

# **The Influence Industry**

## **Personal Data and Political Influence in Italy**

researched and written by  
Fabio Chiusi (@fabiochiusi) & Claudio Agosti (@\_vecna)



in partnership with Tactical Technology Collective's  
*Our Data Our Selves* project  
[ourdataourselves.tacticaltech.org](http://ourdataourselves.tacticaltech.org)

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## Contextualization

When it comes to media and politics, Italy sits at the heart of a contradiction. On the one side, it is home to brand new experiments in digital democracy and the automation of the digital public sphere. On the other, even though social media are a growing and, by now, stable presence in the daily habits of Italian citizens, surveys consistently show that the primary source of information for most of the population is still television.

Most recent data from Italian Communications Authority, AGCOM, confirm<sup>1</sup> tv dominance, showing that in 2017 it accounted for 42,8% of Italians, whereas only 26,3% put the Internet first in their information diet. Seven out of ten use television to get news on a daily basis, while only four do the same online. Also, even though 3/4 of the population consume information combining different types of media (*"crossmedialità"*), tv is the only medium with its own "captive audience": 8,5% of the population still access to information through it *exclusively*.

Television is uniquely able to reach almost the whole of Italian population (91,3%) on the average day; only one in two is reached through the web instead. This comes as no surprise, when one thinks of the decade-long lagging in Internet penetration, the slow and unequal adoption of broadband technology, and the widespread cultural "digital divide" still at work in the country.

This has consequences on media pluralism and their independence. Plagued by the unresolved conflict of interest of the Berlusconi era, Italy still bears sign of what the Reuters Institute's 'Digital News Report 2017'<sup>2</sup> calls a "highly concentrated" tv market, in which "almost 90% of overall revenues are generated by just three main operators: the pay-TV Sky Italia (33%), the commercial group Mediaset (28%), and the public broadcaster RAI (28%)".

Coupled with a "weak and declining print sector" — newspapers, AGCOM data show, are now read on a daily basis by just 17,3% of Italians — it is only consequential for this media environment to be ripe with opportunities for alternative channels of information, even leading to advanced, if controversial, new experiments in consensus gathering and mobilization.

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<sup>1</sup>AGCOM, '*Rapporto sul consumo di informazione*', February 2018, <https://www.agcom.it/documents/10179/9629936/Studio-Ricerca+19-02-2018/72cf58fc-77fc-44ae-b0a6-1d174ac2054f?version=1.0>

<sup>2</sup>Nic Newman with Richard Fletcher, Antonis Kalogeropoulos, David A. L. Levy and Rasmus Kleis Nielsen, '*Reuters Institute Digital News Report 2017*', [https://reutersinstitute.politics.ox.ac.uk/sites/default/files/Digital%20News%20Report%202017%20web\\_0.pdf](https://reutersinstitute.politics.ox.ac.uk/sites/default/files/Digital%20News%20Report%202017%20web_0.pdf)

Which leads to above mentioned the contradiction: Italy is at the same time the result — and continuation — of decades as a laboratory in mass media influence on the democratic process (what Colin Crouch labelled “post-democracy”), and one that is presently witnessing some unique developments in the digitization of public opinion. First of all, the birth and growth of a political movement — turned Italy’s biggest political party<sup>3</sup> — purporting to realize an unprecedented form of digital direct democracy<sup>4</sup> through the usage of an online participatory platform, and by exploiting the disintermediation brought about in communication and propaganda strategies by social networks.

More generally, online activism has been playing a growing, if irregular, role in politics. Starting with the experience of “Popolo Viola” in 2009<sup>5</sup>, a loose anti-Berlusconi collective born out of Facebook pages and able to gather protesters against the former prime minister by the thousands, social media mobilization has been repeatedly subject to studies and debate. To many, it helped shape the results of referenda (2011<sup>6</sup> and 2016<sup>7</sup>) and general elections (2013<sup>8</sup> and 2018), even though its actual contribution is contested<sup>9</sup>. Also, the early promises of a truly horizontal, bidirectional, one-to-one communication between public figures and the electorate have been increasingly replaced by reports on how all of this can be easily manipulated into new forms of propaganda, misinformation and deception<sup>10</sup>.

Cyberattacks and hacks into databases and email accounts of political figures have also multiplied, ranging from that of unspecified “Democratic Party hackers” against elected representatives of the Movimento Cinque Stelle (Five Star Movement, or M5S) in 2013<sup>11</sup>, to the more recent publication of private emails of Lega’s leader, Matteo Salvini<sup>12</sup>, to that of sensitive information belonging to former Prime Minister, Matteo Renzi<sup>13</sup>. The Italian branch of the hacktivist collective Anonymous has also repeatedly intervened in the political process, violating a range of institutional websites that span from that of law enforcement<sup>14</sup> to those of ministries and the government itself<sup>15</sup>.

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3<http://www.rainews.it/dl/rainews/articoli/Elezioni-2018-risultati-camera-senato-M5S-primo-partito-centrodestra-prima-coalizione-lega-batte-forza-italia-maggioranza-4ce7e000-3236-4290-a5def9c34331bb04.html>

4Fabio Bordignon and Luigi Ceccarini, Fabio Chiusi, Riccardo Gualdo, Germano Dottori, ‘*Fenomenologia di Beppe Grillo*’, Limes 4/2013, <http://www.limesonline.com/cartaceo/fenomenologia-di-beppe-grillo?prv=true>

5Federico Mello, ‘*Viola. L’incredibile storia del No B. Day, la manifestazione che ha beffato Silvio Berlusconi*’, 2010, Aliberti

6<http://www.linkiesta.it/it/article/2011/06/14/dati-e-numeri-cosi-la-rete-ha-vinto-i-referendum/5687/>

7<https://www.ilfattoquotidiano.it/2016/12/05/referendum-costituzionale-abbiamo-vinto-grazie-ad-attivisti-e-social-media/3239132/>

8[http://www1.adnkronos.com/IGN/News/Politica/Il-vero-trionfatore-e-internet-sono-le-prime-elezioni-20\\_314228463608.html](http://www1.adnkronos.com/IGN/News/Politica/Il-vero-trionfatore-e-internet-sono-le-prime-elezioni-20_314228463608.html)

9<https://www.valigiablu.it/elezioni-2013-non-ha-vinto-internet-abbiamo-perso-noi/>

10This is testified by the intense debate surrounding “fake news” in Italy during the last two years, which lead to former Prime Minister Matteo Renzi making it one of the main points of his 2018 electoral campaign. See <https://video.repubblica.it/politica/leopolda-renzi-apre-il-convegno-e-attacca-le-fake-news-odio-e-veleno-soprattutto-contro-di-noi/290582/291193?ref=RHPPLF-BH-I0-C8-P2-S1.8-T1>

11<http://espresso.repubblica.it/palazzo/2013/04/24/news/hacker-pubblicano-le-mail-dei-parlamentari-m5s-1.53590>

12<https://motherboard.vice.com/it/article/evmqgn/anonymous-ha-pubblicato-online-70000-email-della-lega>

13[http://www.corriere.it/politica/18\\_febbraio\\_06/hacker-attaccano-pd-firenzeonline-anche-dati-matteo-renzi-2ed08e6e-0b4b-11e8-9333-a02b6d017075.shtml](http://www.corriere.it/politica/18_febbraio_06/hacker-attaccano-pd-firenzeonline-anche-dati-matteo-renzi-2ed08e6e-0b4b-11e8-9333-a02b6d017075.shtml)

The Italian Data Protection Authority itself had to intervene with a severe pronouncement<sup>16</sup> on the lack of security of the M5s's digital democracy platform "Rousseau"<sup>17</sup>, named after XVIII Century philosopher Jean Jacques Rousseau, itself subject to a data breach that revealed sensitive data for some of its more than 140.000 subscribers during the summer of 2017<sup>18</sup>.

While cybersecurity challenges to the democratic process are a unique feature of the online "infosphere"<sup>19</sup> of our present era, those pertaining to the spread of misinformation are not foreign to traditional media. "The partisan nature of Italian journalism", argues the Reuters Institute report, "combined with the strong political and business influence on news organizations, has led to particularly low levels of trust in the news" — which easily paves the way for conspiracy theories, "fake news" and dubious "alternative" or "counter" information channels to flourish. This offline, mainstream media-led nature of the appeal of polluted information has too often been left out of the debate around "new" media and truth in Italy, especially considering that the reach of traditional media far outweighs that of the best known false news sites according to research by Rasmus Kleis Nielsen and colleagues<sup>20</sup>.

It is worth noting, however, that AGCOM data also show that "Italians mostly (54,5%) access online information through so-called algorithmic sources", namely search engines and social networks — which represent the third and fourth most important sources of information according to the survey. These sources are deemed less trustworthy than tv channels (24% trust social media, whereas 40% trust tv channels).

Also, being based upon the principles of personalization and targeting of messages, algorithmic sources of information are alleged promoters of ideological bubbles, echo chambers and selective exposure of political content and propaganda that can lead to increased polarization of the political debate<sup>21</sup>, "dark" manipulation of minutely identified categories of voters<sup>22</sup> and a deterioration of the tone and quality of political speech.

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14<https://www.ilfattoquotidiano.it/2012/10/23/anonymous-viola-sito-della-polizia-3500-documenti-finiscono-in-rete/390527/>

15<https://www.corrierecomunicazioni.it/cyber-security/anonymous-buca-palazzo-chigi-rubate-mail-numeri-di-telefono-e-buste-paga/>

16<http://www.garanteprivacy.it/web/guest/home/docweb/-/docweb-display/docweb/7400401>

17<https://rousseau.movimento5stelle.it/>

18<https://www.valigiablu.it/hacker-grillo-rousseau/>

19Cfr. Luciano Floridi, *The 4th Revolution. How the Infosphere is Reshaping Human Reality*, Oxford University Press, 2014

20Richard Fletcher, Alessio Cornia, Lucas Graves, and Rasmus Kleis Nielsen, *Measuring the reach of "fake news" and online disinformation in Europe*, 2018, <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2018-02/Measuring%20the%20reach%20of%20fake%20news%20and%20online%20distribution%20in%20Europe%20CORRECT%20FLAG.pdf>. From the study, we learn that "none of the false news websites we considered had an average monthly reach of over 3.5% in 2017, with most reaching less than 1% of the online population in both France and Italy. By comparison, the most popular news websites in France (Le Figaro) and Italy (La Repubblica) had an average monthly reach of 22.3% and 50.9%, respectively". Also, "the most popular false news websites in France were viewed for around 10 million minutes per month, and for 7.5 million minutes in Italy. People spent an average of 178 million minutes per month with Le Monde, and 443 million minutes with La Repubblica—more than the combined time spent with all 20 false news sites in each sample".

21<http://journals.sagepub.com/doi/abs/10.1177/0266382117722446?journalCode=bira>

22<https://medium.com/@fabiochiusi/lighting-up-the-dark-ads-a5e31ff00d21>



Even though all of these problems are being presently debated in the media and the academic community, with conflicting evidence<sup>23</sup> (none so far, for example, in the case of foreign interference in the Italian political process through digital media<sup>24</sup>), there's no denying that the potential challenges are new, and should be investigated both in the domestic and in the international context.

This is all the more important given that this growing digital side of political campaigning in Italy can still happen mostly in the dark, with no clear normative framework — or with no established rules at all<sup>25</sup>. Contrarily to those appearing on offline media, online political messages are not subject to any legally binding transparency requirements, resulting in an uncontrolled online environment in which leaders and parties can propagate their sponsored messages without having to specify who's paying for them, or their target audience. Guidelines have been proposed by AGCOM as a response<sup>26</sup>, but they have been rarely implemented by political entities during the March 2018 election. Digital platforms promised self-regulatory interventions, but they are not as yet operational in Italy.

Laws regulating electoral campaigns expenditure do exist, and yet — as Sofia Verza points out<sup>27</sup> — “no specific provision mentions Internet, the cyber-space as well as the social media”, thus allowing political parties to publish “aggregate numbers” that do not specify the share of the digital on the total. “Consequently”, she argues in ‘An Overview of Italian Online and Offline Political Communication’, “no specific evaluation as to the money parties and candidates invest on political communication in the social media emerges”. This is all the more relevant when it comes to the actual use of personal data in politics, as “in particular, the costs of creating databases and profiles of citizens may not be recorded or reportable within current categories and may be spent outside the regulatory period”.

Furthermore, the “electoral silence” imposed 48 hours before the vote is also generally disrespected on online platforms, as is the ban, established by law, on electoral polls in the last 15 days. Also, automated profiles, so-called “political bots”, can operate — as they do, at least since 2014 — in the absence of any obligation to specify their non-human nature to other users, thus being able to routinely hijack trending topic sections of digital platforms, and from there the political and mainstream media agenda, through “astroturfing” practices.

As for the contrast of “fake news”, a law on the model of the recently approved German one imposing fines for failure of quick removal of illicit content has been initially proposed and immediately shelved after critics labeled it dangerous for free speech<sup>28</sup>. In the meantime, the website of the “Polizia di Stato” activated a “red button” to defer false information to be blocked by law enforcement itself — a measure that many deemed to be at least as dangerous<sup>29</sup>, especially in the face of missing evidence of their actual role in influencing

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23<https://cristianvaccari.com/2018/02/13/how-prevalent-are-filter-bubbles-and-echo-chambers-on-social-media-not-as-much-as-president-obama-thinks/>

24<https://www.valigiablu.it/biden-italia-russia-interferenze/>

25Antonio Santangelo e Fabio Chiusi, ‘*Persuasori Social. Trasparenza e democrazia nelle campagne elettorali digitali*’, Progetto Punto Zero, forthcoming.

26AGCOM, ‘*Linee guida per la parità di accesso alle piattaforme online durante la campagna elettorale per le elezioni politiche 2018*’, <https://www.agcom.it/documents/10179/9478149/Documento+generico+01-02-2018/45429524-3f31-4195-bf46-4f2863af0ff6?version=1.0>

27[https://targetingelectoralcampaignsworkshop.files.wordpress.com/2018/02/policy-brief\\_def1.pdf](https://targetingelectoralcampaignsworkshop.files.wordpress.com/2018/02/policy-brief_def1.pdf)

28<https://www.valigiablu.it/legge-fakenews-censura/>

29<https://www.poynter.org/news/italians-can-now-report-fake-news-police-heres-why-thats-problematic>

Italian voters' behavior. The UN's Special Rapporteur on Freedom of Speech, David Kaye, even issued a formal communication to ask Italy to put an end to the initiative, which in his view might be "incompatible" with international law, and "disproportionately suppress (...) criticism of the government, news reporting, political campaigning and the expression of unpopular, controversial or minority opinions"<sup>30</sup>.

While the question of how social media are changing Italian democracy certainly needs further analytical studying, the raw numbers obtained by political leaders and parties during the 2018 election speak for themselves. For example, Five Star Movement's political leader, Luigi Di Maio, managed to reach more than 10,2 million people with a single Facebook post, topping the views chart of political content on the platform just two weeks before the 2018 general election<sup>31</sup>.

During the same timeframe the Five Star Movement has also been "by far the most searched-for party" according to Google Trends<sup>32</sup>, and again by far (84,2 points, with Lega, in second position, scoring just 53,9) topped<sup>33</sup> the Index of Social Mobilization devised by IPSOS to summarize the "positive dimensions of interactions — likes, weekly growth of fans and fan base — of Facebook and Twitter accounts" involved in the political contest. According to Blogmeter's analysis, the M5S also generated the most online interactions (39,6%, followed by PD at 15%) during the last month of the campaign<sup>34</sup>.

According to the "Election Mood" project of the independent observatory Data Mood, the interest shown by the public online — captured algorithmically and expressed as the percentage of user interactions on all posts of a political party in respect with all political posts — almost matched the actual results of the election. To researchers, this means that the result could have been predicted by just watching at their indicators<sup>35</sup>, and therefore at social media activities.

This, however, is not meant to infer that these data provide a good explanation of the M5S's electoral triumph — 32,7% for the Chamber of Deputies and 32,2% for the Senate — in the 2018 competition: the leader who generated the most interactions on Facebook, Instagram, Twitter and YouTube combined on February 2018 has been in fact Matteo Salvini, beating the M5S's Di Maio by around a million. And yet, even though his party gained a spectacular +14% compared to the previous competition, it still got roughly half of the votes obtained by the M5S (5.634.577 against 10.522.272)<sup>36</sup>.

Also, the fact that Matteo Renzi is the most followed political leader on Twitter — with around 3,4 million followers, compared to the 670.000 gained by Salvini and the 300.000 Di Maio currently has — but failed spectacularly in the final results (-2.613.891 votes) is a healthy reminder that big numbers online do not immediately translate into big votes.

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<sup>30</sup><http://www.ohchr.org/Documents/Issues/Opinion/Legislation/OL-ITA-1-2018.pdf>

<sup>31</sup><http://munaflo.blogautore.espresso.repubblica.it/2018/02/14/questo-post-di-di-maio-dimostra-il-dominio-del-movimento-5-stelle-su-facebook-gli-altri-partiti-prendano-nota/>

<sup>32</sup><https://cristianvaccari.com/2018/03/02/what-have-italians-been-searching-on-google-during-the-2018-general-election-campaign/>

<sup>33</sup><https://www.ipsos.com/it-it/elezioni-politiche-2018-analisi-del-voto>

<sup>34</sup><https://www.blogmeter.it/blog/2018/03/01/elezioni-2018-partiti-politici-si-sfidano-sui-social/>

<sup>35</sup>[http://www.adnkronos.com/fatti/politica/2018/03/06/election-mood-risultati-gia-chiari-studiando-social\\_RS4FrE7vWGxuoWy1FMVPO.html?refresh\\_ce](http://www.adnkronos.com/fatti/politica/2018/03/06/election-mood-risultati-gia-chiari-studiando-social_RS4FrE7vWGxuoWy1FMVPO.html?refresh_ce)

<sup>36</sup><http://www.cattaneo.org/wp-content/uploads/2018/03/Analisi-Istituto-Cattaneo-Elezioni-Politiche-2018-Chi-ha-vinto-chi-ha-perso-5-marzo-2018-2.pdf>

What these big numbers do tell, though, is that the online political space appears to have been filled by the whole political spectrum. And that more sophisticated communication and dissemination strategies are starting to be part of the game too. Nothing compared with the obsessively precise microtargeting of social media ads witnessed during the 2016 Presidential election in the US. And yet, absent any transparency requirement for both politics and platforms, some data on the actual microtargeting of voters occurred during the 2018 Italian election has been inferred through the usage of the PAC — “Political Ad Collector” — crowdsourcing tool devised by ProPublica, and applied in Italy by Openpolis<sup>37</sup>.

Data are not built out of a statistically solid sample, and therefore are not nearly enough to provide sound generalizations on whether and how personal data have been used or abused by political entities for political purposes. And yet, some insights are noticeable. Examples gathered by Openpolis in fact show that the targeting of messages is still very rough in Italy, mostly limited to geographic areas of interest to local candidates (e.g., users in Sicily for a candidate running in the same region) and declared political preferences or affiliations of the users (e.g., subscribers of PD’s Facebook page to target the same party’s propaganda).

Leftist party “Liberi e Uguali” adopted a further targeting strategy, trying to reach fans of famous anti-mafia Italian writer Roberto Saviano — mostly aligned with messages from its leader, Pietro Grasso, a former anti-mafia magistrate — and Medici Senza Frontiere (Doctors Without Borders). Salvini’s Lega, embroiled in a in-coalition last vote struggle with Silvio Berlusconi’s Forza Italia, decided to target fans of “il Cavaliere” instead, while at the same time becoming the target of neofascist party CasaPound propaganda.

Italy has also been only relatively affected by the Cambridge Analytica case<sup>38</sup>, following revelations by former employee Chris Wylie in the Observer, the Guardian and the New York Times. The microtargeting firm admittedly worked with “a resurgent Italian political party last successful in the 1980s”<sup>39</sup>, even though its precise identity is still unknown<sup>40</sup>. That would not have been a first for a foreign political consultancy in the age of Big Data. To inform the strategy around the 2016 constitutional referendum, for example, then Prime Minister Matteo Renzi hired political advisor and architect of the Obama 2012 data campaign, Jim Messina — to no success<sup>41</sup>.

Also, according to Facebook data, out of the 87 million users who had their data illicitly transferred and analyzed by Cambridge Analytica, some 214.000 were Italians<sup>42</sup>. In April 2018, both the Italian Data Protection Authority<sup>43</sup> and Antitrust Authority<sup>44</sup> started an investigation into what exactly happened with those data, both in terms of individual privacy and “alleged improper commercial practices”.

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37<https://www.openpolis.it/a-caccia-di-voti-con-le-sponsorizzazioni-social/>

38<https://www.theguardian.com/news/series/cambridge-analytica-files>

39<https://ca-political.com/casestudies/casestudyitaly>

40[https://www.agi.it/politica/partito\\_italiano\\_cambridge\\_analytica\\_intervista\\_wylie-3684939/news/2018-03-26/](https://www.agi.it/politica/partito_italiano_cambridge_analytica_intervista_wylie-3684939/news/2018-03-26/)

41<https://www.reuters.com/article/us-italy-referendum-renzi-insight-idUSKBN13V2FF>

42[http://www.ansa.it/sito/notizie/tecnologia/internet\\_social/2018/04/04/facebook-87-mln-profilo-us-ati-da-cambridge-analytica-\\_9c95aeb0-b100-4c3a-be09-5acfab8f18ee.html](http://www.ansa.it/sito/notizie/tecnologia/internet_social/2018/04/04/facebook-87-mln-profilo-us-ati-da-cambridge-analytica-_9c95aeb0-b100-4c3a-be09-5acfab8f18ee.html)

43<http://www.garanteprivacy.it/web/guest/home/docweb/-/docweb-display/docweb/8533717>

44<https://www.thelocal.it/20180407/italy-to-investigate-facebook-for-improper-practices-as-part-of-data-scandal>

## Case studies

The actual use of personal data in contemporary politics in Italy brought about at least three major themes that need further exploration to grasp what the increasing digitization of the public sphere in the country really means. First, the widespread adoption, within Five Star Movement party members, of the Rousseau “operative system”<sup>45</sup>, and therefore of a digital democracy proprietary platform that plays a crucial role in the decision-making and policy-making process of Italy’s biggest party. Second, the several instances of automation of political propaganda, resulting in botnets hijacking or manipulating consensus on online platforms, and influencing the political and mainstream media agenda as a result. And third, the issue of how personal preferences expressed on social media like Facebook alter — via algorithmic selection — what is actually visible of the political ecosystem to ideologically different Italian users, what is not, and precisely how.

Case studies will now be detailed for each of these themes. The first part will involve an explanation of how Rousseau actually works, especially focussing on the hacks to the platform during the summer of 2017 and what they mean for its cybersecurity and the privacy of its thousands of subscribers. The second will present a series of concrete instances in which political bots have been adopted to spread propaganda and sabotage the public discourse. The third will provide brand new data, obtained through the “fbtrex” (Facebook Tracking Exposed) tool devised by Claudio Agosti, to help understand how each typology of voter — one for each area of the Italian ideological spectrum — is given different information on Facebook’s News Feed, and how this relates with political polarization.

### *Hacking digital democracy: the Rousseau case*

On July the 28th, 2017, Beppe Grillo’s blog announced<sup>46</sup> the latest version of its movement’s “operative system”, Rousseau. The online participatory platform, first launched two years earlier as a beta version<sup>47</sup> and in April 2016 officially<sup>48</sup>, is the true heritage of Gianroberto Casaleggio — the Cinque Stelle’s ideologue and other co-founder — and his vision for the future of politics. Rousseau was, and is, meant to be the actual tool to implement “hyperdemocracy”<sup>49</sup>, a peculiar variant of digital direct democracy in which decisions about the party’s agenda are discussed and ultimately taken on the Internet, the real life elected representatives being nothing more than speakers of the so-formed mandatory “wisdom of the crowds”.

The new version of Rousseau included a complete overhaul of its graphics, and especially a long-awaited opening: non-subscribers would now, for the first time, be able to witness

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<sup>45</sup>Actually, a set of applications for online deliberation and discussion within Five Star Movement members. It is not an “operative system” in the proper sense of the term, even though that is how M5S leadership refers to it.

<sup>46</sup>[http://www.ilblogdellestelle.it/2017/07/ecco\\_il\\_nuovorusseau\\_accessibile\\_anche\\_ai\\_non\\_iscritti.html](http://www.ilblogdellestelle.it/2017/07/ecco_il_nuovorusseau_accessibile_anche_ai_non_iscritti.html)

<sup>47</sup><http://www.ilblogdellestelle.it/2015/07/rousseau.html>

<sup>48</sup><http://www.ilblogdellestelle.it/2016/04/>

[il\\_sogno\\_del\\_m5s\\_continua\\_nasce\\_lassociazione\\_rousseau\\_nonmolliamo.html](http://www.ilblogdellestelle.it/2016/04/il_sogno_del_m5s_continua_nasce_lassociazione_rousseau_nonmolliamo.html)

<sup>49</sup>Gianroberto Casaleggio and Beppe Grillo, ‘*Siamo in guerra. Per una nuova politica*’, Chiarelettere, 2011



what was going on on the platform and its individual applications: among them, “Lex Europa”, where law proposals by M5S representatives at the European Parliament are discussed; “Lex nazionale” and “Lex regionale”, in which the same can be done for laws at national and regional level; “Lex iscritti”, that allows every subscriber to propose a law for future discussion.

Funded through individual donations, it by then collected more than 432.000 euros from 14.000 of its 150.000 subscribers. A gigantic effort, it by far represents Italy’s biggest experiment in implementing digital democracy to date; arguably, a unique of its kind worldwide when one considers that it informs the actual inner workings of what has consistently been the country’s biggest party, from 2013 to the present day. Also, the stated aim of Gianroberto’s son and heir<sup>50</sup> as co-leader of the M5S, Davide, is to reach one million subscribers by the end of 2018<sup>51</sup>, all the while making a model out of Rousseau, one that can be exported and replicated in participatory efforts in other countries. Meetings about the platform have already been held in Brazil, Portugal, Estonia, Finland, Holland and Japan.

The experiment had often been plagued by controversies, however, especially concerning its cybersecurity — with “thousands” of attacks, either to Rousseau or previous participatory platforms admitted by M5S admins themselves<sup>52</sup> — and, therefore, the actual ability of its administrators to safeguard user privacy and the integrity of the democratic process on its servers.

The clearest example is what happened through the summer of 2017. Just 24 hours after the launch of the renewed version of the platform, a white hat hacker that went by the name “Evariste Galois” opened a website to actually show Rousseau subscribers that their data were in danger<sup>53</sup>. “This is not a political attack”, he wrote, alleging that he himself highlighted the issue in an email to Rousseau administrators, days earlier. While not dumping the data, on his site he detailed that it was possible for a malicious entity to extract personal data of subscribers — names, surnames, email addresses, social media profiles, phone number, profession, donations made, their method of payment, and more generally all login data — through a simple SQL injection to its databases.

The vulnerabilities, he argued, had been partially fixed, but the security researcher claimed that he could not exclude the existence of unknown ones<sup>54</sup>. What he could tell, instead, is that password requirements were not strong enough, being limited to 8 characters and allowing “brute-force” attacks through which he managed to get 136 passwords of actual users, out of a random sample of 2517 and in just under 21 hours. With a 5,40% of success, this bears significant consequences for online votes, he argued.

Associazione Rousseau, responsible of managing the platform, replied<sup>55</sup> that the vulnerability applied to the older version, but not the current one, and that in any case it

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<sup>50</sup>Gianroberto Casaleggio passed away on April 12, 2016.

<sup>51</sup>[http://www.repubblica.it/politica/2017/08/02/news/m5s\\_casaleggio\\_presenta\\_il\\_nuovo\\_rousseau\\_un\\_milione\\_di\\_iscritti\\_entro\\_un\\_anno\\_-172182097/](http://www.repubblica.it/politica/2017/08/02/news/m5s_casaleggio_presenta_il_nuovo_rousseau_un_milione_di_iscritti_entro_un_anno_-172182097/)

<sup>52</sup>[http://www.ilblogdellestelle.it/2017/08/la\\_sicurezza\\_di\\_rousseau.html](http://www.ilblogdellestelle.it/2017/08/la_sicurezza_di_rousseau.html)

<sup>53</sup>[http://www.repubblica.it/politica/2017/08/02/news/hacker\\_online\\_dimostra\\_la\\_vulnerabilita\\_di\\_rousseau\\_ho\\_bucato\\_il\\_sito\\_dati\\_a\\_rischio\\_-172221493/](http://www.repubblica.it/politica/2017/08/02/news/hacker_online_dimostra_la_vulnerabilita_di_rousseau_ho_bucato_il_sito_dati_a_rischio_-172221493/)

<sup>54</sup><http://www.lastampa.it/2017/08/02/tecnologia/news/hacker-rivela-il-sito-rousseau-del-ms-non-sicuro-v19l3RimflrSZMCSdvuFqN/pagina.html>

<sup>55</sup>[http://www.ilblogdellestelle.it/2017/08/la\\_sicurezza\\_di\\_rousseau.html](http://www.ilblogdellestelle.it/2017/08/la_sicurezza_di_rousseau.html)

never affected any online votes. Also, it announced it was considering legal action against Galois — something which it later did<sup>56</sup>, enraging the Italian cybersecurity community and the 6.300 signatories of a [change.org](https://www.change.org/p/lettera-aperta-a-sostegno-dell-hacker-etico-evariste-galois-che-ha-scoperto-le-falle-di-sicurezza-del-sistema-rousseau?recruiter=621555974&utm_source=share_petition&utm_medium=facebook&utm_campaign=autopublish) petition that claimed he acted in respect to the principles of “ethical hacking”<sup>57</sup>.

But there was more. The next day, a black hat hacker — “rogue\_o” — entered the stage<sup>58</sup>, starting to tweet out sensitive data from Rousseau databases that he claimed had been at his full disposal for months, even putting some of them on sale in exchange for bitcoins. “It’s too easy play with your votes” (sic), he wrote, claiming to have been forced to come in the open to chastise the “infamous” Galois, who — denouncing the vulnerability of the platform — deprived him of unfettered access. Again, the Associazione Rousseau was forced to answer<sup>59</sup>: revealed data, it claimed, are completely “baseless”, and in any case it wouldn’t comment on further dumps in the future.

To former M5S and Casaleggio Associati<sup>60</sup> members, such as Nicola Biondo, Marco Canestrari and David Puente, this was enough however to conclusively prove that the platform was not to be trusted<sup>61</sup>, and that it had been compromised — together with Grillo’s blog — for a decade. “Everything that involved the Rousseau platform”, wrote Biondo and Canestrari, “votes that selected general election candidates included, has to be considered null and void”, as “no one can guarantee that past votes haven’t been altered”. According to M5S’s political leader, Luigi Di Maio, the issue was instead not their own platform being vulnerable, but “the country’s cybersecurity”<sup>62</sup>.

Not everyone agreed with the claim, made by system administrators and M5S’s top figures, that all problems had been solved. After some articles from cybersecurity experts showed, in detail<sup>63</sup>, how and why Rousseau had long been vulnerable, and most likely remained vulnerable, it was the Italian Data Protection Authority who weighed in.

The result of its investigation, published on December 21st, 2017<sup>64</sup>, confirmed most of the findings sketched in previous analyses: due to the “irrefutable technical obsolescence” of its content management system (CMS) software, passwords had been saved in the clear, and personal data had been exposed to the risk of “abusive access”, wrote the Garante, noting that this could have been easily avoided had the software been timely updated. Vulnerabilities were well known, as the producer indicated December 31st, 2013, as its end-of-life (EOL).

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56<https://www.ilfattoquotidiano.it/2018/02/06/rousseau-individuato-e-denunciato-trentenne-veneto-responsabile-dellhackeraggio-alla-piattaforma-del-m5s/4139758/>

57[https://www.change.org/p/lettera-aperta-a-sostegno-dell-hacker-etico-evariste-galois-che-ha-scoperto-le-falle-di-sicurezza-del-sistema-rousseau?recruiter=621555974&utm\\_source=share\\_petition&utm\\_medium=facebook&utm\\_campaign=autopublish](https://www.change.org/p/lettera-aperta-a-sostegno-dell-hacker-etico-evariste-galois-che-ha-scoperto-le-falle-di-sicurezza-del-sistema-rousseau?recruiter=621555974&utm_source=share_petition&utm_medium=facebook&utm_campaign=autopublish)

58[http://www.repubblica.it/politica/2017/08/04/news/nuovo\\_attacco\\_hacker\\_a\\_rousseau\\_facile\\_giocare\\_con\\_i\\_vostri\\_voti\\_-172309654/?ref=RHPPLF-BH-I0-C8-P6-S1.8-T1](http://www.repubblica.it/politica/2017/08/04/news/nuovo_attacco_hacker_a_rousseau_facile_giocare_con_i_vostri_voti_-172309654/?ref=RHPPLF-BH-I0-C8-P6-S1.8-T1)

59[https://www.ilblogdellestelle.it/2017/08/i\\_sicari\\_informatici\\_non\\_fermeranno\\_il\\_movimento\\_5\\_stelle.html](https://www.ilblogdellestelle.it/2017/08/i_sicari_informatici_non_fermeranno_il_movimento_5_stelle.html)

60Founded by Gianroberto Casaleggio, Casaleggio Associati is the company that used to run the digital operations of the M5S, before the Associazione Rousseau took over the role.

61<http://www.supernova5stelle.it/2017/08/15/il-re-e-nudo-e-non-e-un-bel-vedere/>

62<https://video.repubblica.it/edizione/palermo/di-maio-su-rousseau-nessun-problema-ma-preoccupati-per-cybersecurity-del-paese/282342/282944>

63<https://www.clodo.it/blog/hack5stelle-riassunto/>

64<http://www.garanteprivacy.it/web/guest/home/docweb/-/docweb-display/docweb/7400401>

The efficacy of technical countermeasures devised by Associazione Rousseau after the hacks were also affected by the use of obsolete CMS, argued the Authority, confirming Galois's findings about the weakness of password requirements, with 8-digit strings that could be "easily exposed to decryption and brute force attacks" of the likes of which performed by the white hat hacker.

This is all the more important when "votes expressed by subscribers, either during the choice of candidates to be inserted in the electoral lists of the Movement or to orient other politically significant choices" are "electronically registered keeping a strong tie, for each expressed vote, with ID data of the voters". Translated, this means "the tangible possibility of associating, both during and after voting operations, the actually expressed votes with the respective voters".

In the document, the Data Protection Authority therefore issued some "necessary prescriptions" to reconcile the digital democracy efforts of the M5S with user security and privacy. First, "adequate actions of vulnerability assessment" for future developments of Rousseau must be put in place, and performed "before" these systems become operational and are made available to the public. Login passwords should also be subject to "automatic quality control", in order to avoid weak and easily exploitable combinations. Brute force attacks should be contrasted by enabling limited attempts for the login procedure, and hashing algorithms to encrypt passwords made stronger.

As to votes integrity, a log of all accesses and operations performed through the platform should be established, thus enabling real auditing procedures. More generally, the Authority expressed serious doubts concerning the actual possibility of preserving the confidentiality of votes on Rousseau, highlighting — even though just "in abstract" — that it would be possible for system administrators to "constantly profile subscribers", absent an ex-post anonymization procedure. "It would be necessary", he therefore concluded, "to reconfigure the e-voting system so that risks for rights and liberties of individuals are minimized".

Associazione Rousseau quickly replied that all observations from the Data Protection Authority had already been accepted, and accounted for<sup>65</sup>.

Difficult, however, to actually ascertain whether and to what extent this is true<sup>66</sup>, given the lack of transparency around the workings of Rousseau that several pundits long denounced. To many of them, this stems mainly from the fact that its source code is proprietary and not open source, as for example in the case of Pirate Party's "liquid democracy".

What we do know is that rogue\_o took possession of Davide Casaleggio's account at least once in February 2018, releasing sensitive data — his phone numbers, email and private addresses, Rousseau password — on Twitter<sup>67</sup>.

Critiques to the M5S's digital democracy efforts have not however been limited to technical issues. During the years, criticism abounded on the political level too. Questions have been repeatedly raised about the formulation of choices in online votes, for instance, ranging for

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<sup>65</sup>[https://www.agi.it/breakingnews/](https://www.agi.it/breakingnews/m5s_accolte_le_raccomandazioni_del_garante_rousseau_piu_sicuro-3333887/news/2018-01-03/)

<sup>66</sup><https://www.davidpuente.it/blog/2018/01/05/rousseau-e-gia-sicuro-le-raccomandazioni-del-garante-la-privacy-sono-gia-state-accolte/>

<sup>67</sup>[https://www.agi.it/politica/hacker\\_casaleggio\\_m5s-3459763/news/2018-02-07/](https://www.agi.it/politica/hacker_casaleggio_m5s-3459763/news/2018-02-07/)

those concerning expulsions from the movement of certain activists — often unbalanced against the accused<sup>68</sup> —, the choice of local election candidates — at times, rejected even after winning the popular vote online<sup>69</sup> —, and the selection of Prime Minister candidate and current political leader, Luigi Di Maio — whose competitors were completely unknown to the public, and therefore no real contestants in the opinion of many observers<sup>70</sup>.

Together with the recent overhaul of the movement's own rules<sup>71</sup> — which no activist voted upon — in the direction of a more traditional party and leadership structure, all of the highlighted issues impose a reflection on how the digital and the democratic process actually intertwine in a contemporary, advanced Western democracy and, in particular, whether this combination ultimately leads to increased levels of meaningful participation and co-deliberation or, on the contrary, mostly provides opportunities for plebiscitary outcomes and subtler manipulations of consent<sup>72</sup>.

### *Automating the public sphere: the case of pro-Salvini “self-bots”*

“Salvini is the strongest on the web”, proclaimed<sup>73</sup> [corriere.it](http://www.corriere.it) on May the 20th, 2014, right before the European Parliament election in which Matteo Salvini, then leader of Lega Nord (now “Lega”), gathered 6,1% of the votes, 4% less than the previous one.

“Italians made up their minds: #alfanodimettiti”, wrote in a similar fashion *il Giornale*<sup>74</sup>, one year later. Again, Salvini was able to dominate the online sphere — “gaining the favor of the whole social network”, reads the article —, imposing an hashtag campaign for the resignation of then Minister of Interior, Angelino Alfano, at first position among trending topics on the Italian Twitter. A counter-propaganda strategy by Alfano supporters, #iostoconalfano, did not get traction instead.

The two circumstances are only apparently unrelated. Because in both instances, it was automation that did the trick. As Roberto Favini noted on his blog<sup>75</sup>, with the help of Buzzdetector data scientist, Angelo Centini, the otherwise inexplicable spikes in social media amplification was mostly due to a now “temporarily suspended” app, launched as part of Salvini's propaganda campaign, that allowed subscribers to “become a spokesperson” of the Lega Nord leader. After a quick registration process, each supporter's Twitter profile would then be enlisted in an army of propagandists that “automatically retweet” tweets from Salvini's official profile, @matteosalvinimi.

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68<https://www.ilfattoquotidiano.it/2013/06/19/m5s-rete-ha-deciso-adele-gambaro-espulsa/631140/>

69<https://www.ilpost.it/2017/03/17/beppe-grillo-genova-cassimatis/>

70<http://www.rainews.it/dl/rainews/articoli/m5s-domani-si-vota-on-line-il-candidato-premier-sette-sconosciuti-sfidano-di-maio-bcbc3992-1f52-4475-b3cc-2f3356e5c3e9.html>

71[https://www.ilblogdellestelle.it/2017/12/e\\_ora\\_di\\_pensar.html](https://www.ilblogdellestelle.it/2017/12/e_ora_di_pensar.html)

72See Fabio Chiusi, ‘Critica della democrazia digitale. La politica 2.0 alla prova dei fatti’, Codice, 2014

73<http://seigradi.corriere.it/2014/05/20/europee-e-salvini-il-piu-forte-sul-web/>

74<http://www.ilgiornale.it/news/politica/italiani-hanno-deciso-alfanodimettiti-1194901.html>

75<http://www.myweb20.it/2014/05/matteo-salvini-primo-politico-su-twitter-ma-con-aiutino/#sthash.Ri0q6p6H.Kd0QRfgg.dpbs>



**HO BISOGNO DI TE!**

**PARTECIPA ANCHE TU ALLA CAMPAGNA SUI SOCIAL**

**EUROPEE, DOMENICA 25 MAGGIO VOTA LEGA NORD E SCRIVI: SALVINI**

**REGISTRAZIONI TEMPORANEAMENTE SOSPESE**  
Siamo spiacenti per il momento non siamo in grado di accogliere ulteriori iscrizioni.

**DIVENTA PORTAVOCE DI MATTEO SU TWITTER!**

Vuoi essere anche tu portavoce di Matteo Salvini durante la campagna elettorale fino al 25 maggio? E' semplicissimo: se hai già un account Twitter, **compila il campo 'Tua email', clicca sul pulsante 'Registrati con Twitter'** e segui le istruzioni a schermo. Una volta completata la registrazione, il tuo profilo ritwitterà automaticamente i tweet di Matteo Salvini (@matteosalvinimi)!

Tua email

**APPLICAZIONE TEMPORANEAMENTE SOSPESA**

Subscription gave app creators permission to “read tweets from your chronology”, “look up who you follow and follow new users”, “update your profile”, “publish tweets from your account” and even “access your direct messages”. No wonder many — “at least in 90% of cases”, argues Favini — decided to open a brand new account from which to spread Salvini’s messages.

The #alfanodimettiti campaign followed along the same path. As Gilda35 analysis showed, “the first 10 accounts constitute 40% of tweets”. A Motherboard article<sup>76</sup> argued this was due to the re-activation of Salvini’s app, called “LegaNordIllustrator”, “granting an automatic retweet for each post indicated by the app”. As soon as the human botnet was turned off, the hashtag got out of the trending topics, noted the article.

According to a Viralbeat analysis<sup>77</sup> of 20.754 tweets from the Twitter campaign, “intervention of the LegaNordIllustrator bot certainly provided a crucial contribution in the launch phase of the hashtag”.

But what followed is even more interesting for understanding how the automation of the Italian public sphere actually works. First, many of the accounts involved “kept tweeting autonomously, even developing a storytelling of their own”. Second, many genuine conversations sparked from the artificially inflated trending topic, thus managing to hijack the online conversation in the desired direction. Third, and most important, traditional media weighed in, providing a megaphone to augment the reach of anti-Alfano messages way beyond the possibilities of Twitter bots alone.

The same intertwining of online and offline political agenda happened right before the March 4, 2018 general election. Building on a blog post by programmer and debunker

<sup>76</sup><https://motherboard.vice.com/it/article/ypb4aj/matteo-salvini-ha-utilizzato-una-botnet-per-gonfiare-la-sua-presenza-sul-web>

<sup>77</sup><http://www.viralbeat.com/blog/caso-alfano-dimettiti-newsmaking-vittima-di-bot/>

David Puente<sup>78</sup>, The Atlantic Council's Digital Forensic Research Lab found<sup>79</sup> an identical text in support of Salvini "posted by 154 accounts in the space of 74 seconds". They were all advertising the Lega leader's presence at a tv show on January 23. Again, it was not just bots, or "automated accounts which post retweets or likes without human intervention": it was also what the DFR Lab labelled "self-bots", or human supporters voluntarily handing control over their own accounts to the "LegaNordIllustrator" app, and therefore temporarily becoming tools for the propagation of automated messages.

What this means is that, on the side, "the behavior of these accounts was too similar and too synchronized to be anything other than automated"; on the other, however, some of them behaved "in different ways", alternating bot-like tweets with individually produced content. This appears to demonstrate that some nodes of the botnet were in fact made of "genuine" users who decided, at times, to hand over the keys to their accounts to Salvini's automated propaganda efforts.

According to DFR Lab analysis, the same strategy adopted in 2014 and 2018 also involved the 2016 referendum announced by then Prime Minister, Matteo Renzi. "On the night before the referendum", the article reads, "between 10:04pm and 10:09pm, 156 Twitter accounts shared the same picture with the same message that invited Italian citizens to go and vote "no"". Some of the "selfbots", noted the DFR Lab, were even the same found to be active two years later.

Even though the self-botnet is small, appearing "to include just over 150 accounts, of which some are Lega corporate ones (...) "selfbots" like this further blur the distinction between human and algorithm, and render the online space more vulnerable still to abuse", concluded researchers Ben Nimmo and Anna Pellegatta.

To lab director, Maks Cziperski, this was also part of a larger attempt "to popularize the more extreme parties, both right and left"<sup>80</sup>. A SkyTg24 analysis<sup>81</sup>, for example, showed that a network of "more than 100 bots" was involved in spreading a viral racist video, shared by Salvini himself, contrasting good Italians in dire economic conditions with privileged, and yet complaining, immigrants. Similar anti-immigrants, anti-Islam content had been proposed by a broader network of media organizations, made of alt-right sources like Breitbart, anti-EU ones like Voice of Europe and the controversial Infowars website.

Political bots in Italy are not the exclusive domain of the current Lega leader. "There exist many political botnets in Italy", explained Renato Gabriele, from the Gilda35 collective, to La Stampa in February 2017<sup>82</sup>, "and they are not isolated. The often mingle or overlap because of common interests. At times they are used in separate clusters, so that the same accounts are not always exposed. We've seen them active in the 2016 referendum", a time in which he argues that 76% of all Twitter conversations on the subject were attributable to "spam"<sup>83</sup>.

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<sup>78</sup><https://www.davidpuente.it/blog/2018/01/24/tweet-automatici-della-lega-nord-su-twitter-un-matteo-salvini-strepitoso-su-la7-siete-daccordo/>

<sup>79</sup><https://medium.com/dfrlab/electionwatch-italys-self-made-bots-200e2e268d0e>

<sup>80</sup><https://www.bloomberg.com/news/articles/2018-02-19/now-bots-are-trying-to-help-populists-win-italy-s-election>

<sup>81</sup><http://tg24.sky.it/politica/2018/02/28/salvini-elezioni-2018-network-siti-stranieri.html>

<sup>82</sup><http://www.lastampa.it/2017/02/22/esteri/cos-funziona-la-propaganda-politica-a-colpi-di-bot-su-twitter-RPus61i05CcRaJL6TjAp2J/pagina.html>

<sup>83</sup><https://medium.com/gilda-35/small-data-repubblica-e-il-referendum-7bffaad629>

Usage of political bots has also been linked with the proliferation of online content in favor of far right party Fratelli D'Italia and its leader, Giorgia Meloni<sup>84</sup>. Moreover, a pro-government botnet has been found repeatedly spamming the same message rejoicing — with the same exact wording — for the restitution of private homes to those affected by the 2009 L'Aquila earthquake. Its origin, at times incorrectly attributed to the Democratic Party<sup>85</sup>, is still unknown, even though analyses by Puente<sup>86</sup> linked it to social media intelligence company IsayData — which strongly denied any involvement<sup>87</sup>. Hackers claiming to belong to the Italian branch of the hacktivist collective Anonymous later hacked 900 out of a 2.500 “fake bot” network allegedly operated by IsayData, accusing the company of “political propaganda” of which, however, they did not provide conclusive proof<sup>88</sup>.

Evidence is lacking in respect with the presence of Russian bots influencing the Italian democratic process, and in particular operating in favor of Lega and Movimento Cinque Stelle, too. Claims of Russian interference by former US Vice President, Joe Biden, and former Deputy Assistant Secretary of Defense, Michael Carpenter in a Foreign Affairs essay<sup>89</sup>, together with allegations on the press — both foreign<sup>90</sup> and domestic<sup>91</sup> — have been rebuked by the Italian intelligence community and Ministry of Interior<sup>92</sup>, Marco Minniti.

### *Tracking exposed: using bots to understand Facebook polarization in the Italian election*

Not all political bots serve the purpose of spreading propaganda: some may be created for the opposite intent of tracking how political content are served to Facebook users. As widely reported<sup>93</sup>, the social network does not show, in each News Feed, all of the contents produced by “friends” and pages a user “likes” in chronological order. Rather, they are curated and selected via an algorithm that provides a unique experience to each user, according to its preferences. As a result, only certain post are actually shown in the Feed, while most remain hidden from view. Facebook claims this serves the purpose of maximizing “meaningful” interactions — or, in social media jargon, user “engagement”.

Problem is: we don't really know how this algorithm works, which criteria it applies in its selection — apart from very broad ones — and how it evaluates and weighs user preferences. As code is not neutral, but it instead embeds the values of those who write it, this comes at the cost of overseeing the ethical and political consequences implied by these

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84<https://nacholotta.github.io/salvini.html>

85<https://www.davidpuente.it/blog/2017/12/31/fake-bot-is-da-dove-prendono-tweet-che-pro/>

86<https://www.davidpuente.it/blog/2017/12/29/fake-bot-sulle-cassette-del-terremoto-sono-tutti-collegati-porterebbero-roma/>

87[https://www.agi.it/cronaca/terremoto\\_case\\_aquila\\_twitter-3323411/news/2017-12-30/](https://www.agi.it/cronaca/terremoto_case_aquila_twitter-3323411/news/2017-12-30/)

88[https://www.agi.it/cronaca/hacker\\_elezioni\\_italia-3364537/news/2018-01-12/](https://www.agi.it/cronaca/hacker_elezioni_italia-3364537/news/2018-01-12/)

89<https://www.foreignaffairs.com/articles/2017-12-05/how-stand-kremlin>

90<https://www.nytimes.com/2018/03/01/world/europe/italy-election-russia.html>

91<http://www.lastampa.it/2018/02/17/esteri/iiovotono-consip-e-bastaimmigrati-le-operazioni-social-in-italia-dei-troll-di-san-pietroburgo-r5xkcNv6d3vhlZrswlNvK/pagina.html>

92<http://www.repubblica.it/esteri/2017/12/14/news/>

[gli\\_007\\_italiani\\_smentiscono\\_biden\\_non\\_ci\\_sono\\_evidenze\\_di\\_ingerenze\\_straniere\\_su\\_voto\\_italiano\\_-184102713/](http://www.repubblica.it/esteri/2017/12/14/news/gli_007_italiani_smentiscono_biden_non_ci_sono_evidenze_di_ingerenze_straniere_su_voto_italiano_-184102713/)

93See for example Eli Pariser, ‘*The Filter Bubble: What the Internet is Hiding from You*’, Penguin, 2011.

decisions. In other words, if “algorithms are like social policies”, then “they should be available for public scrutiny”<sup>94</sup>.

Pundits long argued that the lack of transparency around the actual functioning of Facebook’s curation algorithm bears significant consequences for the public sphere, leading to increased polarization of the political discourse, via ideological “filter bubbles” and “echo chambers” — in which we are “indoctrinated” with our own propaganda, as Eli Pariser puts it, and therefore mainly exposed to content that confirms, rather than disprove, our prejudices and beliefs.

To field-test these — contested — hypotheses, we used the “Facebook Tracking Exposed” tool developed by Claudio Agosti<sup>95</sup> in the run up to the March 4, 2018, Italian general election, focusing on how exactly News Feed contents on the social network have been served to six bots mimicking the behavior of users with well-defined, different ideological orientations.

The aim is manifold, and consistent with the goals of the larger “Tracking Exposed” project: observing, evaluating and better understanding the Facebook algorithm; raising awareness around the notion of “algorithmic diversity”; giving users greater transparency and agency over how they experience the algorithm; providing quality data for further research; encouraging Facebook “to publish more open data describing the social phenomena happening” on its platform — in this case, how the perception of reality is algorithmically shaped in the context of an electoral campaign.

In this narrower sense, the specific goals of the 2018 Italian election experiment were: understanding fairness in the algorithmic distribution of political content on Facebook in the run up to the vote; gaining greater transparency in respect to the dynamics with which political contents are distributed on the social network; raising awareness about the algorithmic intermediation of discourse between political institutions and citizens, thus questioning with a hands-on example one of the basic premises of communication in the digital age — that of a direct, unfiltered connection between the former and the latter through social media (“disintermediation”).

In order to do that, we adopted the following methodology. First, we created six bots, each of them “following” the same batch of 30 public Facebook pages we decided were representative of the whole Italian ideological and political spectrum — a mixture of news outlets, political leaders, political parties and propaganda organs<sup>96</sup> — in clusters of six for each orientation (“far right”, “right”, “center-left”, “left”, “Five Star Movement”). Each bot would then “like” only those pages pertaining to a particular ideological orientation, thus becoming oriented; only one, the “control” bot, would not, thus representing the “undecided” voter.

Bots would then access 13 times a day, at the same time — each hour from 8:05 am to 8:05 pm — through a so-called “autoscroller”, a simple tool to automatically scrolls the News Feed by 800 pixels every 5 seconds, 30 times per access, thus collecting an average of 45 posts per access. Data collection started on January 10, 2018, and lasted for 60 days. Bots

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<sup>94</sup><https://facebook.tracking.exposed/project>

<sup>95</sup><https://facebook.tracking.exposed/>

<sup>96</sup>The original batch comprised 90 sources, among which we selected the 30 most active ones in term of published content. Of course, as it will be highlighted among the limitations of our method, ours was an arbitrary choice, bot in terms of quality and quantity of selected pages.



activity has been compared only when the “autoscroller” worked as intended for all of them.

Bots representing hypothetical types of clearly ideologically oriented users have been preferred to pre-existing, human ones as the variety of interactions of real-life individuals with their social graph — in terms of number of “friends”, shared contents, access to the platform and accessed sources — would have made comparisons less feasible and meaningful.

Through this methodology, and the usage of Tableau Public, Excel and original software obtained from existing open source code for data visualization, we have been able to get some insights into variables that might be useful in judging how Facebook’s algorithm actually works. Among them: how often the same content is repeated depending on a user’s ideological orientation; the dynamics of algorithmic exposure to different typologies of content (links, photos, videos, status updates); the difference between publication time and visualization time of a content.

A first noticeable finding from our dataset concerns the diversity — or lack thereof — of content to which the far right oriented bot has been exposed. As shown in Fig. 1, this bot is shown a much smaller variety of posts compared to the others, that are therefore repeated in its News Feed way more than average. Whereas no other bots saw the same content more than 16 times, the far right one “saw some posts as often as 29 times in the 20 days represented in the dataset”.

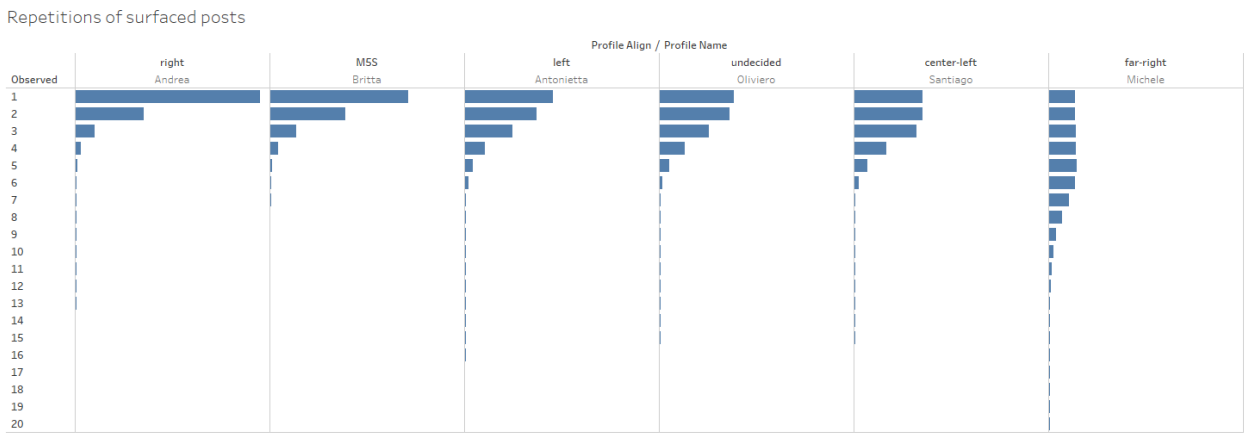


Fig. 1 - The far right oriented bot, “Michele”, is shown a smaller variety of posts — measured as “number of records” — and at the same times more frequently repeated — “observed”.

By analyzing the type of posts to which this bot is exposed (Fig. 2), one can also understand that the far right bot is consistently exposed to a disproportionate amount of photos.

What this means is that an hypothetical Italian neo-fascist had a radically different experience of Facebook’s News Feed, seeing the same photo content over and over again.

This is consistent with polarization studies that claim that ideological “filter bubbles” more severely affect those who lie at the extremes of the political spectrum.

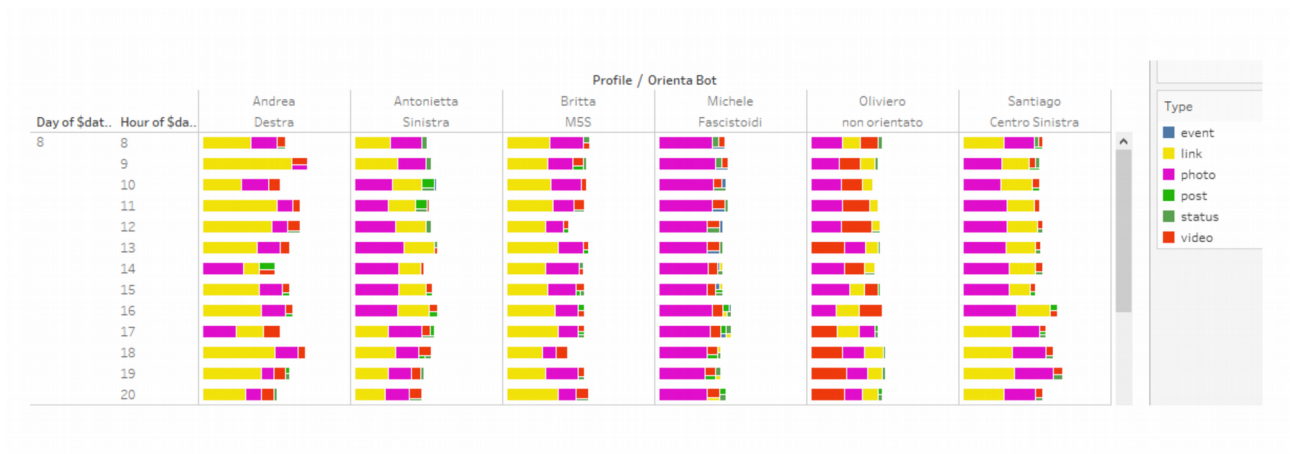


Fig. 2 - The far right bot “Michele” is consistently shown much more photos (*pink*) than other bots

An interesting additional finding is the fact that, after announced changes to Facebook algorithm<sup>97</sup> went into effect, the repetition pattern significantly altered, raising the average amount of surfaced repeated posts across the whole ideological spectrum.

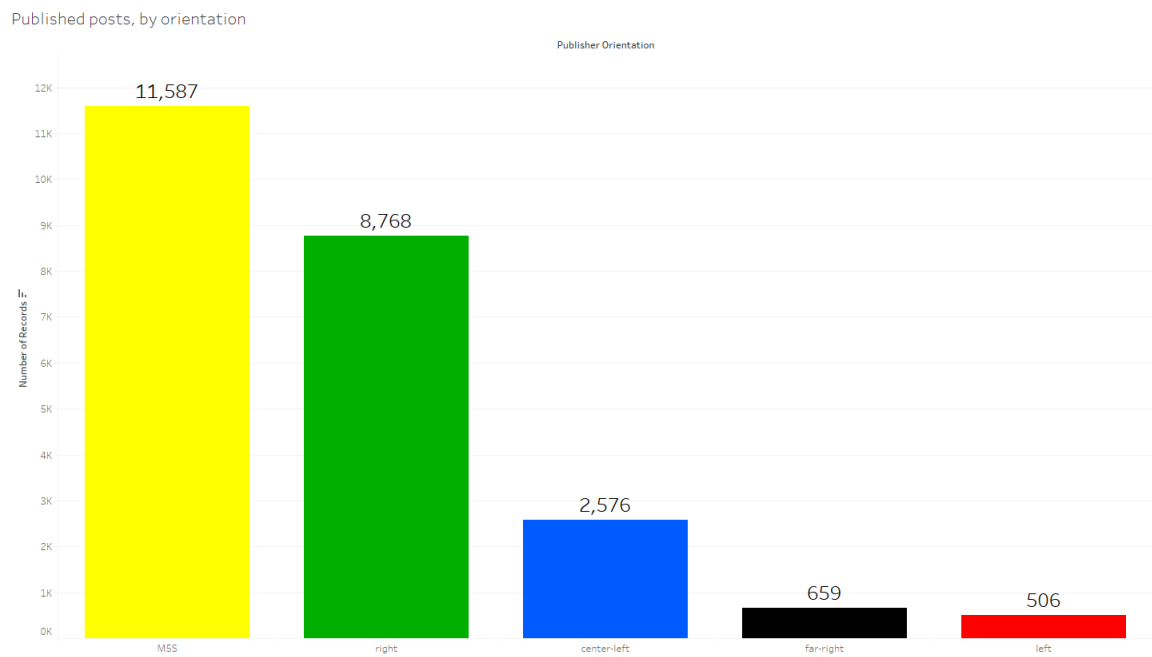


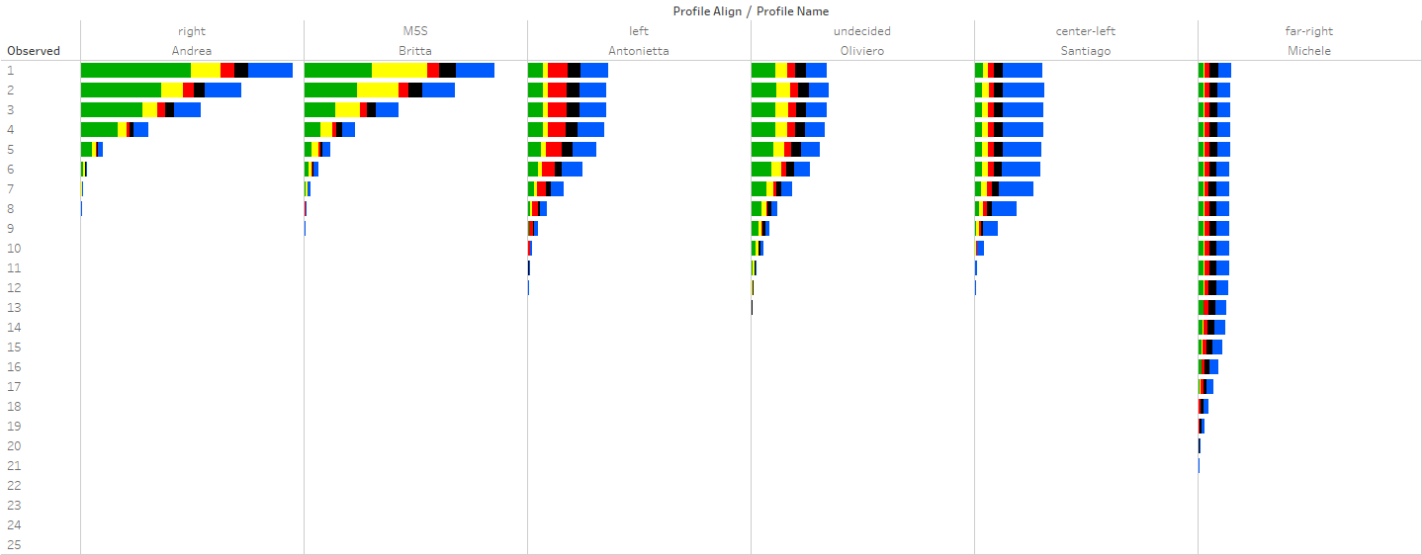
Fig. 3 — Number of published posts by sources included in the study, by ideological orientation

Our study therefore not only allows us to observe the differences in absolute numbers of published posts by sources in each ideological cluster (Fig. 3), but it also provides a unique historical record of how algorithmic changes actually impacted on the exposure and displaying of content on users’ feeds, and how these dynamics evolved throughout the process.

Fig. 4 — Repetitions of surfaced posts, by source orientation

<sup>97</sup><https://www.nytimes.com/2018/01/11/technology/facebook-news-feed.html>

Repetitions of surfaced posts, by source orientation



For instance, by breaking down surfaced repeated content by ideological orientation (Fig. 4), we could see that center-left content (*blue*) scored a significant amount of repetitions in all News Feeds, and especially in that of the neo-fascist bot — where it obtains more repetitions than all other ideological orientations.

Surfaced posts, by orientation

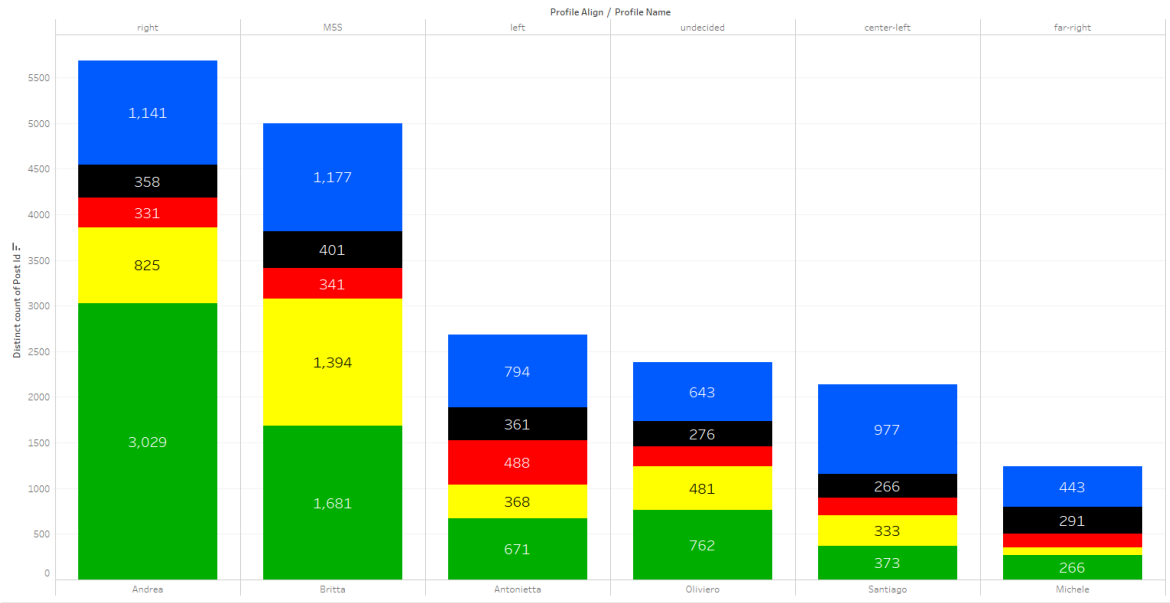


Fig. 5 — Number of surfaced posts, by ideological orientation

That center-left oriented posts get a better exposure ratio is confirmed when confronting, for each orientation, the number of posts published in our source batch (Fig. 3) with that of posts that are actually shown in the News Feeds of our users (Fig. 5). Even though center-left sources published less content in absolute terms, their posts got a better degree of exposure than those that were M5S-oriented.

The common sense assumption that the more you publish, the more you appear in somebody's News Feed is proven factually wrong also when confronting the three major news sources for the center-left, center-right and M5S orientations. As Fig (6) and (7) show, even though conservative news outlet Il Giornale published a bigger absolute

number of posts during the analyzed timeframe, it is progressive La Repubblica that most consistently surfaced in News Feeds from all orientations.

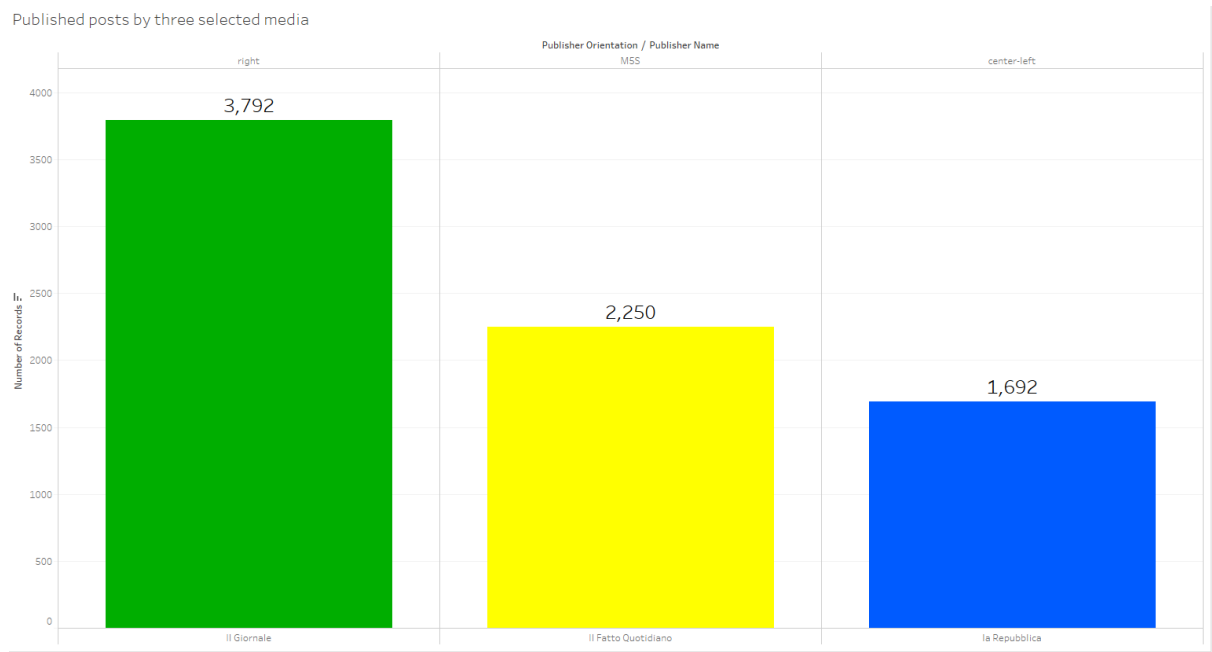


Fig. 6 — Absolute number of published posts by the three main news sources for each the center-right (green), M5S (yellow) and center-left (blue) ideological orientations

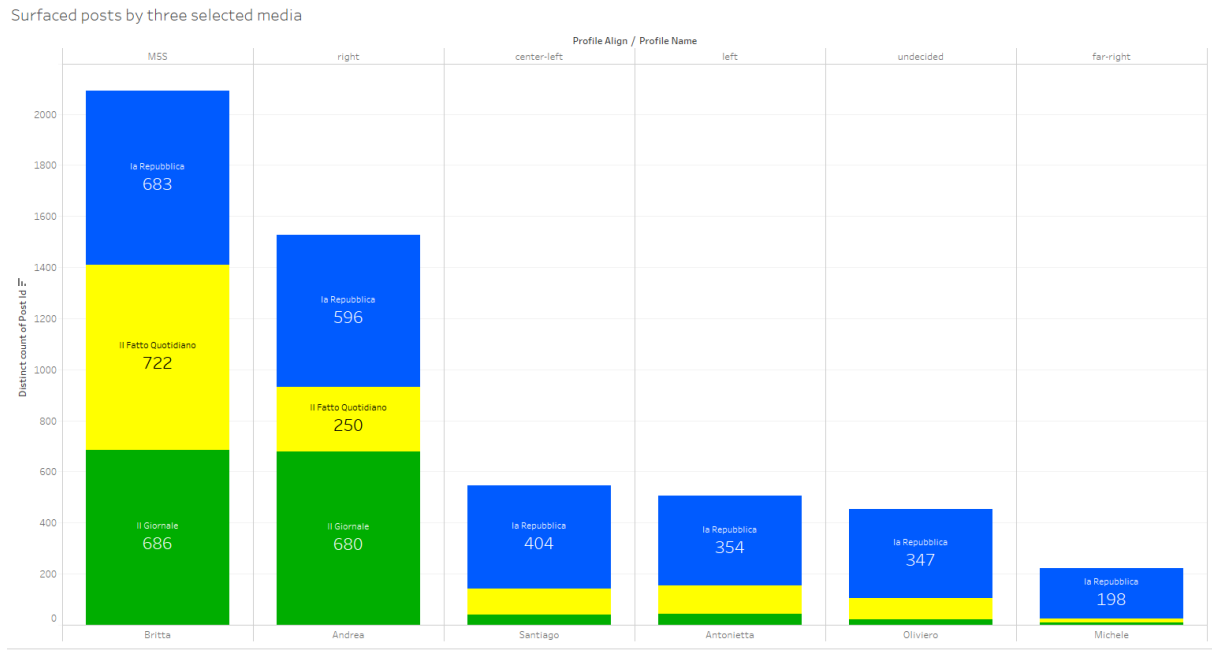


Fig. 7 — Number of posts by the three sources that have been actually shown in each ideologically oriented News Feed. La Repubblica gets bigger exposure even in the face of smaller publication numbers

Our data do not allow speculations as to why this happened — only Facebook data could provide an answer. What our method does show, however, is that such disproportions exist, and that they are otherwise left unchecked, and unexplained.



Of course our method is subject to some structural limitations, to be improved in further research. The biggest involve our page selection to define the ideological orientation of the analyzed bots. Some could question, for example, that certain sources — for example, the Facebook page of a newspaper — only pertain to a precise ideological faction, or identify an ideological faction in any sense. Even though primarily referenced by center-left and Five Star Movement supporters, outlets such as La Repubblica and Il Fatto Quotidiano in fact gather a more diverse readership. Also, many other pages could have been handpicked to define an ideological category — other prominent political figures or unofficial pages — instead of the ones we selected, possibly with different results.

One far right Facebook page (“Fascisti uniti per l’Italia”) was abruptly shut down during data collection, and even though swiftly replaced with an ideologically compatible one (“Lotta studentesca”) the sample had to be adjusted on the fly.

Finally, ideological categories themselves are questionable, not just in respect to the Facebook pages that should identify them, but in themselves. Defining a clear difference between “center-left” and “left”, for example, may easily get lost in subtleties, while the lack of a purely “centrist” bot — especially in a country run for half a century by Democrazia Cristiana — is at risk of missing an important piece of the Italian political puzzle.

Future developments therefore include a better use of bots, both in the technical aspects of behavioral tracking and the very composition of their ideological orientation. Results could also be cross-checked in multiple instances, for example by repeating the experiment in other situations, unrelated to an electoral campaign. Finally, more metrics can be applied: while currently focusing on “likes” on a Facebook Page only, the project might expand to the tracking of “likes” to individual posts.

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Disclaimer: The sensitive nature of examining data practices within political parties and within electoral campaigns created some understandable constraints on the research by our partners. Our partners largely found that interviewees would only share information off-the-record and without attribution. For this reason, some of the findings had to be augmented with publicly available information and others by participant observation at industry conferences and presentations and first-hand technical reviews. Tactical Tech and the authors have made every effort to ensure that the information in this report is correct and appropriately sourced where possible, however, Tactical Tech and the authors do not assume and hereby disclaim any liability to any party for any errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause.