate	1.2 / 5		×
>		@TEE__2014	3.3 / 5		×
>		@pierre_lt	0.2 / 5		×
>		@TeamMacronPR	1.1 / 5		×
>		@AlexFrame	1.9 / 5		×

General idea: if there is a software robot, the same code will probably be instantiated several times at different moments, so as not to generate too much traffic and its instances will have a "regularity" of behavior (because of the algorithm).

1. Regularity of behaviour within an account
2. Resemblance of behaviour across different accounts
3. Partisan logic: Accounts which tend to retweet the same tweets.

## 2) Le2i



6 clusters identified

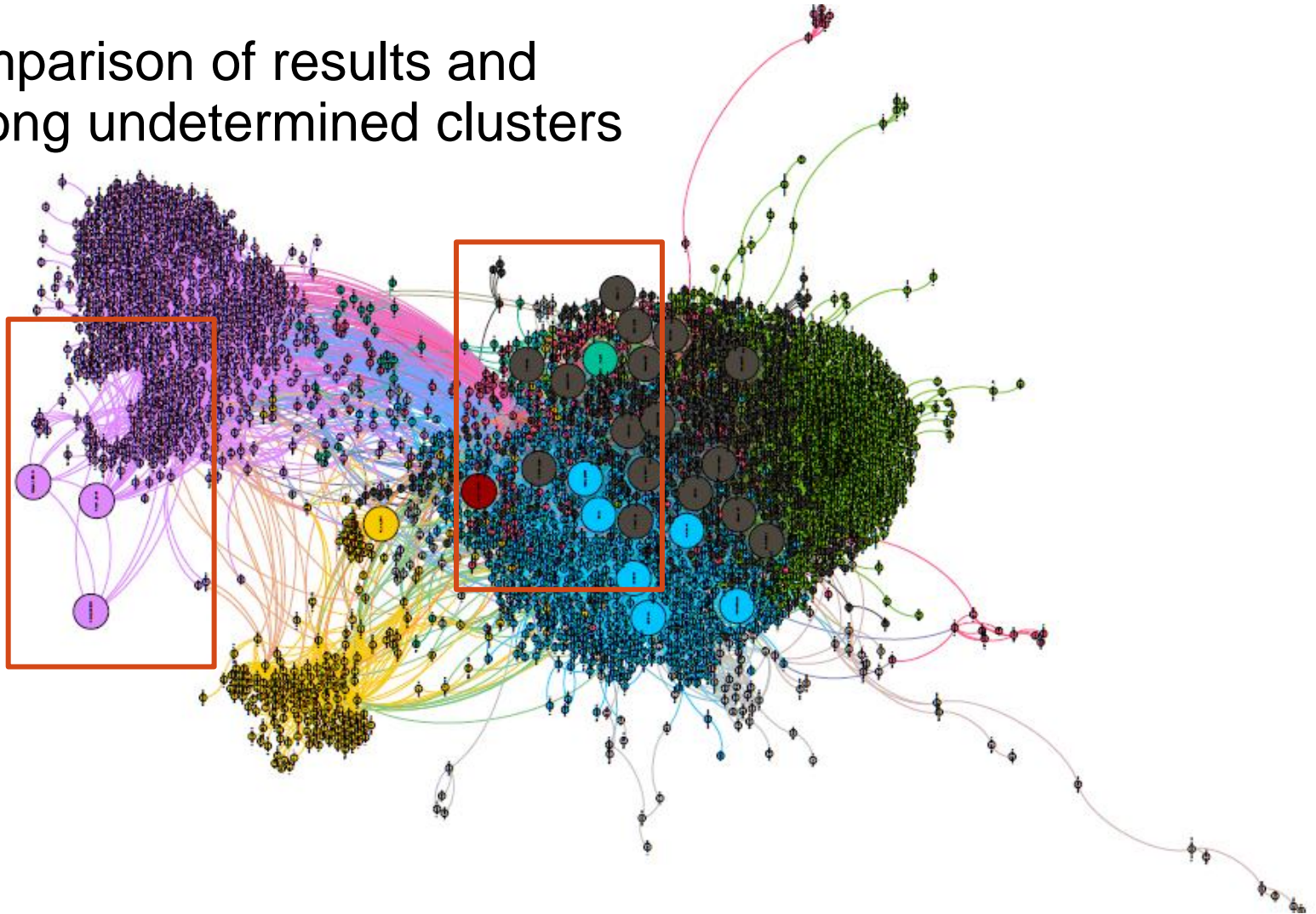


3 clusters with comparable semantics and uses  
(1,3,6)

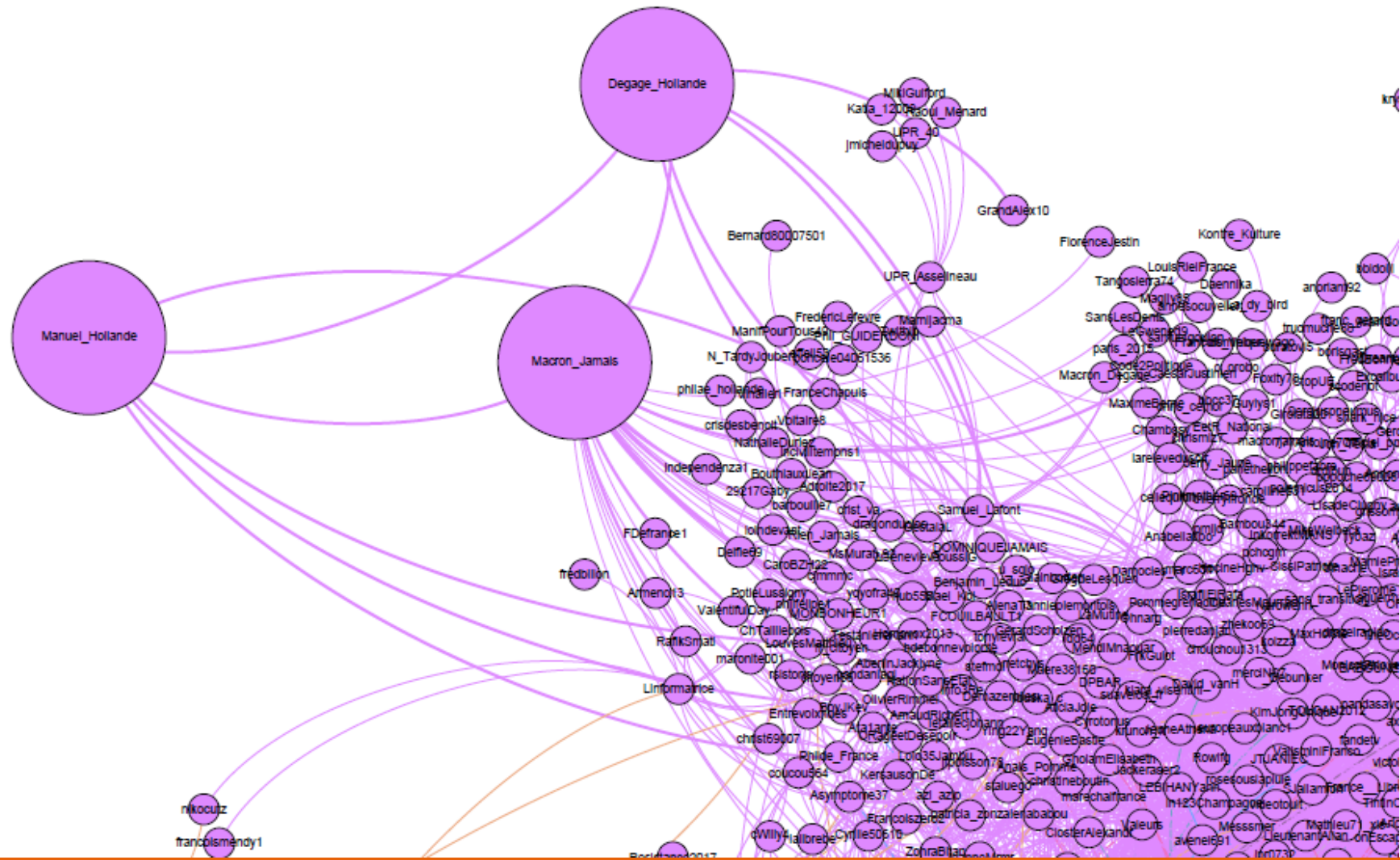


3 undetermined clusters (2, 4, 5)

## 3) Gephi: comparison of results and selection among undetermined clusters

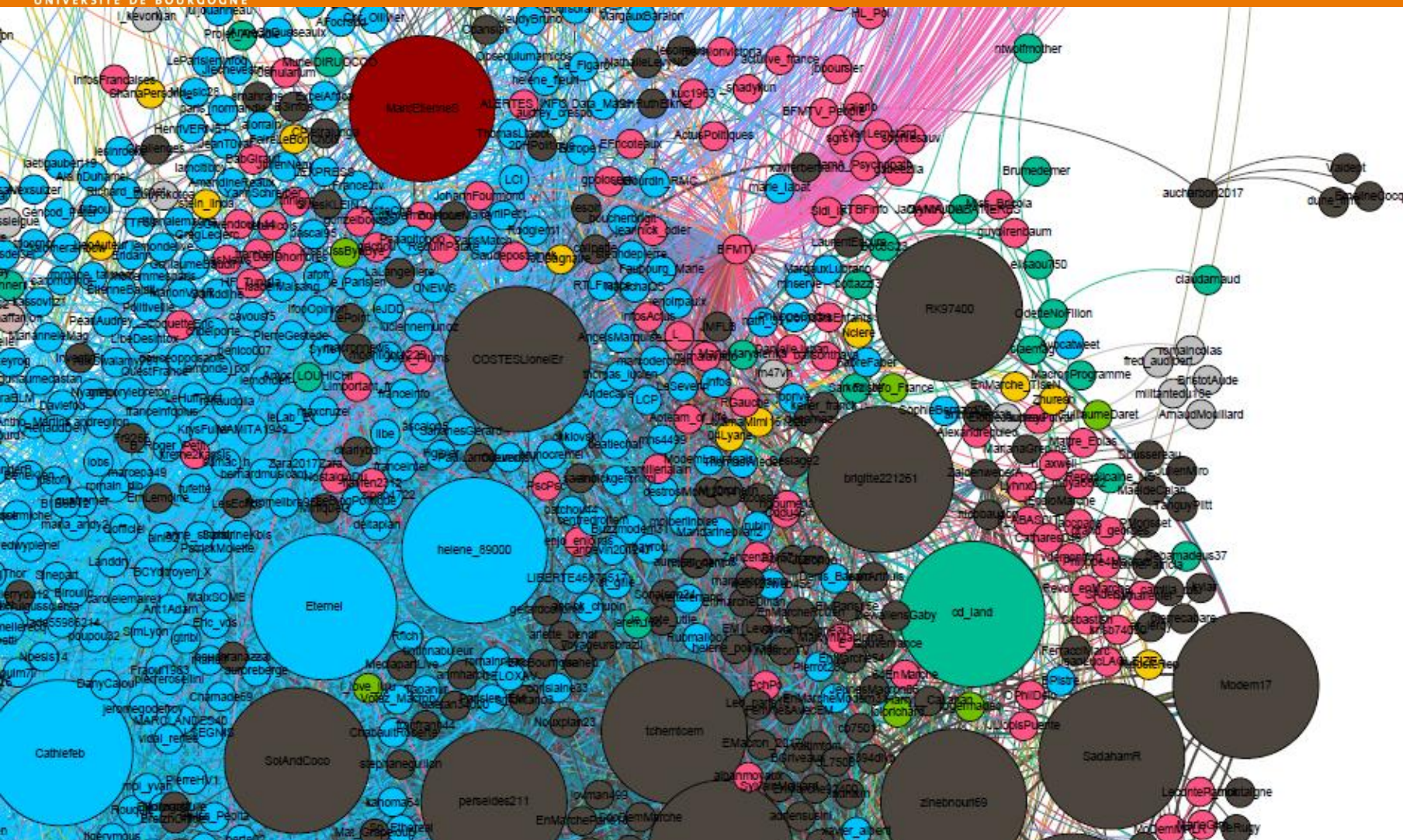








# Results of Clustering of Connected Accounts (RT)



## Cluster 6 : the 'stupid' robot

from_user	user_id	nbret	nbretjour	nbtweetp2	proba	maxrateh	htnb	cluster	botometer
07_mai_2017	2	7233	516	7233	impossil	516	1822	6	impossible

## Focus on Cluster 4 : undetermined

↳ a cluster has a human tendency but integrates robots or militant accounts that behave like humans



# Bots Acting Human and Humans Being Bots

“TweetAttacksPro 4 is designed to run thousands of twitter accounts at the same time 24/7 to auto-follow, unfollow, follow back, tweet, retweet, reply, favorite, delete tweet, unretweet, unfavorite, add to list and send messages to your new followers, etc. Every account can have its own settings thus preventing twitter from becoming suspicious about the account, plus the software can simulate human operation perfectly!

\$7 to Try TweetAttacksPro 4 Unlimited Elite Version”