**Policy Paper**
**Note de recherche**

**cife**

*Centre international*
*de formation européenne*

*CIFE Policy Paper N°54*

*Lucas Skupin\*, May 2nd, 2017*

# The influence of social media on democratic participation and decision-making

The advent of social media as a political instrument initially generated widespread euphoria among scholars and journalists, who saw it as a driving force for unity, equality, democratisation and truth in open access platforms such as Twitter and Facebook.[1] Attributions that weighed heavily on the shoulders of the prodigies of digital communication and still do today. While there is without a doubt potential and opportunity in the realm of these digital networks, their influence on the political debate as well as on the decision-making process during the Brexit referendum and the primary and general elections in the USA compels us to re-evaluate the precarious link between democracy and technology.

### The Good, the Bad and the Ugly

When the self-immolation of Mohammad Bouazizi sparked the first wave of the "Arab Spring" on the 17th of December 2010, social media was quickly credited as playing an important role in the unprecedented rise of grassroots movements in the Maghreb States. Newspaper headlines read "Why not call it a Facebook revolution?"[2], or "How an Egyptian Revolution Began on Facebook"[3]. In 2013, the democratic potential of social media became a front-page topic again when social activists turned to Twitter and Facebook to report police violence against the African-American community in the USA, to counteract the lack of checks and balances in responsible law enforcement agencies.[4]

Once it turned out that the initial euphoria of a democratic domino effect in the Arab world was far from being a self-fulfilling prophecy, it became apparent that social media didn't live up to the premature claim it was a catalyst for democratisation and equality. On the contrary, authoritarian governments made use of Twitter and Facebook for propaganda purposes and in their own counter-insurgency strategies.[5][6] Additionally, social media networks became forums for the otherwise rather clandestine communications of radical islamists or xenophobes.[7] With their legal foundations in the USA where both the First Amendment and the Communications Decency Act provide Twitter, Facebook and others "substantial legal protection" from the contents submitted by

their users, the lack of urgency to aggressively tackle hate speech resulted in negative coverage in Germany, France and the USA in recent years.[8][9] The criticism peaked as a response to the influence of social media on political participation, decision-making and the polarisation of society in the wake of the Brexit referendum in Great Britain and the primary and general elections in the USA.

### Growing numbers, growing problems

As of April 2017, Facebook with nearly 2 billion, Youtube with 1 billion, Instagram with 800 million and Twitter, as well as Snapchat with 250-300 million active users are the frontrunners of globally operating social media networks.[10] Being established forums for political debate and, according to a Pew study, a growing source for news consumption, this paper focusses mainly on Facebook and Twitter.[11]
"With every new technology comes abuse, and social media is no exception."[12] Against this backdrop, the following paragraphs seek to assess the shape, function and impact of new phenomena in the sphere of political communication in social media.

### Falsified information

Perhaps the most attention is being paid to the issue of falsified information, also known as fake news. Deliberate misinformation is not a new invention and has been used in political campaigns or conflicts for centuries.[13] However, in today's fast-paced media environment, where Facebook and Twitter act as real-time news feeds for a growing number of people, the immediate and unfiltered dissemination of any kind of information has reached unprecedented dimensions.[14] While traditional media outlets normally redact their articles, anyone can publish almost any kind of news without further review on social media platforms. As a matter of fact, the use of social media as a primary news resource comes with the risk of being exposed to deliberate misinformation.
Fake news items can take many forms on social media nowadays. They appear disguised as Tweets, Instagram photos, Facebook posts, or Youtube videos. Driven by a blend of monetary and ideological

incentives, their common ground is a sensationalist style and the claim to be genuine.[15] In an attempt to pre-emptively guard against being exposed, false news often makes use of conspiracy theories involving those who are able to scrutinise the information's validity, mainly journalists and the government, often referred to in the derogative terms, 'mainstream media' and 'the establishment'.

Falsified information can be created by anyone – government or citizen. Their potential to influence opinions, intimidate or demobilise opposing groups and generate the impression of support make them a dangerous tool of computational propaganda and a veritable threat to societies, especially in vulnerable times – for example during elections or referendums.[16] Numerous incidents of misinformation intented to mislead voters during the 2016 US presidential election led to a debate as to whether social media "propelled Donald Trump to victory".[17]

Far from being an isolated event in the USA, computational propaganda is a borderless phenomenon. In Germany, xenophobic fake news dealing with the German refugee influx became a popular instrument for right-wing partisan activists. Commonly equipped with the hashtag 'rapefugees', numerous fictitious stories shed a bad light on refugees, with the intention of altering the immigration policy of the German government.[18][19] The fabricated claim that a 13-year-old German girl with Russian roots had been abducted and raped by refugees is one example that resulted in demonstrations and extensive media coverage in Germany and Russia.[20]

In France, there has been a perceivable increase in intended "manipulation and distortion", especially "during election periods", says Samuel Laurent, head of the Le Monde fact-checking team.[21] For example, false news claimed that Alan Juppé, centre-right politician and until recently a candidate in the French presidential election, is allegedly linked to the Muslim Brotherhood and further accused him of "wanting to build a Mosque-Cathedral in Bordeaux".[22]

Already in 2014, long before the Brexit and the election of Donald Trump put the issue on everyone's agenda, the World Economic Forum identified the "rapid spread of misinformation online as among the top 10 perils to society".[23] This assessment comes as little surprise if the complicity of its preferred audience is taken into account. Psychologist Nigel Barber argues that there is an "astonishing willingness" to give credence and disseminate "patent falsehoods" as long as it damages the reputation of a target holding different views.[24] He identifies gossip as the "main psychological precursor of fake news" and "shared

antipathy" as the main motivation.[25] The veracity of the content shared is unimportant, "because believing it feels good and serves a social function", he further explains.[26]

While some pieces of falsified news are meticulously assembled[27], or great effort has gone into making them appear to come from legitimate news outlets[28], others opt for the quantitative approach and simply overwhelm networks with their content. In January 2017, Jonathan Albright, data researcher and media and communications professor, found 78,349 artificially submitted videos propagating fake news and populist theories on Youtube.[29] A new so-called news video was generated "every three minutes".[30]

Often times the sources of fake news are not Facebook, Twitter or Youtube itself, but myriads of websites with the sole purpose of disseminating misleading content to social media platforms in the hope of maximising clicks and benefitting from advertising revenue.[31] The bizarre case of the Macedonian town of Veles from where "hundreds of fake news sites" published mostly pro-Trump content, illustrates the global scale of the highly competitive market for fake news.[32] For David Mikkelsen, founder of the fact-checking website snopes.com, the competition pressure forces partisan political fake news websites to "push their news further to the extreme".[33] The controversial nature of lurid and populist messages is guaranteeing them a disproportionate amount of attention on social media. According to Simon Hegelich, professor of political data science at the Technical University of Munich, "those with extremist and radical opinions can often outgun more moderate voices".[34] Those opinions, especially when multiplied by social bots and like-minded users can create the "impression of a grassroots movement of contrarians" and "contribute to a strong polarisation" into partisan groups[35], both veritable threats to democratic societies.

## Social Bots

In the past few years, the sheer mass of social media users has created incentives to automatise interaction and content production. Pre-programmed algorithms, so called social bots, imitate human behaviour on social networks and discussion boards. With an estimated number of 48 million false accounts, it seems that the minimalist architecture of Twitter is particularly vulnerable to the deployment of social bots and bot networks.[36] Unlike benign bots such as news feeds or customer relations chat bots, harmful

social bots, fuelled by ideological and/or monetary motives, are designed to spread unverified or even falsified information, suppress or promote opinions in discussions and to put items of their choice on the agenda.[37]

Lutz Finger, Director of Data Science at LinkedIn distinguishes between five forms of malicious bots in an article in Forbes.[38] [39] While relatively simple bots are sufficient for the purpose of spamming, more sophisticated algorithms do mischief in terms of damaging the reputation of competitors or political opponents. Bots that influence opinions and limit free speech are further sources exerting a potentially dangerous impact on democratic decision-making and participation.[40]

The so-called 'political astroturf' is a particular type of threat emanating from the mass usage of false accounts. With the aim of shaping collective opinions, a single person or organisation can imitate a "spontaneous grassroots" movement that conveys a paean of praise for the one side and spreads rumours about the opposing side of the political spectrum.[41] [42] Scientists working on the Political Bots project at the Oxford Internet institute (OII) observed that the activity of political bots "reached an all-time high" during the US Presidential election 2016.[43] Both pro-Clinton and pro-Trump bots were used "strategically throughout the election".[44] The quantitative differences are illustrated by the 5:1 ratio of highly automated pro-Trump bots vis-à-vis the pro-Clinton bots.[45]

The manipulative use of social bots has also proved to be beneficial to authoritarian governments when it comes to suppressing the free speech of opposition movements. Jean-Paul Verkamp and Minaxi Gupta exemplified this approach in their analysis of five incidents in the years 2011 and 2012.[46] In Syria, twitter bots tried to disrupt and suppress messages emanating from the Arab Spring movement by publishing 107,000 tweets within 13 days. In Russia, political opinions regarding the election on the 5th and 6th of December 2011 were diluted by 338,000 automated tweets dispatched by 25,000 bots. The political debates surrounding #aiweiwei and #freetibet were targeted in China, whereas in Mexico, social bots were designed to drown critical remarks directed at Enrique Peña Nieto, who was at that time presidential candidate.[47]

In Europe, populist parties and groups were criticised for their use of social bots to inflate their perceived support and influence opinions. However, if a social bot supports populists such as UKIP, the AfD, Front National or their political adversaries, the anonymity of the internet makes it very difficult to investigate a social bot's source and thus makes it almost impossible to hold someone accountable. Philip Howard, researcher at the Computational Propaganda Project, funded by the European Research Council, examined 1.5 million tweets in relation to the Brexit referendum – 54 percent of which were pro-Leave and 20 percent in favour of remaining in the EU. About 500,000 tweets were generated by very few high frequency accounts. He concludes that the "level of activity suggests that many of these are scripted bots".[48] The German right-wing party 'Alternative für Deutschland' initially included the use of social bots in their election strategy, before publically dismissing their statements upon criticism.[49] Nevertheless, presumed bot networks in support of the party have been found on Facebook.[50]

The massive sharing of posts as well as the large scale usage of hashtags through social bots brings with it the danger of manipulating the algorithms of Google's search engine, or the trending topics and hashtags on Facebook, Instagram and Twitter. The algorithms prioritise and rank topics on the basis of popularity, fuel them with more visibility and attract the attention of genuine users who might multiply the effect. As companies, politicians and journalists closely monitor the trending items, the agenda setting potential of bot networks becomes a real threat for society, both online and offline.[51]

**Filter bubbles**

The power of the algorithm is further illustrated by its role in the formation of filter bubbles. The unprecedented diversity and ubiquity of information on social media has opened the door for selective exposure. To countervail the information overload, users tend to personalise news feeds and digital contacts according to their own interests and worldview.[52] On the basis of this personalisation, the algorithms of social media platforms evaluate and classify user profiles, thus amplifying the one-sided exposure.[53] While people with diverse interests and weak partisan bias may defy the boundaries of filter bubbles, others might be caught in echo chambers that multiply and reinforce their convictions. The resulting repeated confrontation with intense partisan campaigns – for example during the US Presidential election – may result in a scenario where "Clinton supporters will cut the Trump supporters out of their network, and Trump supporters will do the same",

argues Philipp Howard.[54] They act in accordance with the rationale of "elective affinity", a concept that describes the tendency of humans to favour the familiar over the different.[55] As research done by the OII suggests that increased in-group contact manifests and even radicalises previously held beliefs[56], filter bubbles have the power to be a problematic catalyst for polarisation and one-sided news consumption.

With regard to elections, however, Helen Margetts, Director of the OII, sees "little evidence" that filter bubbles shape their outcome, as they tend to influence those who are already decided rather than the contested group of indecisive constituents.[57]

**What has been done so far?**

The unprecedented occurrences of falsified news and social bots have triggered different reactions from politicians, journalists and the social media companies themselves.

Facebook has implemented various updates to counter the prevalence of misleading content on its platform. "Disrupting economic incentives", "building new products to curb the spread of false news", "easy reporting" and "third party verification" are some, but not all, measures taken to regain trust.[58] [59] According to the development team, the algorithm responsible for Facebook's newsfeed has also been adjusted in order "better identify and rank authentic content".[60] This also aims at helping to "prevent fake news, hoaxes or spam from appearing in Trending", a section of the network which features much discussed topics.[61] Facebook is collaborating with local fact-checking organisations such as the Associated Press, PolitiFact and Snopes in the USA, Agence France-Presse and Le Monde in France and Correctiv in Germany.[62] [63] [64] In consultation with the non-profit organisation First Draft, they are also working on the distribution of an "educational tool to help people spot false news".[65]

In cooperation with selected publishers, Google has implemented a fact-checking feature to its search engine and the Google news section. Only those who are "algorithmically determined to be an authoritative source of information" will be included in the revision process.[66] In an effort to dry out the financial revenue of fake news providers, Google has also restructured their 'AdSense' programme and has taken action against misleading ads and 'tabloid cloakers', "a new type of scammer that tries to game

our system by pretending to be news", a blog entry on Google's own development blog sums up.[67]

Although not yet known for vast amounts of political false news, the fast growing platform Snapchat has pre-emptively tightened its guidelines to make sure that the content published on its 'discover' platform is "fact-checked and accurate".[68]

In comparison to the active, albeit not proactive, responses from Google and Facebook, Twitter comes off as a bit stolid. Although it acknowledges the "increase of abusive behaviour", the countermeasures aiming at improving "controls, reporting and enforcement"[69] appear to fight the symptoms rather than the causes. Muting or reporting a controversial opinion is a small comfort when confronted with bot networks. Twitter's hesitation to acknowledge the platforms vulnerability towards social bots can be attributed to the sheer number of estimated fake accounts and bots on the platform. Bearing in mind that Twitter is still not profitable and has lost about half of its value since the initial public offering on the stock market[70], admitting that "9-15%" of the platform's active users could be bots[71], would be a perilous move.

The increase in fake news and most notably the election of Donald Trump has triggered a stark response from journalists worldwide. Investigative collaborations have been founded and traditional media houses have reallocated human and financial resources to effectively fact-check and rectify falsified information. Local journalists support regional media outlets such as Le Monde's Les Décodeurs or research centres like the German CORRECT!V, who often work hand in hand with international collaborations like the Global Investigative Journalism Network or the International Consortium of Investigative Journalists.

Especially in those countries with upcoming general elections, the topic stirs quite a lot of attention, but not nearly as much action. However, in Germany, Minister of Justice and Consumer Protection Heiko Maas has proposed a new law to hold social media companies accountable if they are unwilling to remove "obviously criminal content" from their platforms within a short period of time.[72] The wording of the law foresees non-compliance fees amounting to up to 50 million Euros.[73] However, the blurry lines between free speech and hate speech, the danger of 'overblocking' in an attempt to minimise the risk to break the law and uncertainties with

regard to the competences of jurisdiction have sparked strong criticism from the social media companies and free speech campaigners, who fear that the law may open the door for censorship and limitations to the freedom of expression.[74] Reports from countries like the USA, Cambodia, Singapore and the Philippines indicate that the threat of fake news is used by governments as a pretext to harass different-minded media organisations or to "tighten their media laws".

## Recommendations

1. The remedy of choice against falsehoods, conspiracy theories and manipulation is first and foremost an educated society. A critical examination of media usage belongs to every school's curriculum and should aim at helping students to navigate through a media environment that is characterised by abundance, ambiguity and ubiquity. First Draft's and Facebook's partnership to create an educational tool helping people to spot fake news, is a praiseworthy first step, but education is a long term approach that needs to be implemented online and offline.

2. While direct interference by government authorities brings with it the risk of limiting freedom of expression, politicians need to shape policies to create an environment where manipulation cannot thrive. This should not be limited to the aforementioned education, but must also include areas of jurisdiction and law enforcement. Working groups should be established to coordinate efforts.
Working Group Education: between teachers, professors, journalists, fact-checking organisations, civil servants from the Ministry of Education, scholars of various disciplines, such as communications, journalistic/media studies, data science and responsible staff from the social media companies.
Working Group Jurisdiction: between scholars of law, fact-checking organisations, civil servants from the Ministry of Justice and responsible staff from the social media companies.

3. Given the massive user count and growing importance of social media, the providing companies need to be part of the solution rather than a universal scapegoat. After all, the virtual activities on the platforms and services created by the likes of Google, Facebook and Twitter are a reflection of today's society. Users, providers and authorities need to work hand in hand to address and contain the issue. Since developments in technology act as a problematic catalyst in terms of the spread and severity of the problem, the providing companies have a special responsibility to be a counteractive force in this regard. Mislead-

ing news will not be eradicated from our virtual communication spheres, but they will lose financial attractiveness and have less impact on political debates if they do not become 'trending' or 'viral'. Highly disputed content could be put in a sort of quarantine for a certain amount of time, to prevent uncontrolled distribution. As fake accounts and social bots will inevitably become smarter and less likely to be exposed, the artificial intelligence used to spot them needs constant improvement, too.

4. In the short term, the fact-checking endeavours of investigative networks and collaborations in partnership with social media companies seem like a beneficial improvement. Hence, the majority of the funding should not be left to private entrepreneurs like Ebay founder Pierre Omidyar or George Soros, who have contributed heavily compared to government spending so far.[77][78] Although some investigative networks in countries where news is "being weaponised by governments" cannot envisage a scenario in which they "would accept government funding", democratic governments that are willing to support fact-checking efforts should allocate funds or facilitate their work by providing office space or equipment.[79]

5. Facebook and Twitter could facilitate the emancipation from one-sided informational cocoons by adjusting the terminology and the options of how people are connected with each other as well as with political groups and institutions. For many, the positive connotation of the words "follow" or "like" are a problematic, if not insurmountable threshold, preventing them from observing anything with a very different political orientation online. So instead of having its users choose between staying in groups of like-minded people or "liking" or "following" the political opposition, Facebook and Twitter could add alternatives like "observe" or "examine". For social media users, this terminology would facilitate getting out of filter bubbles without being branded a follower or sympathiser of anything from the other side of the political spectrum.

6. The evolution of false news and social bots is already progressing and as a result, misinformation is likely to become multi-layered and harder to spot. The artificial intelligence of bots and the appearance of fake news will improve and adapt to avoid automatic detection. As with regular news, it is to be assumed that misleading information will be increasingly disseminated using video and audio formats.

7. Technical advancements foreshadow the dimension of manipulation that will be possible in the future. Adobe, for example, has launched a new audio tool that first records

*and then imitates any person's voice.[80] It will also allow users to type words and play them back in the exact voice of the recorded person. History has shown that technical innovations bring with them the risk of abuse. If developers in- and outside the social media companies, civil society and government authorities keep an eye on potentially dangerous innovations, maybe the next wave of manipulative attempts can be dealt with in a more pro-active manner.*

*8. Public annual progress reports based on independent auditing should clearly indicate the progress made and the obstacles that remain with regard to hate speech, deliberate false news and social bots on the social media platforms.*

## Conclusion and outlook

The usage of social media as a source of information and as a means of communication has reached an all time high.[81] The increased significance comes with a baggage of side-effects. Users are being exposed to fake news and public debates are subject to manipulation. Especially in times of elections, political 'astroturfing' and deliberate misinformation have become serious threats to the democratic processes of decision-making and participation. After the Brexit referendum and the US general election, the topic has reached a critical mass and has become a prevalent item on the public agenda. The social media companies have responded with technical and structural innovations to contain the problem. Some argue that the reaction is too little, too late[82], but it seems like these are steps in the right direction. In this regard, the elections in France and Germany will be the litmus test.[83] Research in relation to prior elections in both countries would suggest that the comparatively diverse media consumption is likely to attenuate the impact of fake news and social bots.[84]

The most delicate and uncertain matter in dealing with fake news or hate speech is the questions of responsibilities and competences. Is human intervention in the form of an editorial staff more effective in detecting and exposing manipulative content or is artificial intelligence superior? Is the latter free from partisan bias, or just a mere reflection of the programmer's intent? Are social media companies capable of drawing a red line between what is legal and illegal? Or should the issue be left to jurisdiction? The pivotal question revolves around finding an equilibrium between the freedom of the user and an adequate protection from virtual manipulation.

Time has the virtue of bringing the public and scientific discourse into a slightly better focus, so there is room for cautious optimism that today's vast amount of research will contribute to the creation of effective antidotes in the fight against the evolution of computational propaganda. Facebook creator Mark Zuckerberg even foreshadows an idealist scenario in which artificial intelligence anticipates and prevents "harmful behaviour, while also enforcing the network's social norms".[85] Artificial intelligence works in many ways, only time will tell which side gains the upper hand.

*Lucas Skupin is Project Manager and Media Production Manager at CIFE and Alumnus of CIFE's Master in Advanced European and International Studies*

### References

*All external links last checked on the 24.04.2017*

1) "The biggest threat to democracy? Your social media feed", Vyacheslav Polonski, World Economic Forum, https://www.weforum.org/agenda/2016/08/the-biggest-threat-to-democracy-your-social-media-feed
2) "Why not call it a Facebook revolution?", Chris Taylor, CNN, http://edition.cnn.com/2011/TECH/social.media/02/24/facebook.revolution/
3) "Spring Awakening, How an Egyptian Revolution Began on Facebook", Jose Antonio Vargas, NY Times, https://nyti.ms/2k1NTkl
4) "How Black Lives Matter uses social media to fight the power", Bijan Stephen, Wired, https://www.wired.com/2015/10/how-black-lives-matter-uses-social-media-to-fight-the-power/
5) "Social Media as a Government Propaganda Tool in Post-revolutionary Egypt", Sarah El-Khalili, First Monday, March 2013, Vol. 18, No. 3.
6) "The Upheavals in Egypt and Tunisia: The Role of Digital Media" Philip N. Howard, Muzammil M. Hussain, Journal of Democracy, July 2011, Vol. 22, No. 3
7) "War goes viral", Emerson T. Brooking, P. W. Singer, The Atlantic, https://www.theatlantic.com/magazine/archive/2016/11/war-goes-viral/501125/
8) "German minister's idea to punish social media could suffocate democracy", Paul Callan, CNN, http://edition.cnn.com/2017/03/16/opinions/german-ministers-idea-could-suffocate-american-democracy-callan/
9) "Facebook, Twitter, Youtube face hate speech complaints in France", Emmanuel Jarry, Leigh Thomas, Reuters, http://www.reuters.com/article/us-france-internet-idUSKCN0Y60MM
10) "Leading social networks worldwide as of April 2017", Statista, https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/
11) "News Use Across Social Media Platforms 2016", Jeffrey Gottfried, Elisa Shearer, PewResearchCenter, http://www.journalism.org/2016/05/26/news-use-across-social-media-platforms-2016/
12) "The Rise of Social Bots", Emilio Ferrara, Onur Varol, Clayton Davis, Filippo Menczer, Alessandro Flammini, Communications of the ACM, https://cacm.acm.org/magazines/2016/7/204021-the-rise-of-social-bots/fulltext

Policy Paper
Note de recherche | cife | Centre international
de formation européenne

13) "Pizza, politics and pure fiction: the rise of fake news", Stephen Armstrong, The Telegraph, http://www.telegraph.co.uk/men/thinking-man/pizza-politics-pure-fiction-rise-fake-news/

14) PewResearchCenter, see 11)

15) The Telegraph, see 13)

16) "Junk News and Bots during the German Federal Presidency Election: What Were German Voters Sharing Over Twitter?", Lisa-Maria Neudert, Bence Kollanyi, Philip N. Howard, Oxford Internet Institute, http://comprop.oii.ox.ac.uk/wp-content/uploads/sites/89/2017/03/What-Were-German-Voters-Sharing-Over- Twitter-v6-1.pdf

17) "Junk News and Bots during the U. S. Election: What Were Michigan Voters Sharing Over Twitter?", Philip N. Howard, Gillian Bolsover, Bence Kollanyi, Oxford Internet Institute, http://comprop.oii.ox-.ac.uk/wp-content/uploads/sites/89/2017/03/What-Were-Michigan-Voters-Sharing-Over-Twitter-v2.pdf

18) Oxford Internet Institute, see 16)

19) "Frauke Petry und die Bots", Justus Bender, Marvin Oppong, FAZ.NET, http://www.faz.net/aktuell/politik/digitaler-wahlkampf-frauke-petry-und-die-bots-14863763.html

20) "Fake news: an insidious trend that's fast becoming a global problem", Michael Safi, The Guardian, https://www.theguardian.com/media/2016/dec/02/fake-news-facebook-us-election-around-the-world

21) Ibd.

22) Ibd.

23) "The Rapid Spread of Misinformation Online. Outlook on the Global Agenda 2014" World Economic Forum. 10, 2014.

24) "Fake News has a Real Audience", Nigel Barber, Psychology Today, https://www.psychologytoday.com/blog/the-human-beast/201702/fake-news-has-real-audience

25) Ibd.

26) Ibd.

27) "I Fooled Millions Into Thinking Chocolate Helps Weight Loss.", John Bohannon, Gizmodo, http://io9.gizmodo.com/i-fooled-millions-into-thinking-chocolate-helps-weight-1707251800

28) "There is no such thing as the Denver Guardian, despite that Facebook post you saw", Eric Lubbers, The Denver Post, www.denverpost.com/2016/11/05/there-is-no-such-thing-as-the-denver-guardian/

29) "FakeTube: AI-Generated News on YouTube", Jonathan Albright, Medium, https://medium.com/@d1gi/faketube-ai-generated-news-on-youtube-233ad46849f9

30) Ibd.

31) The Telegraph, see 13)

32) Ibd.

33) Ibd.

34) "German social bots expert to brief MPs on fake news threat", Deutsche Welle, http://p.dw.com/p/2TDqB

35) Communications of the ACM, see 12)

36) "Online Human-Bot Interactions: Detection, Estimation, and Characterization", Onur Varol, Emilio Ferrara, Clayton A. Davis, Filippo Menczer, Alessandro Flammini, Center for Complex Networks and Systems Research, Indiana University & Information Sciences Institute, University of Southern California, https://arxiv.org/pdf/ 1703.03107.pdf

37) Ibd.

38) "Do Evil - The Business Of Social Media Bots", Lutz Finger, Forbes, https://www.forbes.com/sites/lutzfinger/2015/02/17/do-evil-the-business-of-social-media-bots/#6f2bad40fb58

39) An in-depth categorisation of bots can be found here: http://journals.plos.org/plosone/article/figure/image?size=large&id=10.1371/journal.pone.0171774.t001

40) Forbes, see 38)

41) Communications of the ACM, see 12)

42) "Detecting and Tracking Political Abuse in Social Media", J. Ratkiewicz, M. D. Conover, M. Meiss, B. Goncalves, A. Flammini, F. Menczer, Center for Complex Networks and Systems Research School of Informatics and Computing, Indiana University, https://www.aaai.org/ocs/index.php/ICWSM/ICWSM11/paper/view/2850/3274

43) http://comprop.oii.ox.ac.uk/2016/11/17/bots-and-automation-over-twitter-during-the-u-s-election/

44) Ibd.

45) Ibd.

46) "Five incidents, one theme: Twitter spam as a weapon to drown voices of protest", John-Paul Verkamp, Minaxi Gupta, School of Informatics and Computing, Indiana University, https://www.usenix.org/system/files/conference/foci13/foci13-verkamp.pdf

47) Ibd.

48) "Europe by Numbers: Bot and Sold", Josh Raisher, Berlin Policy Journal, http://berlinpolicyjournal.com/europe-by-numbers-bot-and-sold/

49) Ibd.

50) FAZ.NET, see 19)

51) "Netzangriff: Bots feuern gegen Themen", NDR.DE, https://www.ndr.de/nachrichten/netzwelt/Netzangriff-Bots-feuern-gegen-Themen-,bots100.html

52) World Economic Forum, see 1)

53) "The Filter Bubble : How the New Personalized Web Is Changing What We Read and How We Think", Eli Pariser, Penguin Books, 2012

54) "Automated Pro-Trump Bots Overwhelmed Pro-Clinton Messages, Researchers Say", John Markoff, NY Times, https://nyti.ms/2k22s0F

55) "Is Social Media Killing Democracy?", Philip N. Howard, Oxford Internet Institute, https://www.oii.ox.ac.uk/blog/is-social-media-killing-democracy/

56) World Economic Forum, see 1) (Accessed: 22.04.2017)

57) "Of course social media is transforming politics. But it's not to blame for Brexit and Trump", Helen Margetts, Oxford Internet Institute,

58) "Working to Stop Misinformation and False News", Adam Mosseri, Facebook newsroom, https://newsroom.fb.com/news/2017/04/working-to-stop-misinformation-and-false-news/

59) "News Feed FYI: Addressing Hoaxes and Fake News", Adam Mosseri, Facebook newsroom, https://newsroom.fb.com/news/2016/12/news-feed-fyi-addressing-hoaxes-and-fake-news/

60) "News Feed FYI: New Signals to Show You More Authentic and Timely Stories", Akos Lada, James Li, Shilin Ding, Facebook newsroom, https://newsroom.fb.com/news/2017/01/news-feed-fyi- new-signals-to-show-you-more-authentic-and-timely-stories/

61) "Continuing Our Updates to Trending", Will Cathcart, Facebook newsroom, https://newsroom.fb.com/news/2017/01/continuing-our-updates-to-trending/

62) "How Facebook's Fact-Checking Partnership Will Work", Mike Isaac, NY Times, https://nyti.ms/2jVLUOW

63) "Facebook, Google join drive against fake news in France", Reuters, http://www.reuters.com/article/us-france-election- facebook-idUSKBN15LoQU

64) "Deutsches Recherchebüro soll Falschmeldungen auf Facebook richtigstellen", Fabian Reinbold, Spiegel Online, http://www.spiegel.de/netzwelt/web/facebook-correctiv-soll-fake-news-richtigstellen-a-1130014.html

65) "A New Educational Tool Against Misinformation", Adem Mosseri, Facebook newsroom, https://newsroom.fb.com/news/2017/04/a-new-educational-tool-against-misinformation/

66) "Fact Check now available in Google Search and News around the world", Justin Kosslyn, Cong Yu, The Keyword, https://blog.google/products/search/fact-check-now-available-google-search-and-news-around-world/

67) "How we fought bad ads, sites and scammers in 2016", Scott Spencer, The Keyword, https://blog.google/topics/ads/how-we-fought-bad-ads-sites-and-scammers-2016/

68) "Snapchat Discover Takes a Hard Line on Misleading and Explicit Images", Katie Benner, NY Times, https://nyti.ms/2khY2tv

69) "Progress on addressing online abuse", Twitter, https://blog.twitter.com/2016/progress-on-addressing-online-abuse

70) "Here's the biggest difference between Twitter and Snapchat", Jay Yarow, CNBC.COM, http://www.cnbc.com/2017/03/01/snap-

chat-not-like-twitter-because-evan-spiegel.html

71) Center for Complex Networks and Systems Research, Indiana University & Information Sciences Institute, University of Southern California, see 36)

72) ''Facebook and Twitter Could Face Fines in Germany Over Hate Speech Posts'', Mark Scott, Melissa Eddy, NY Times, https://ny-ti.ms/2mFBntp

73) ''Entwurf eines Gesetzes zur Verbesserung der Rechtsdurchsetzung in sozialen Netzwerken'', Bundesregierung, https://www.bmjv.de/SharedDocs/Gesetzgebungsverfahren/Dokumente/RegE_NetzDG.pdf;jsessionid=7F05BF5AA4E5B1869D1F66D7081E300F.1_cid334?__-blob=publicationFile&v=2

74) NY Times, see 72)

75) ''Trump press ban: BBC, CNN and Guardian denied access to briefing'', Sabrina Siddiqui, The Guardian, https://www.theguardian.com/us-news/2017/feb/24/media-blocked-white-house-briefing-sean-spicer

76) '''Fake news' used to justify tighter media laws in Southeast Asia'', ifex, https://www.ifex.org/asia_pacific/2017/04/10/fake-news-media-laws/

77) ''100 Millionen Dollar gegen Fake News'', Spiegel Online, http://www.spiegel.de/kultur/gesellschaft/ebay-gruender-spendet-100-millionen-dollar-gegen-fake-news-a-1141953.html

78) ''Die Förderer'', CORRECT!V, https://correctiv.org/correctiv/foerderer/ (In Germany, the Federal Agency for Civic Education pledges 41,500€ per year to CORRECT!V)

79) Quote taken from an email response from Ms Aimee Rinehart of First Draft on the 19th April 2017. The full quote read: "I can't imagine a scenario where First Draft would accept government funding. However, we're in a new era here with news being weaponized by governments so I don't know what that might mean long term."

80) ''#VoCo. Adobe MAX 2016 (Sneak Peeks) | Adobe Creative Cloud'', Adobe, https://youtu.be/I3l4XLZ59iw

81) '''Fake news' and the EU's response'', Naja Bentzen, European Parliamentary Research Service Blog, https://epthinktank.eu-/2017/04/02/fake-news-and-the-eus-response/

82) ''Facebook's New Plan to Deal With Fake News Is Too Vague and Too Late'', Rhett Jones, Gizmodo, http://gizmodo.com/facebooks-new-plan-to-deal-with-fake-news-is-too-vague-1789171552

83) ''Digital vs Traditional Media Consumption'', Jason Mander, globalwebindex,http://insight.globalwebindex.net/hs-fs/hub/304927/file-1414878665-pdf/Reports/GWI_Media_Consumption_Summary_Q3_2014.pdf

84) Oxford Internet Institute, see 16)

85) ''Facebook's Mark Zuckerberg posts manifesto defending social media'', Financial Times, https://www.ft.com/content/328d33f6-f49d-11e6-8758-687615182136