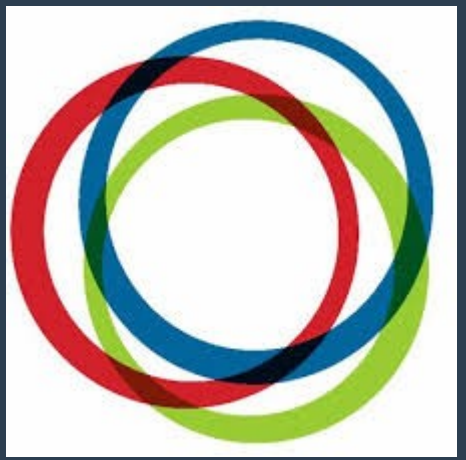
Facebook Algorithm analysis,

Italian 2018 election,
Argentinian 2017 WTO clashes

Claudio Agosti – Renata Avila - Federico Sarchi



The panel is live-tweeted, links & updates:

How the problem looks like?

- https://twitter.com/Hellchick/status/942863353403150336

What is the problem

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- Algorithms are like social policies; they should be available for public scrutiny
- Users has been used as rats lab in psychological and social experiments.

What is the problem

Wednesday, April 11, 2018

WASHINGTON Examiner

Mark Zuckerberg: 'Optimistic' AI tools to flag, remove hate speech on Facebook will be developed in 5-10 years

by Melissa Quinn | April 10, 2018 03:51 PM

- Among all the algorithms crossing our life, Facebook's coordinate how people perceive the reality; besides the enormous audience, it is personalized, making it even harder to scrutiny.

Methodology

- We created 6 avatar-persona, <u>without friends</u>

Andrea
fa i *like* di destra

Michele
il fascistoide

Antonietta
mette *like* a
sinistra

Santiago
centro-sinistra

Britta
Movimento 5
Stelle

Oliviero
non orientato!

How we made the test: political segments

- We selected 5 political orientation (center-left, right, far-right, M5S, left), 6 facebook pages for each group
- Those creates a list of 30 *sources*

	Right	Alt-right
Community	https://www.facebook.com/NoiconSalviniUfficiale/	https://www.facebook.com/Fascisti-uniti-per-Litalia-411675
Community	https://www.facebook.com/ilpopulista.it/	https://www.facebook.com/OrdineFuturo/
Media	https://www.facebook.com/ilGiornale/	https://www.facebook.com/ilprimatonatsionale/
Party	https://www.facebook.com/legasalvinipremier/	https://www.facebook.com/ForzaNuovaPaginaUfficiale/
Politician	https://www.facebook.com/rivogliobologna/	https://www.facebook.com/casapounditalia/
Politician	https://www.facebook.com/giorgiameloni.paginaufficiale/	https://www.facebook.com/RobertoFiorePaginaUfficiale/

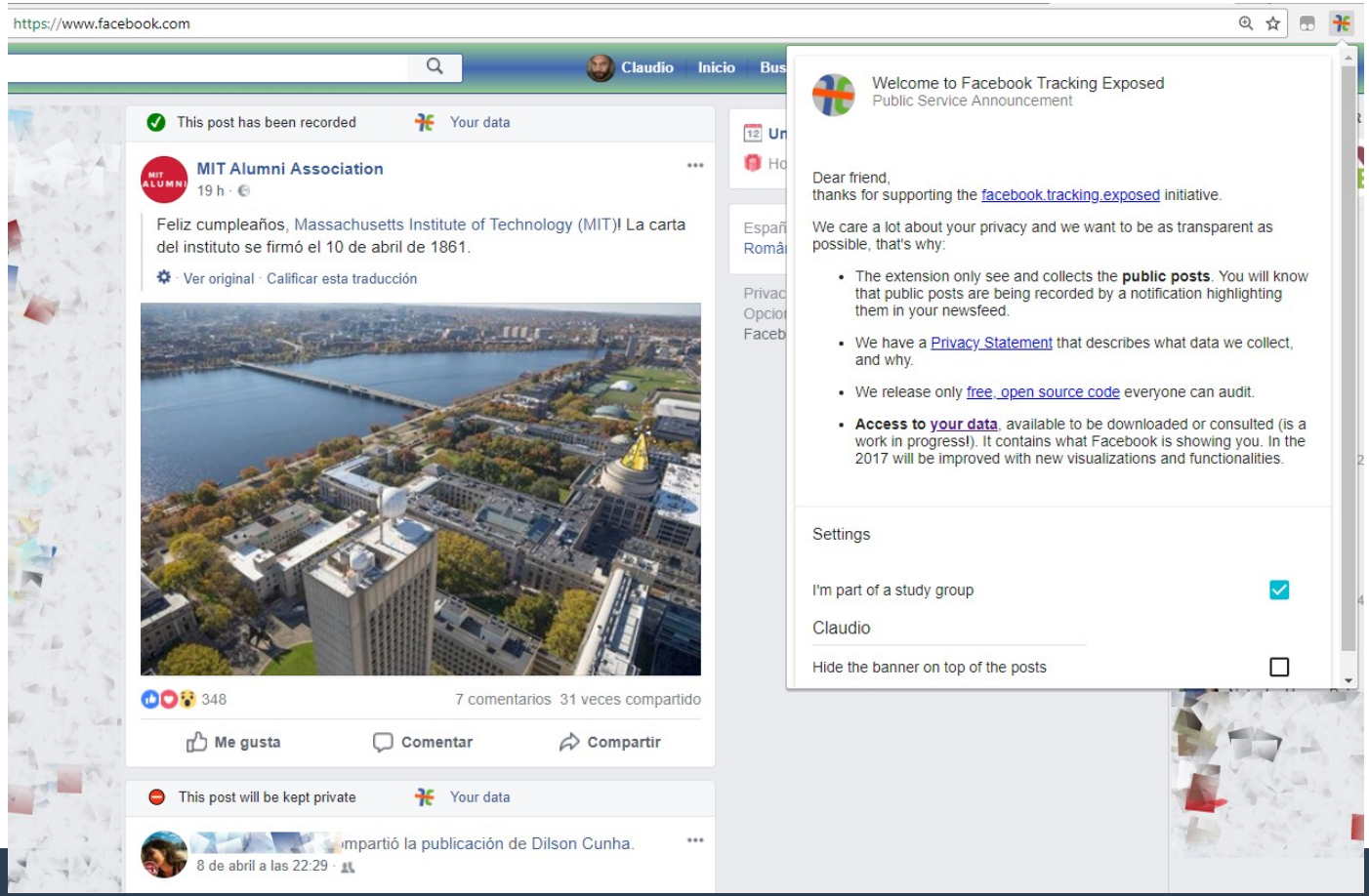
Profile orientation (train the algorithm)

- To characterize the user, they were expressing interest on posts aligned with the political orientation

- So the algorithm starts feeding them based on their polarization

Our approach

- Using a web-extension, we will collect data on what each user sees on their public timeline.



How data collection works

- We collect everything the algorithm shared with the users
- every hour all the users access to facebook at the same time, the tool scrolls automatically

			Profile Align / Profile Name					
			center-left	far-right	left	M5S	right	undecided
Publisher Name	Post Id	Perma Link	Santiago	Michele	Antonietta	Britta	Andrea	Oliviero
MoVimento 5 Stelle	10155843347040813	/movimentocinquestelle/..				■	■	
	10155843372355813	/movimentocinquestelle/..	■		■	■	■	
	10155843553080813	/movimentocinquestelle/..	■		■	■	■	
	10155843555235813	/movimentocinquestelle/..				■	■	
	10155843557890813	/movimentocinquestelle/..	■		■	■	■	
	10155843782725813	/movimentocinquestelle/..					■	■
Noi con Salvini	951550688347024	/NoiconSalviniUfficiale/po..					■	
	952895531545873	/NoiconSalviniUfficiale/p..			■			
	952918211543605	/NoiconSalviniUfficiale/po..				■		
	952931964875563	/NoiconSalviniUfficiale/po..				■		
	952961834872576	/NoiconSalviniUfficiale/po..				■		

Our intention: *specialization*

- Extract the metadata from the data submitted, and make this dataset available to researchers.

Metadata extracted

- saved 3 months ago.
- **Id:** 963554474b3a140d9d32c7fbe13511fada7c0fd8
- **type:** feed
- ☑ postType
- ☑ feedUTime
- **publicationUTIme:** 1515580929
- ☑ feedBasicInfo
- **postId:** 912499998926105
- **permaLink:** /Possibile.it/photos /a.469405023235607.1073741830.458027194373390/912499998926105 /?type=3
- **hrefType:** photo
- ☒ feedHref

The user saw this

Possibile è con Andrea Maestri e altre 17 persone.

· 20 min ·

Il nostro contributo, la comunità di #Possibile: donne e uomini, ragazze e ragazzi, #LibereeUguali #LiberieUguali.

Few notes on metadata

- The data+metadata you download from your Facebook are “what you gave/what FB tooks”
- The metadata Facebook has about you is a trade-secret
- The metadata you can take from facebook API are some, and depends from the sources
- The metadata we have are attributed from the HTML snippet we scrape.

How an algorithm looks like?

- Produce visualizations and other renderings of how different users experience the FB algorithm.

8-14 February (diversity+type)

Profile Align / Profile Name

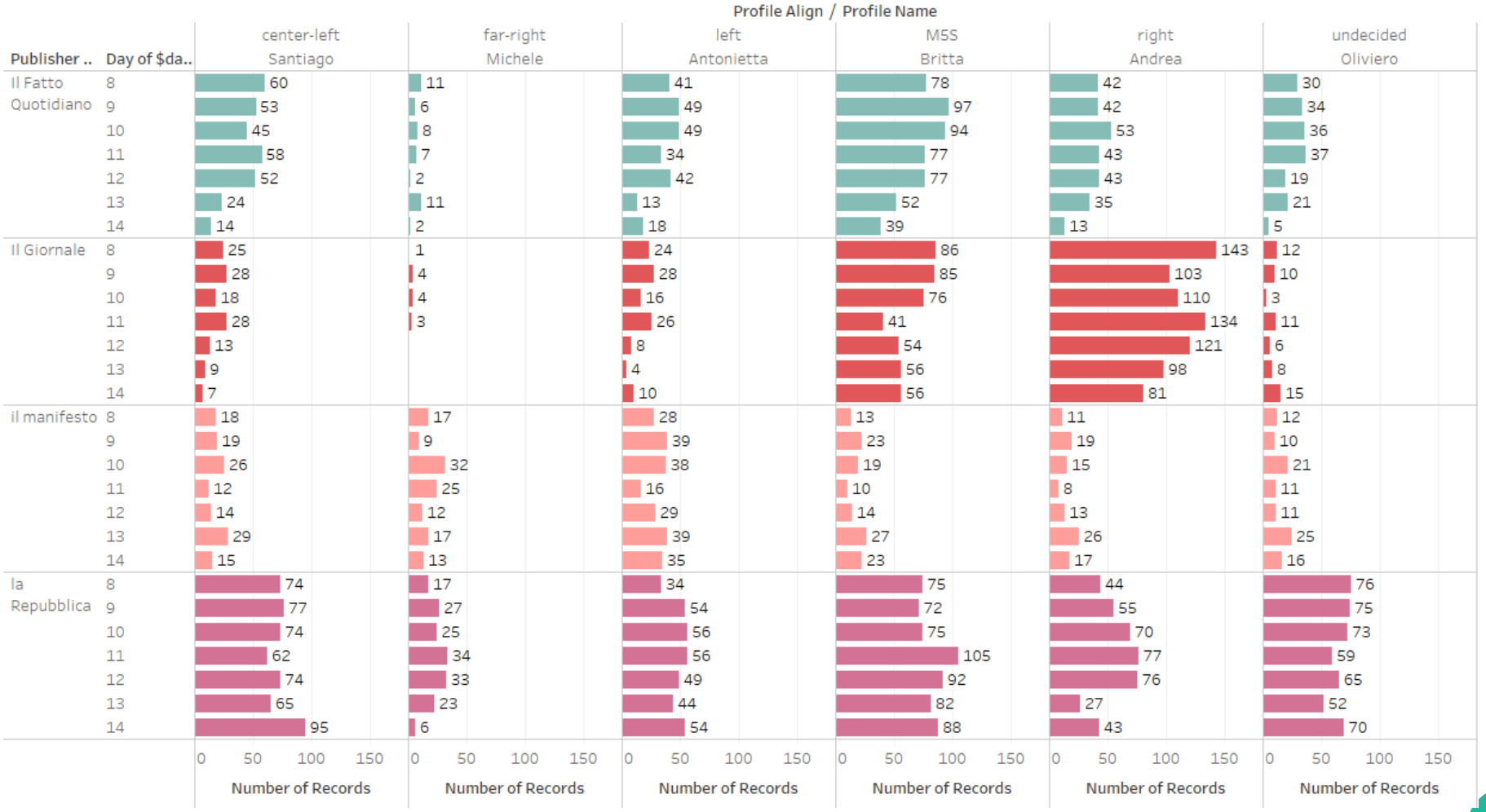
Month of ..	D..	Utype	center-left Santiago	far-right Michele	left Antonietta	M5S Britta	right Andrea	undecided Oliviero
February	8	photo	38.05%	53.33%	36.13%	25.55%	21.79%	34.39%
		post	59.02%	38.10%	62.41%	69.78%	74.15%	55.66%
		video	2.93%	8.57%	1.46%	4.67%	4.06%	9.95%
	9	photo	35.42%	60.82%	40.68%	28.12%	24.24%	24.37%
		post	59.38%	32.99%	58.47%	67.25%	68.30%	60.92%
		video	5.21%	6.19%	0.85%	4.64%	7.46%	14.71%
	10	photo	40.00%	62.89%	39.13%	27.91%	20.32%	32.45%
		post	55.88%	29.90%	58.15%	66.56%	74.20%	56.91%
		video	4.12%	7.22%	2.72%	5.52%	5.48%	10.64%
	11	photo	37.33%	58.89%	36.48%	25.76%	20.57%	33.33%
		post	59.33%	33.33%	61.01%	70.08%	74.23%	54.90%
		video	3.33%	7.78%	2.52%	4.17%	5.20%	11.76%
	12	photo	40.00%	62.77%	37.84%	34.91%	19.03%	33.53%
		post	56.11%	29.79%	59.01%	61.09%	77.03%	55.69%
		video	3.89%	7.45%	3.15%	4.00%	3.94%	10.78%
	13	photo	43.90%	62.83%	42.06%	32.85%	22.60%	31.18%
		post	52.68%	32.74%	55.61%	64.83%	72.48%	58.24%
		video	3.41%	4.42%	2.34%	2.33%	4.92%	10.59%
	14	photo	42.07%	53.57%	38.62%	36.05%	30.47%	32.40%
		post	53.10%	41.07%	58.20%	61.05%	63.43%	55.87%
		video	4.83%	5.36%	3.17%	2.91%	6.09%	11.73%

How to judge algorithm fairness?

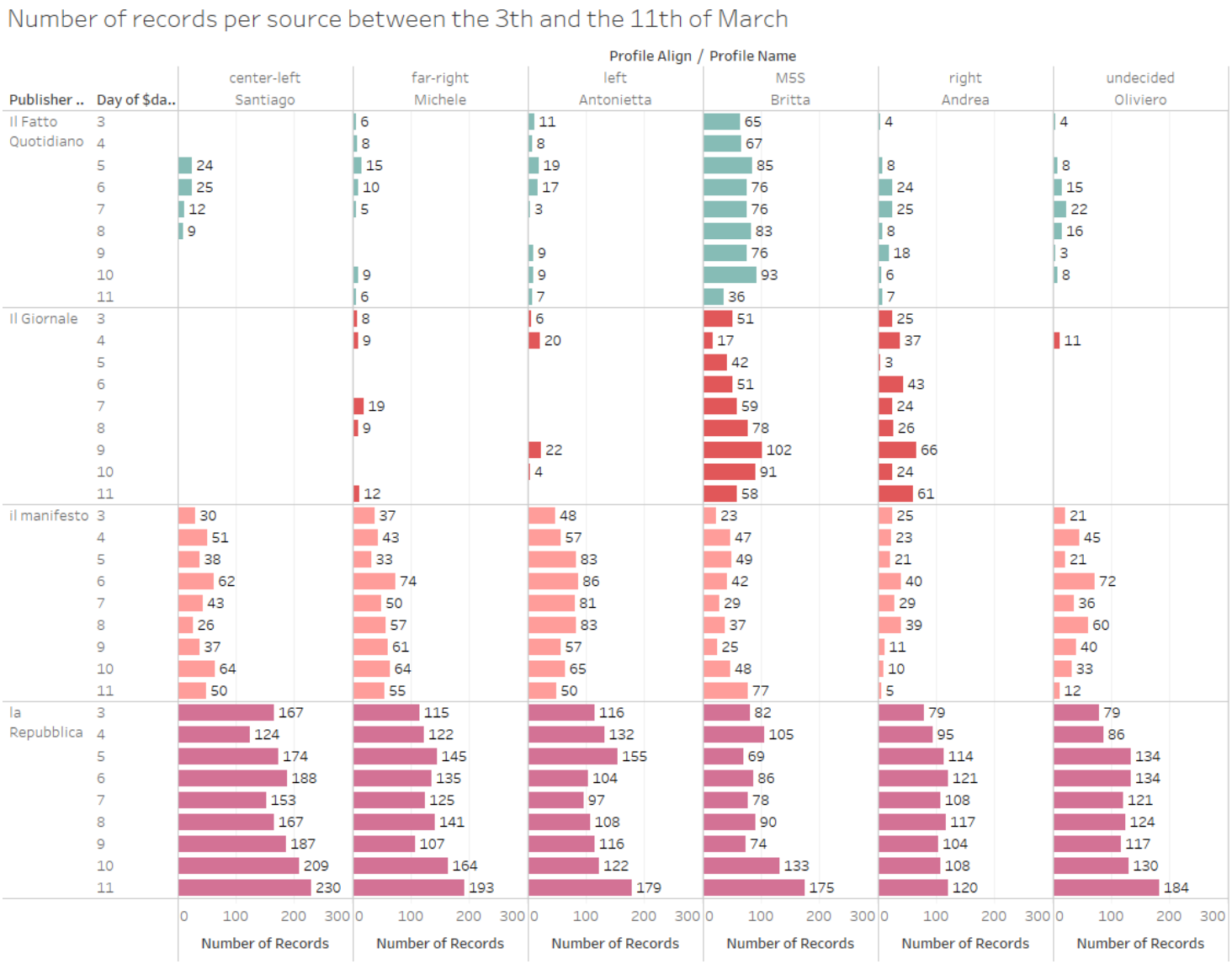
- We can’t know what’s the right way, because do not exists the right prioritization algorithm.

How media are really treat?

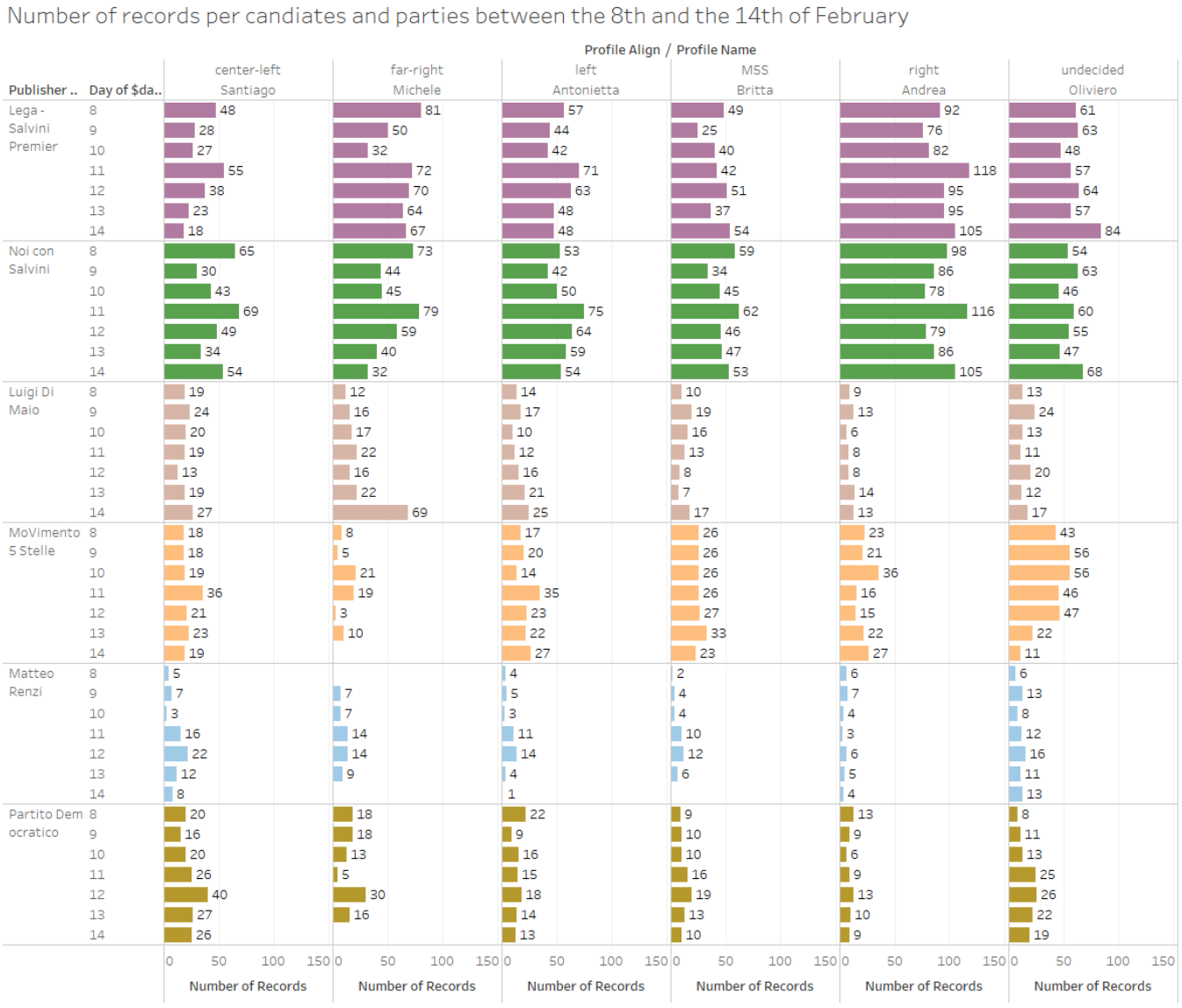
Number of records per source between the 8th and the 14th of February



Media and bubbles



Political candidates and bubbles



Algorithm was changing, we took a *picture*

January 11, 2018

Bringing People Closer Together

Number of records per candiates and parties between the 3th and the 11th of March

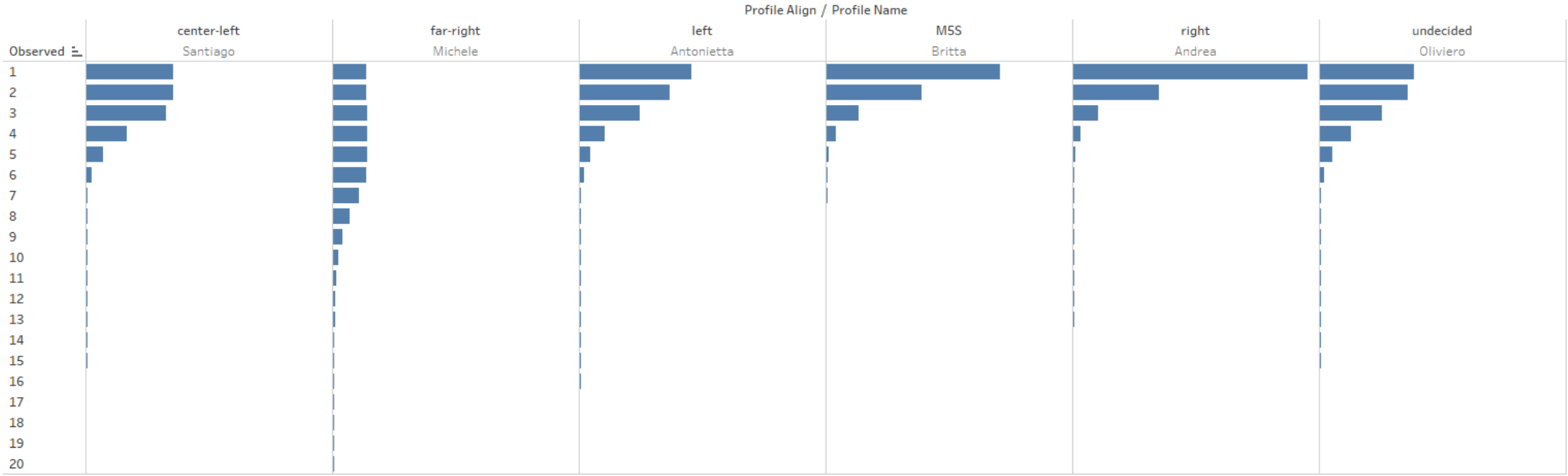
Profile Align / Profile Name

Publisher ..	Day of $da..	center-left Santiago	far-right Michele	left Antonietta	MSS Britta	right Andrea	undecided Oliviero
Lega - Salvini Premier	3		12	35	53	117	108
	4		41	48	31	134	142
	5	20	49	47	38	112	107
	6	27	34	31	43	48	70
	7	8	8	6	18	59	35
	8		13	8	27	61	25
	9		12	16	22	79	43
	10			14		86	37
	11			14		76	41
Noi con Salvini	3	4	22	52	42	110	113
	4	12	35	48	45	127	122
	5	20	38	36	45	82	110
	6	21	28	28	43	37	57
	7	12	7	17	16	48	25
	8	3	13	8	39	67	29
	9		12	16	21	82	43
	10			14	1	75	27
	11			14		73	36
Luigi Di Maio	3			6	6	5	
	4		8	8	9	7	
	5	13		9	10	4	
	6				2		
	9			9	1	13	
	11	11				4	
MoVimento 5 Stelle	3			11	16	24	11
	4			8	17	4	1
	5				17	7	22
	6				9		
	7				8	20	13
	8				8	5	9
	9				3	5	
	10					10	11
	11	11				12	2
Matteo Renzi	3	33	18	7	8		10
	4	18	16	18	16	10	18
	5	7					2
	6	1	1	1	1	1	1
	7	13	11	7	1	7	9
	8	14	11	9	5	11	11
	9	19	7	10			6
Partito Democratico	3	59	42	27	28	13	11
	4	62	38	34	50	26	
	5	68	61	41	26	46	
	6	74	58	62	24	43	
	7	79	42	43	20	36	3
	8	110	55	50	19	47	15
	9	58	30	26	12	15	21
	10	86	77	61	54	26	60
	11	78	69	54	80	24	67

0 50 100 150 — Number of Records

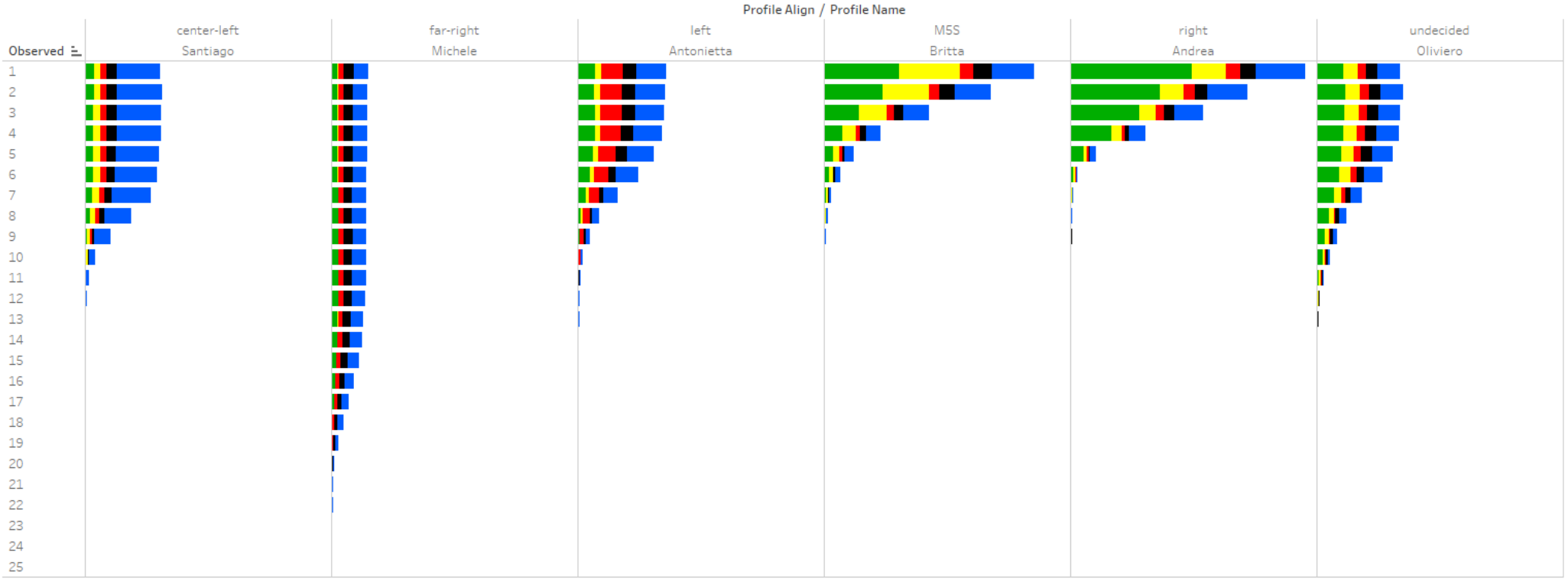
Information diversity

8-14 February (repetition)

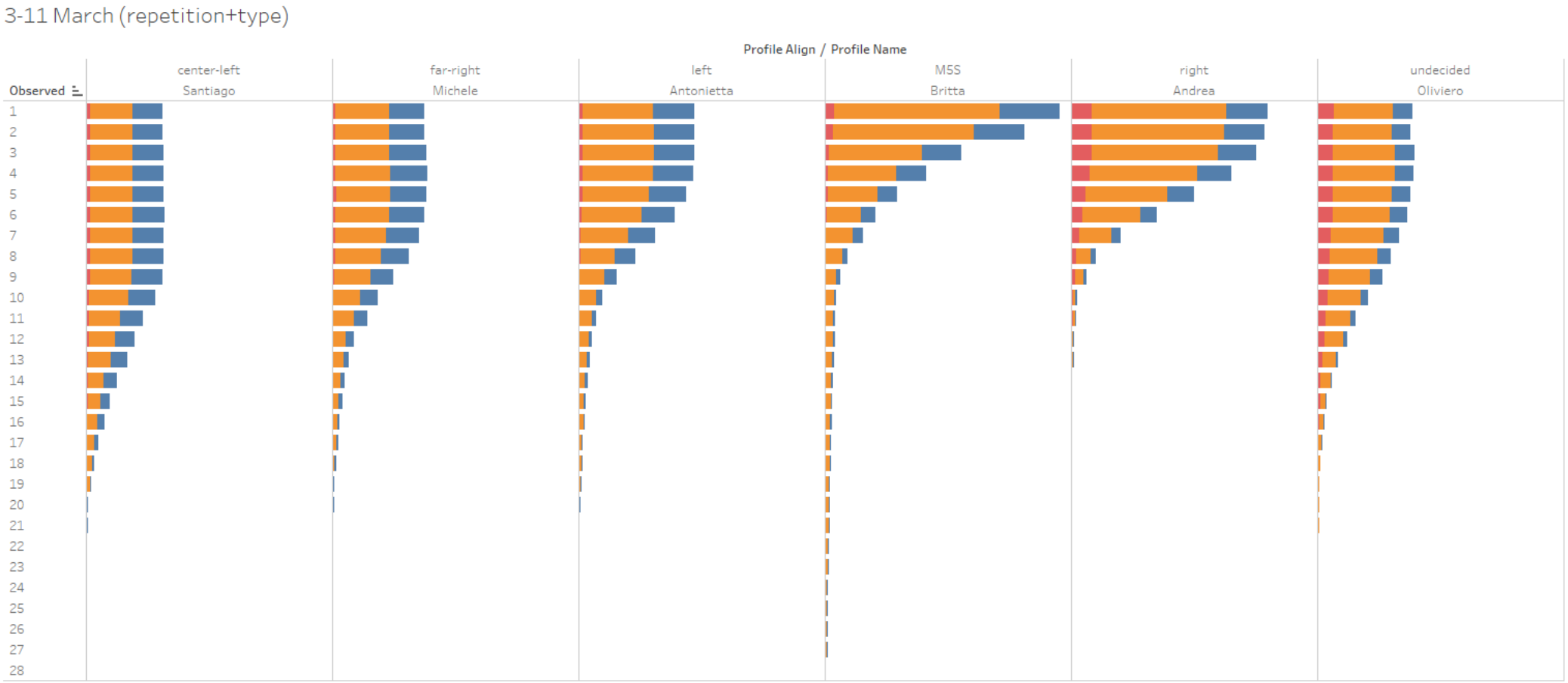


Information diversity

19-26 February (repetition+sources)



Information diversi



Race at the top

Unique contents between the top15 feeds in the timelines

tomorrow, algorithm-driven censorship

States, companies, algorithms and crowds: the many new faces of web censorship

Add to Calendar

panel discussions | in English (without translation)

17:45 - 19:00 friday
13/04/2018

Sala delle Colonne, Palazzo Graziani

« back to the programme

Claudio Agosti
Good Technology Collective

Lina Attalah
publisher Mada Masr

Simone Basso
fellow Measurement Lab

Renato Gabriele
founder Oohmm

Jillian York
Electronic Frontier Foundation

Opendata: do your algorithm assessment!

https://github.com/tracking-exposed/experiments-data/tree/master/e18

https://facebook.tracking.exposed

- Currently unfunded :(
- we look for volunteers! =)