



universität  
wien

# MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

„Algorithmic Culture – Do social networks change our view  
of politics?“

verfasst von / submitted by

Sarah Emler, BA

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of  
Master of Arts (MA)

Wien, 2018 / Vienna 2018

Studienkennzahl lt. Studienblatt /  
degree programme code as it appears on  
the student record sheet:

A 066 582

Studienrichtung lt. Studienblatt /  
degree programme as it appears on  
the student record sheet:

Masterstudium Theater-, Film- und Medientheorie

Betreut von / Supervisor:

Dr. Thomas Waitz, M.A

## **Deutschsprachiges Abstract**

In dieser Masterarbeit geht es um die Untersuchung des Einflusses der Algorithmenkultur auf das politische Weltbild der Menschen. Konkret, um Soziale Netzwerke, welche mit Algorithmen arbeiten. Können diese unser politisches Weltbild verändern? Dabei wird zuerst die Definition von Alexander R- Galloway zur Algorithmenkultur herangezogen und diese auch anhand Elia Pariser „Filter Bubble“ diskutiert. Des Weiteren, wird die Theorie der Demokratie an sich untersucht und schlussendlich darauf eingegangen, wie sich Wähler Nachrichten holen und wie Medienunternehmen mit ihren Lesern und den Algorithmen umgehen.

**Dedicated to Ursel Emler  
(1937 – 2018)**

# Content

## **1 Introduction**

## **2 Algorithmic Culture**

- 2.1 Definition of ‘algorithm’ and ‘culture’
- 2.2 What is ‘algorithmic culture’?
- 2.3 The *pioneers* and origin of ‘algorithmic culture’
- 2.4 The *dangers* of ‘algorithmic culture’

## **3 The Filter Bubble**

- 3.1 Is filtering (in Social Networks) necessary?
- 3.2 What does a filter bubble contain?
- 3.3 News representation within the filter bubble
- 3.4 What effect does the filter bubble have on the production of news stories?

## **4 Democracy**

- 4.1 Necessities for a democracy
- 4.2 Post-Democracy
- 4.3 The value of information in a democracy
- 4.4 Political Targeting
- 4.5 Journalism within democracy

## **5 Social Networks**

- 5.1 Facebook
- 5.2 What people see on Facebook

## **6 Gathering News**

- 6.1 Internet and social media penetration
- 6.2 Social media use for news
- 6.3 Newsrooms using algorithm

## **7 Discussion**

## **8 Conclusion**

## **9 References**

# 1 Introduction

On June 23, 2016, the citizens of the United Kingdom and Gibraltar who were eligible to vote, had the chance to decide via referendum whether to stay in the European Union or not. It was a very indistinct win for the leave-campaign, since 51,9% voted for Brexit and 48,1% for remain<sup>1</sup>. After the referendum, many supporters of the leave-campaign expressed their dissatisfaction over the achievement of their former goal. According to them, the consequences of leaving the European Union were not delivered. Meaning, it was not clear to them that many points Nigel Farage, a pro-Brexit candidate, and others made, were not the case or an incomplete truth.<sup>2</sup> However, there were many articles and broadcasts explaining what will happen if Great Britain leaves the European Union. Thus, all the voters should have had access to every comment that was made about the referendum beforehand. The question is: Why does it seem as if they did not?

Looking at the United States, who had a very significant election in 2016 as well, one might peek at the Pew Research Center and their analysis on “News Use Across Social Media Platforms 2016”. It shows, that 6 out of 10 Americans get their news from social media.<sup>3</sup> However, companies, such as Facebook or Twitter, are working with a certain algorithm. A classified algorithm, which sorts the content according to the user’s interests. In this thesis, it shall be called *preference algorithm* since it records what a user is passionate about most and delivers the content in such order. Thus, it sorts the “preferences” of a person.

---

<sup>1</sup> <https://www.electoralcommission.org.uk/find-information-by-subject/elections-and-referendums/past-elections-and-referendums/eu-referendum/electorate-and-count-information>, last accessed: June 4, 2017.

<sup>2</sup> Comment: These complaints were visible either on news platforms or social networking sites in the form of articles or videos. Since there are too many to put them into reference, one might look at this article as an example:  
<http://www.telegraph.co.uk/news/2016/11/07/cps-considers-complaint-that-leave-campaigns-misled-eu-referendu/>, last accessed: February 28, 2017.

<sup>3</sup> <http://www.journalism.org/2016/05/26/news-use-across-social-media-platforms-2016/>, last accessed: February 28, 2017.

“What one sees in Amazon, and in its kin Google, Facebook, Twitter, Netflix and many others, is the enfolding of human thought, conduct, organization and expression into the logic of big data and large-scale computation, a move that alters how the category *culture* has long been practiced, experienced and understood.”<sup>4</sup>

A phenomenon, Ted Striphas derives from Alexander R. Galloway's term of “Algorithmic Culture”. While Striphas talks mainly about the change of *culture* itself, Galloway focuses more on the strings of power within algorithms.

Considering this, and returning to the complaints of disappointed supporters of the leave-campaign in Great Britain's referendum, one might see an involvement of the *preference algorithm* during the Brexit referendum. As the above-mentioned study of the Pew Research Center and the newly published “Reuters Institute Digital News Report 2017” show, the number of people getting their news just from social media sites is increasing rapidly. Thus, an opinion a person might have on a certain subject might have been influenced by the *preference algorithm*. It is delivering just certain topics or news a user is interested in without showing the opposition. Therefore, in case of an election in a democratic country, a voter might not have full knowledge of a matter for proper decision-making.

This high accusation shall be discussed in this thesis by looking at the term “algorithmic culture” and its political involvement with a focus on social media. The emphasis lies on Facebook's algorithms and its users especially. Since the topic not only coincides within media theory but also with politics and journalism, the approaching arguments in this thesis will be from each of these fields. The thesis will first look at the origins of algorithmic culture and how it evolves and what kind of effects it might have on the people's lives. Then, further developed the idea of the “Filter Bubble”, which Eli Pariser claims to be the outcome of this algorithmic driven social networks in his book “The Filter Bubble”. This chapter will be followed by an outline of the definition of democracy. Afterwards the thesis is concentrating on the news-audience and their way of informing themselves on current events. Finally, the interference of editors will be discussed and what impacts *preference algorithms* might have on future political developments.

---

<sup>4</sup> Striphas, Ted, *Algorithmic Culture* in: European Journal of Cultural Studies, 2015, Vol.18(4-5), p 396.

## 2 Algorithmic culture

### 2.1 Definition of ‘algorithm’ and ‘culture’

Before defining the term ‘Algorithmic culture’ in this thesis, we must look at the two words separately. When it comes to the latter, ‘culture’, there seems to be very different kinds of understandings and meanings, which makes it rather difficult. In his essay “The Meanings of culture”, Arthur Asa Berger challenges himself by trying to explain why it is hard to define ‘Culture’:

“We think of culture two ways: first, in terms of aesthetic matters (relative to thearts) and second, as a concept used by anthropologists to describe the way people live. There are, so I understand, something like a hundred different definitions of culture used by anthropologists.”<sup>5</sup>

The word itself comes from the Latin word ‘cultus’, which can be translated into ‘care’. Berger refers here to the cult in the sense of a religious organization. Later he mentions the version ‘cultivated’, “which means something that has been grown or, in the realm of aesthetics and the arts, sophisticated taste.”<sup>6</sup> For this thesis we are going to focus on the general definition of the term “culture” as stated in the “Dictionary of Sociology” by Henry Pratt Fairchild:

“Culture. A collective name for all behavior patterns socially acquired and socially transmitted by means of symbols; hence a name for all the distinctive achievements of human groups, including not only such items as language, tool-making, industry, art, science, law, government, morals, and religion, but also the material instruments or artifacts in which cultural achievements are embodied and by which intellectual, cultural features are given practical effect, such as buildings, tools, machines, communication devices, art, objects, etc.”<sup>7</sup>

---

<sup>5</sup> <http://journal.media-culture.org.au/0005/meaning.php>, last accessed: May 20, 2018.

<sup>6</sup> <http://journal.media-culture.org.au/0005/meaning.php>, last accessed: May 20, 2018.

<sup>7</sup> Fairchild, Henry Pratt (Ed.), *Dictionary of Sociology*. New York: Philosophical Library 1944, p. 80.

Since the behavior of people, the ways we communicate, art and everything else mentioned in this paragraph changes continuously, one can say that culture is transformable. The first word, ‘algorithm’, has been formed in the 9<sup>th</sup> Century by an Arabic mathematician who “translated works on algebra and arithmetic”<sup>8</sup>, as the Online Oxford Dictionary states. Its origin derives from Arabic, Middle English, Old French, medieval Latin and the Greek word ‘arithmos’, which can be translated into ‘number’. In his excerpt “Algorithms and their others: Algorithmic culture in context”, Paul Dourish describes the understanding of algorithms in computer science as such:

“In computer science terms, an algorithm is an abstract, formalized description of a computational procedure. Algorithms fall into different types according to their properties of domains.”<sup>9</sup>

As well as in ‘culture’ there are different kinds of ‘algorithms’. Dourish continues by stating that generally, algorithms are stated as fast, automatic and non-human. Furthermore, he points out the appearance of problems when algorithms move into new spheres. A phenomenon which shall be further discussed in chapter 1.3. In 1975 Niklaus Wirth writes following formulation: “Algorithms + data structures = programs”<sup>10</sup>. For a program to run, it needs certain algorithms which have been fed with certain data to fulfill their purpose. This formulation will accompany us throughout this thesis.

## 2.2 What is ‘algorithmic culture’?

The technology sector has been thriving in the last and the current century. The ways we work now changed rapidly and thus, shaped our culture as well. The usage of algorithms on platforms such as Google, Amazon or Facebook seem to have a further impact on our culture. When buying a book on Amazon, one immediately gets a list of other recommended ones. Moreover, they usually are very interesting. The results of a Google-search are usually on several pages. However, most people just look at the first ones on the top. There are many different studies in

---

<sup>8</sup> <https://en.oxforddictionaries.com/definition/algorithm>, last accessed: May 20, 2018.

<sup>9</sup> Dourish, Paul, “Algorithms and their others: Algorithmic culture in context“, *Big Data & Society*, July-December 2016, p.3.

<sup>10</sup> Dourish, 2016, p. 1.

the field, trying to find out the user's usage when it comes to search engines. The more convenient approach would probably be via eye-tracking, because "eye movement data can provide an in-depth view of human reasoning and the decision-making process"<sup>11</sup>. When looking at the results of a search engine, the decision of which link to click on is based on a heuristic selection.<sup>12</sup>

"The observation of participants' eye movements during the process of predictive relevance judgment showed that the use of relevance criteria is dynamic and is associated with ranking order, surrogate, components (Title, Summary, and URL), and participants' relevance judgments (very relevant, partially relevant, not relevant)."<sup>13</sup>

However, despite one's own judgment or the relevant components, people "often rely to a great extent on the ranking provided by the search engine and predominantly access the first few web pages presented."<sup>14</sup> Thus, search engines have a significant influence on what information someone gets just by ranking specific pages on the top. Besides, not everyone receives the same list of results. It is personalized, based on the data Google collected and run by an algorithm. In his book "The Filter Bubble" Eli Pariser writes that "Google's algorithms suggests [what] is best for you in particular – and someone else may see something entirely different"<sup>15</sup>. He then continues by giving an example of a search line on climate change, and that an oil oligarch would get different results by using the google search than an activist for environmental issues.

Tarleton Gillespie writes in his article "#trendingistrending. When Algorithms become culture" that whatever one sees on platforms such as Facebook and Google, is usually a trending topic and of personal interest:

"Most navigation mechanisms are either *search* or *recommendation*: search, where the user's query is matched with the available content; and recommendation, where the user is matched with other users and offered content they preferred. [...] Trending algorithms calculate the current activity

---

<sup>11</sup> Balatsoukas, Panos/Ian Ruthven, "An Eye-Tracking Approach to the Analysis of Relevance Judgments on the Web: The Case of Google Search Engine", *Journal of the American Society for information and technology* 63 (9) 2012, p. 1728.

<sup>12</sup> Gerjets, Peter/Yvonne Kammerer, "The Role of Search Result Position and Source Trustworthiness in the Selection of Web Search Results When Using a List or a Grid Interface", *International Journal of Human-Computer Interaction*. 30, 2014, p. 188.

<sup>13</sup> Balatsoukas, 2012, p. 1742.

<sup>14</sup> Gerjets 2014, p. 178.

<sup>15</sup> Pariser, Eli, *The Filter Bubble. What the Internet is Hiding from You*, London: Penguin Books <sup>3</sup>2011, p. 2.

around every post, image, or hashtag, by combining some measure of each item's popularity, novelty, and timeliness. Within these measures are a number of assumptions. In particular, trending algorithms tend to be concerned with a very broad *who*, and a very narrow *when* (and a little bit about *what*)”<sup>16</sup>

Thus, the chances of a particular political topic in one's newsfeed on Facebook is very high if it is trending and of the user's interest. Gillespie sets forth that this amplifies the popularity of a trending topic. It is being shown more often since it is trending and if someone shares or clicks on it the interest-rate rises.

“Trending algorithms measure, and they also announce. This makes them databased and calculating, and in doing so, they offer up a rich hieroglyph about some ‘us’, some public, that can itself be discussed, marveled over, or rejected, just like finding out that some crappy pop group just took the #1 spot from your beloved indie band. They can be cultural objects of meaning, not just for those producing information and looking to them to amplification, but for those who see in them a reflection of the public in which they take part.”<sup>17</sup>

To exemplify it, Gillespie points out the song-lists by the music-streaming App Spotify. Looking at the list “Top 100 tracks currently on Spotify”<sup>18</sup>, one can see that “Despacito – Remix” by Luis Fonsi, Daddy Yankee, Justin Bieber is currently on the top. Someone checking out the list might be encouraged or motivated to listen to the song as well. Thus, shaping the algorithm by keeping the song on top of the list. This involvement in algorithms by humans is mentioned by Jonathan Roberge and Robert Seyfert in their article “What are algorithmic cultures?”:

“[People] are not entirely passive, but rather are actively engaged in the selection of information they see and how they are shaped by it; they partially curate what they are going to see (and perhaps buy) through their own behavior. Thus, user behavior and online advertising become deeply cultural and social affairs because they either enact subject or fail to connect with them. Introna shows how in their own way algorithmic cultures are *un multiple*, that is, very generic but at the same time very personal. Placing an advertisement correctly enacts or confirms the subject in a highly personalized way: who I am becoming depends on where I am surfing. In turn, incorrectly placing an advertisement is

---

<sup>16</sup> Gillespie, Tarleton, “#trendingistrending. When algorithms become culture”, *Algorithmic cultures: essays on meaning, performance and new technology*, Hg. Jonathan Roberge/Robert Seyfert, New York: Routledge 2016, p. 54f.

<sup>17</sup> Gillespie, 2016, p. 69.

<sup>18</sup> <https://open.spotify.com/user/spotify/playlist/4hOKQuZbraPDIfaGbM3IKI>, last accessed: May 20, 2018.

not only a missed opportunity, but can also question and insult the subject ('Why am I seeing this?')."<sup>19</sup>

Roberge and Seyfert see in algorithmic culture an outcome which works from both sides. The mathematical one and the human one. In addition, they see multiple algorithmic cultures. One for each person. This personalization in algorithms is something that also "change[s] the very nature of social relations, disentangling and cutting off some relations and creating new ones."<sup>20</sup> In his book "The Late Age of Print: Everyday Book Culture from Consumerism to Control" Ted Striphas calls this new cultural activity "data-driven activities".<sup>21</sup> José van Dijk also sees an influence in cultural activities:

"As a medium coevolves with its quotidian users' tactics, it contributes to shaping people's everyday life, while at the same time this mediated sociality becomes part of society's institutional fabric."<sup>22</sup>

In addition, he mentions two very significant factors in this matter. One is the connectedness between people and the other the profit for markets out of this vast data-collection.

"*Connectivity* quickly evolved into a valuable resource as engineers found ways to code information into algorithms that helped brand a particular form of online sociality and make it profitable in online markets – serving a global market of social networking and user-generated content."<sup>23</sup>

Van Dijk sees in social networks the online version of a network by humans. It might have been the same song on the Spotify-List without social media just by word-of-mouth-recommendation. However, he also sees the power of social networks on people. "[Social] networks also affect what individuals do and think."<sup>24</sup> Although, this does not seem to only rely on social networks. The *recommendation algorithm* by Amazon or the results-list of Google seems to have an impact as well.

"When you read books on your Kindle, the data about which phrases you highlight, which pages you turn, and whether you read straight through or

---

<sup>19</sup> Roberge, Jonathan/Robert Seyfert, "What are algorithmic cultures?," *Algorithmic cultures: essays on meaning, performance and new technology*, Hg. Jonathan Roberge/Robert Seyfert, New York: Routledge 2016, p. 11.

<sup>20</sup> Roberge, 2016, p. 14.

<sup>21</sup> Striphas, Ted, *The Late Stage of Print. Everyday Book Culture from Consumerism to Control*, New York: Columbia University Press 2011, p. 79.

<sup>22</sup> Van Dijk, 2013, p. 5f.

<sup>23</sup> Van Dijk, 2013, p. 4.

<sup>24</sup> Van Dijk, 2013, p. 11.

skip around are all fed back to Amazon's servers and can be used to indicate what books you might like next."<sup>25</sup>

To be able to recommend something, one needs information. In the computer context, that is data. The more data the algorithms have on a person, the better it can choose the personalized content for this individual.

The invention of the World Wide Web by Tim Berners-Lee in 1989 was the beginning of a new type of networked communication, says José van Dijck in his book *The Culture of Connectivity*.<sup>26</sup> Less telegrams, letters or conversations over telephone. It became faster to write E-Mails and cheaper to talk over Skype. People buy based on recommendations (Amazon) or check out what Google shows them when wanting to know something. "To skype" or "to Google" have become verbs and thus, have been integrated into our language, hence, culture. Back to communication, with Apps such as Facebook Messenger or Whatsapp, one can send multiple pictures or videos within seconds to an unlimited amount of contacts. Another way of sharing, and ergo communicating these pictures, is by posting them on the personal profile on Facebook. Friends can see on their Facebook newsfeed what one has posted. However, only if the algorithm thinks, it might be interesting to that person. This brings us back to the initial paragraph by Ted Striphas from the first chapter of this thesis:

"What one sees in Amazon, and in its kin Google, Facebook, Twitter, Netflix and many others, is the enfolding of human thought, conduct, organization and expression into the logic of big data and large-scale computation, a move that alters how the category *culture* has long been practiced, experienced and understood."<sup>27</sup>

The way we communicate, listen to music, do online-shopping, or research a topic, is mainly based on specific platforms which are run by algorithms. Pariser writes: "The structure of our media affects the character of our society"<sup>28</sup>. Hence, 'algorithmic culture'.

---

<sup>25</sup> Pariser, 2011, p. 29.

<sup>26</sup> van Dijck, José, *The Culture of connectivity. A critical history of social media*, New York: Oxford University Press 2013, p. 5.

<sup>27</sup> Striphas, Ted, *Algorithmic Culture* in: European Journal of Cultural Studies, 2015, Vol.18(4- 5), p 396.

<sup>28</sup> Pariser, 2011, p. 18.

### 2.3 The *pioneers* and origin of ‘algorithmic culture’

As stated in chapter one, Ted Striphas derives the term “algorithmic culture” from Alexander R. Galloway who himself developed this idea out of Gilles Deleuze’s definition of the ‘control society’. In Deleuze’s sense, the society moved from Michel Foucault’s well-known ‘discipline society’ to a ‘society of control’ in the late twentieth century.

“While the disciplinary societies of high modernity were characterized by more physical semiotic constructs such as the signature and the document, today’s societies of control are characterized by immaterial ones such as the password and the computer. These control societies are characterized by the networks of genetic science and computers, but also by much more conventional network forms.”<sup>29</sup>

In his short work “Postscript on the Societies of Control” from 1990, Deleuze delivers a foresighted view of power in a society which is specifically formed around computers. Unlike Foucault, who sees the power in institutions, Deleuze refers to an automated process of control. One can also say it is a society driven and controlled by machines, by a computer which collects information such as a person’s position. This ‘notion of control’<sup>30</sup> is the root of Alexander R. Galloway’s ‘algorithmic culture’: “The point of power today resides in networks, computers, algorithms, information and data.”<sup>31</sup> The other pioneer, Ted Striphas, on the other hand, sees in his definition more the impact algorithms have on culture and how they transform it. However, in their critique of Algorithmic culture, both seem to have similar concerns, as Scott Kushner writes:

“Both Galloway and Striphas’ critiques of algorithmic culture are machine-centered: they are largely concerned with the way algorithms construct regimes of power and knowledge. They each show how algorithmic culture imposes binary logic on human thought, constraints its possibilities, and models its behaviors.”<sup>32</sup>

Thus, in the following section, the general *dangers* which come within ‘algorithmic culture’ shall be further addressed.

---

<sup>29</sup> Galloway, Alexander R., *Gaming. Essay on Algorithmic Culture*, Minneapolis: University of Minnesota Press 2006., p. 87f

<sup>30</sup> Kushner, Scott, “The freelance translation machine: Algorithmic culture and the invisible industry“, *New Media & Society* 15(8), 2013, p. 1243.

<sup>31</sup> Galloway, Alexander R., *The Interface Effect*, Cambridge/Malden: Polity Press 2012, p. 91.

<sup>32</sup> Kushner, 2013, p. 1244.

## 2.4 The *dangers* of ‘algorithmic culture’

In the last few sections, the definition of ‘algorithmic culture’ has been established and where its origins lie. Throughout these, critical points on ‘algorithmic culture’ itself have been mentioned, which shall be further looked at in this part of the chapter. This discussion will be a foundation for the primary debate of this thesis, whether social networks change our view of politics since algorithms mainly run these platforms.

In “how to have culture in an algorithmic age” Ted Striphas describes quite visibly his fear of a new development of culture through algorithms by comparing it to a time before the existence of computers:

“In the old paradigm of culture — you might call it ‘elite culture,’ although I find the term ‘elite’ to be so overused these days as to be almost meaningless — a small group of well-trained, trusted authorities determined not only what was worth reading, but also what within a given reading selection were the most important aspects to focus on. The basic principle is similar with algorithmic culture, which is also concerned with sorting, classifying, and hierarchizing cultural artifacts.”<sup>33</sup>

He concludes his apprehensions by taking Amazon and its use of algorithms as an example:

“Using its computing cloud, Amazon aggregates all of the information it’s gathered from its customers’ Kindles to produce a *statistical determination* of what’s culturally relevant. In other words, significance and meaningfulness are decided by a massive — and massively distributed — group of readers, whose responses to texts are measured, quantified, and processed by Amazon.”<sup>34</sup>

Alexander R. Galloway goes even further and adds his aspect of control by the algorithms. For this, he compares and algorithmically driven software with ideology and the way they form the structure of a society. “Software is algorithmically effective in ways that ideology never was.”<sup>35</sup>:

---

<sup>33</sup> <https://www.thelateageofprint.org/2010/06/14/how-to-have-culture-in-an-algorithmic-age/>, last accessed: May 23, 2018.

<sup>34</sup> <https://www.thelateageofprint.org/2010/06/14/how-to-have-culture-in-an-algorithmic-age/>, last accessed: May 23, 2018.

<sup>35</sup> Galloway, 2012, p. 70.

“Worse than attributing a specific characteristic to a specific racial or national group is the fact that ideological models such as these ignore the complexity, variation, and rich diversity of human life at many levels [...]”<sup>36</sup>.

Eli Pariser mentions similar concerns of a controlling algorithm when he writes: “Ultimately, the filter bubble can affect your ability to choose how you want to live”<sup>37</sup>. In addition, Galloway points towards a mobilization of people in the same direction. It seems like an algorithmically run machinery producing the same humans with similar thoughts, desires, and knowledge. This coincides with Pariser’s apprehension: “[W]e’re creating a global society whose complexity has passed the limits of individual comprehension”<sup>38</sup>. The intricacies of our lives which force us to think outside the box and find different solutions because the most logical one does not work will disappear. Thus, the learning effect is being reduced. According to Pariser, “the balance between open-mindedness and focus that makes us creative”<sup>39</sup>, will vanish because of the personalization process, which ends in the creation of human beings with similar interests.

“As a result, while the Internet offers access to a dazzling array of sources and options, in the filter bubble we’ll miss many of them. While the Internet can give us new opportunities to grow and experiment with our identities, the economics of personalization push toward a static conception of personhood. While the Internet has the potential to decentralize knowledge and control, in practice it’s concentrating control over what we see and what opportunities we’re offered in the hands of fewer people than ever before.”<sup>40</sup>

Hence, there is a fear of the loss of diversity in culture. This brings us back to the power of algorithms and another form of control: informatics control, which reminds us of political power. Galloway writes referring to Lev Manovich’s Essay “on totalitarian interactivity” that “Manovich [himself] admits that he sees digital interactivity as a type of political manipulation”<sup>41</sup>. Here one can point towards the voters of the Brexit-Referendum who complained about not having had all the information for deciding whether to stay in the European Union or not. Before going further into the discussion of whether algorithms in social networks politically manipulate the people, we need to take a closer look on social networks themselves and how the algorithm works within them and the current political system.

---

<sup>36</sup> Galloway, 2006, p.97.

<sup>37</sup> Pariser, 2011, p. 16.

<sup>38</sup> Pariser, 2011, p. 19.

<sup>39</sup> Pariser, 2011, p.91.

<sup>40</sup> Pariser, 2011, p. 218.

<sup>41</sup> Galloway, 2012, p. 6f.

### 3 The Filter Bubble

In chapter 2, certain aspects of a filter bubble have been described already. A term, Eli Pariser has dedicated a whole book too, titled as such. He writes: “The new generation of internet filters looks at the things you seem to like – the actual things you’ve done, or the things people like you like – and tries to extrapolate.”<sup>42</sup> Pariser calls these “prediction engines,” which, according to him, have the ability to create a personal university for an individual. A filter bubble “fundamentally alters the way we encounter ideas and information.”<sup>43</sup> Even though we have always been more interested in topics which appeal to our personal interests and then chosen our media consumption accordingly, Pariser mentions three new but significant dynamics the filter bubble brings along:

- You are the only person in your bubble
- Your filter bubble is invisible (especially to yourself)
- It was not on your decision to enter the filter bubble<sup>44</sup>

Eli Pariser speaks here of an “information diet,”<sup>45</sup> which came upon the internet users. The filter bubble is sort of the heart of the algorithmic culture, which then becomes an “algorithmic society, where our public functions, from police databases to energy grids to schools, run on code.”<sup>46</sup>

#### 3.1 Is filtering (in Social Networks) necessary?

Why is it necessary to filter the newsfeed from Facebook? For Eli Pariser, it became necessary when more people entered the platform. At first, all the posts from one’s friends were visible

---

<sup>42</sup> Pariser, 2011, p. 9.

<sup>43</sup> Pariser, 2011, p. 9.

<sup>44</sup> Pariser, 2011, p. 9f.

<sup>45</sup> Pariser, 2011, p. 14.

<sup>46</sup> Pariser, 2011, p. 227.

on Facebook's newsfeed, the "home"-page when logging in. However, the more people signed up and posted content on the platform; it was impossible to manage, "the Feed became unreadable."<sup>47</sup> The question was, how to organize it:

"Facebook's solution was EdgeRank, the algorithm that powers the default page on the site, the Top News Feed. EdgeRank ranks every interaction on the site. The math is complicated, but the basic idea is pretty simple, and it rests on three factors. The first is affinity: the friendlier you are with someone - as determined by the amount of time you spend interacting and checking out his or her profile - the more likely it is that Facebook will show you that person's updates. The second is the relative weight of that type of content: Relationship status updates, for example, are weighted very highly; everybody likes to know who's dating whom. [...] The third is time: Recently posted items are weighted over older ones."<sup>48</sup>

Since Facebook focuses on what we have around us, we see posts from friends with whom we engage regularly. News we most likely know, or which interest us. Topics, which reflect our own opinion, since the friends close to us, usually have similar beliefs.

"[T]he average person's Facebook friends will be much more like that person than a general-interest news source. This is especially true because our physical communities are becoming more homogenous as well - and we generally know people who live near us."<sup>49</sup>

As discussed in Chapter 2.4, there is a general fear of the creation of similar human beings with similar thoughts, ideas, and desires. But why do people usually get information which confirms their own beliefs? For Pariser, the consummation of critical news, which "confront our ideas of the world"<sup>50</sup> makes someone uncomfortable. It challenges us. And this is not the way Social Networks are built. After all, these are still businesses. Also, they use tricks on how to get us back continuously. These strategies are well thought-through, and Adam Alter dedicated a whole book on them. In "Irresistible - why we can't stop clicking" - they are designed to get us back continuously. Over several pages, he describes the little tricks companies built in their Apps in order to bring people back. These might be triggers such as notifications, which are being sent directly to one's lock screen. However, even if the person turned off this feature of being continuously updated, whenever a new message arrived, there is the next persuasion: the little red number. It is this number on the icon of an Application, which tells one, whether a

---

<sup>47</sup> Pariser, 2011, p. 37.

<sup>48</sup> Pariser, 2011, p. 37.

<sup>49</sup> Pariser, 2011, p. 66.

<sup>50</sup> Pariser (2011), p. 88.

new message has been received and if yes, how many. In addition, this number is set in red, the color used for warning signals. An eye-catcher so to speak. Thus, unmissable. In this sense, even if a person turned off the notifications of an Application when unlocking the phone to just checking something, it is almost inevitable not to spy that little red number.

### 3.2 What does a filter bubble contain?

Mario Haim, Andreas Graefe and Hans-Bernd Brosius write in their article “Burst of the Filter Bubble?” that rationally spoken, “algorithms filter out information that is assumed to be of little interest of individual users.”<sup>51</sup> Thus, one gets delivered certain content which they like. This is in fact, is a business model, perfectly designed for shopping. And it works in both ways. While the users are provided with relevant news and shopping interests without having to search for a significant amount of time, for advertisers, this collected data is the key-strategy to finding buyers.<sup>52</sup> Or even convincing *maybe-customers* into buying something. The professional term for this method is “behavioral targeting.” About 98 percent of online-shoppers leave the webpage without buying anything. Thus, the algorithms record the movement of the customer, and if this person has decided not to buy the products he or she looked at, it will appear on the advertisement spots on almost any webpage until purchasing that item. “Retargeting means businesses no longer have to take ‘no’ for an answer.”<sup>53</sup> However, what might be quite useful when shopping, has a different effect on Social networks. Here one consumes not products but connects with people and engages in discussions. “[M]any people are increasingly engaged in the process of personalization, limiting their exposure to topics and points of view of their own choosing.”<sup>54</sup> Cass Sunstein refers here to people, who stay in their bubble. People who do not suspect anything being too monotone. Or people who just do not care. In fact, some might be aware of an existing filter bubble, but do not know how far theirs has been formed. In addition, a person might not know what it outside of one’s filter bubble, and therefore no desire to go to different places. Pariser says, we have to transform the

---

<sup>51</sup> Haim, Mario/Andreas Graefe/Hans-Bernd Brosius, “Burst of the Filter Bubble?“, *Digital Journalism* 6(3), 2018, p 331.

<sup>52</sup> Pariser, 2011, p.40.

<sup>53</sup> Pariser, 2011, p. 44f.

<sup>54</sup> Sunstein, Cass R., “Democracy and filtering“, *Communications of the ACM*, 47 (12), December 2004, p. 58.

“unknown unknown into a known unknown.”<sup>55</sup> There is a difference between knowing about not having knowledge in a specific field and not knowing that there is a specific field in which one might not have any knowledge in. For Pariser, it is necessary to have at least an idea of what a person might miss out on. People should be aware of not knowing something. This is the known unknown he mentions.

“In the filter bubble, things look different. You don’t see the things that don’t interest you at all. You’re not even latently aware that there are major events and ideas you’re missing [...] you can’t tell how biased the sample is from looking at the sample alone: You need something to compare it to.”<sup>56</sup>

For Pariser, one cannot be free in a filter bubble. In his definition of freedom, one needs “to be able to not only do what you want, but to know what’s possible to do.”<sup>57</sup> Not knowing that one is missing out on information, since the algorithm filters out the interests, can be called ‘information blindness.’<sup>58</sup> In his contribution “Big Data: Opportunities and Privacy Challenges,” Hervais Simo develops this idea even further. Even though it is an algorithm which filters the content, the possibility to add is there as well. For Simo, this has the potential for manipulation.

“The ability to accumulate and manipulate data about customers and citizens on an unprecedented scale may give big companies with selfish agendas and intrusive/authoritarian governments powerful means to manipulate segments of the population through targeted marketing efforts, perform social control, and hence possibly negatively impact the course of our democracies, or do all sorts of harm. Moreover, the increasing monolithic power which users of big data analytics – like internet giants Google, Facebook, or Amazon – derive from the data that they hold also raise challenges for information transparency and informational self-determination.”<sup>59</sup>

A similar concern is raised by Pariser as well. He calls it the “loci of power”<sup>60</sup> of big companies. Since most people, when ordering online, do this via Amazon. When looking for a webpage or a definition, Google search is the to-go-to search engine. In chapter 2 we already talked about “googling” becoming a verb. It has been integrated into the society, fixed in our vocabulary.

---

<sup>55</sup> Pariser, 2011, p. 106.

<sup>56</sup> Pariser, 2011, p. 106f.

<sup>57</sup> Pariser, 2011, p. 112.

<sup>58</sup> Haim, 2018, p. 332.

<sup>59</sup> Simo, Hervais, “Big Data: Opportunities and Privacy Challenges”, in: *Privatheit, Öffentlichkeit und demokratische Willensbildung in Zeiten von Big Data*, Hg. Philipp Richter, Baden-Baden: Nomos 2015, p. 34f.

<sup>60</sup> Pariser, 2011, p. 144.

According to Pariser, these companies “regulate our behavior”<sup>61</sup> and “shape our future preferences.”<sup>62</sup> Since media has shaped society throughout history. According to Pariser, the collected data by these big media companies can help the government influence its citizens. “While their multinational character makes them resistant to some forms of regulations, they can also offer one-stop shopping for a government seeking to influence information flows.”<sup>63</sup> Thus, for Pariser, the collected data not only helps to personalize one’s web-surrounding and convince one into buying a bag they would not have considered purchasing, but governments might also use it for manipulation. However, since the focus of this thesis is the question whether the algorithms shape our point of view of politics by primarily doing their job – meaning, filtering out whatever we do not seem to be interested in – this accusation by Pariser will not be further discussed. For Cass Sunstein, the filtering of uninteresting and not wanted content is a positive effect, “but democracy itself means each of us should be exposed to new topics and contrary opinions.”<sup>64</sup> While we look at the term “democracy” in chapter 4, it is necessary to talk about how news is represented in Social Networks within the filter bubble.

### **3.3 News representation within the filter bubble**

When the internet was invented, there was a sigh of relief and great excitement. The internet seemed to bring unlimited access to knowledge, enhance democratic processes and participation in discussions. However, the involvement of machines is increasing, and in the future, they might be the drawing power.<sup>65</sup> Pulling back to a non-internet news access, it might happen that when reading “a city newspaper and in the process [you] come across stories you would not have selected if you had the power to control what you see [...] you might see the beginning of another show, one you would not have chosen in advance.”<sup>66</sup> Moreover, if one likes it, one keeps watching or reading. Thus, enhancing the horizon. Which is something necessary in a democratic country. A matter further discussed in chapter 4. However, within Social Networks, people see only personalized content. Stories they are interested in. Even if a person likes the liberal New York Times and the very conservative Fox News on Facebook,

---

<sup>61</sup> Pariser, 2011, p. 175.

<sup>62</sup> Pariser, 2011, p. 233.

<sup>63</sup> Pariser, 2011, 144.

<sup>64</sup> Sunstein, 2004, p. 57.

<sup>65</sup> Pariser, 2011, 52.

<sup>66</sup> Sunstein, 2004, p. 58.

the articles or videos delivered will mirror the person's preferred opinion. The algorithm registered the user is interested in tax cuts; thus, the news content delivered will be about the benefits of tax cuts. As mentioned in the introduction and further discussed in chapter 5, a vast amount of people only access news via Social Networks. "That is, a large – and ever-increasing – share of news consumers rely on algorithmically curated environments in which algorithms automatically select personalized news based on information about individual news consumers."<sup>67</sup> In this case, the algorithm emphasizes on certain topics and views. Enhancing the user's interest in that matter. Thinking of algorithmic culture and the creation of similarity, this theory leads to people being interested – narrow-mindedly – in the same news topics. Again, Pariser develops this idea further: "The rise of the filter bubble doesn't just affect how we process news. It can also affect how we think."<sup>68</sup>

### **3.4 What effect does the filter bubble have on the production of news stories?**

"[W]hile personalization is changing our experience of news, it's also changing the economic that determine what stories get produced."<sup>69</sup> Media corporations are businesses after all as well. Their readers are the audience. Paid advertisements by other companies, presented either in the newspapers themselves or on the internet on the webpage to the audience, are common financial strategies. As well as subscriptions, donations et al. If the media company is not a public broadcasting corporation, then it usually relies heavily on click-bait. "Click Baiting is one of the many strategies used by online news journalists with the intent of making their headlines more attractive and, therefore, obtaining more clicks."<sup>70</sup> More clicks mean more visitors, which makes a newspaper more visible within a community and thus, might be attractive to either a more significant audience or investors.

"Three essential aspects of Click Bait are clearly underlined, those being the intentional omission of relevant information from the headline (forcing the reader to click through the title to understand what the article is about), clear exaggeration (creating high expectations which are not always met,

---

<sup>67</sup> Haim, 2018, p. 330

<sup>68</sup> Pariser, 2011, p. 76.

<sup>69</sup> Pariser, 2011, p. 68.

<sup>70</sup> Blom Jonas Nygaard/ Kenneth Reinecke Hansen, "Click bait: Forward-reference as lure in online news headlines", *Journal of Pragmatics*, January 2015, Vol. 76, p. 87-100.

consequence of the almost exclusive focus on obtaining clicks and page views), and the use of techniques and specific, recurring and formulaic expressions which are engineered to create curiosity gaps and open loops.”<sup>71</sup>

These are stories, on which a person is most likely to click on. But what kind of stories are these? “sex, power, gossip, violence, celebrity, or humour, we are likely to read it first [...] it’s harder to push the ‘like’ button on an article titled, ‘Darfur sees bloodiest month in two years.’”<sup>72</sup> Even if this is focused on the like button by Facebook, it can be transferred to the news webpage itself as well: It is easier to consume multiple stories on Meghan Markle’s wedding with Prince Harry, Roger Federer’s twins or the girls who found her face printed on a sweater, than numerous articles on dying refugees – especially children – in the Mediterranean sea. “The attention economy is ripping the binding, and the pages that get read are the pages that are frequently the most topical, scandalous, and viral.”<sup>73</sup> Almost every media corporation, which is not a public broadcasting corporation, has to rely in some way on click-bait. Thus, these scandalous stories, the funny stories, are the ones being produced. The ones presented on the top of the newspaper’s webpage, these are the first headline a user sees and – probably – will click on. This might end up in higher consumption of these kinds of scandalous news. “After all, how news is conveyed profoundly shapes what is conveyed.”<sup>74</sup>

Going back to the filter bubble, if a person clicks on the news about Prince Harry’s wedding, another article on a similar matter might appear because the algorithm recorded the user’s interest in that topic. In the end, the person will see much more celebrity news than political issues, because the algorithm measured more clicks on these rather “easy topics. In return, the media company gets feedback that coverage on Prince Harry is of immense interest to its audience. Thus, in order to increase audience-reach, they try to cover more news about the newlywed royal couple. In this sense, the filter bubble influences news-stories when the news organization is using a click-bait system.

---

<sup>71</sup> Alves, Liliana/ Nuno Antunes/Olga Agrici/Carlos M. R. Sousa/Célia M. Q. Ramos, “Click Bait: You won’t Believe What Happens Next!”, *Journal of Social*, December 2016, 5(2), p. 203.

<sup>72</sup> Pariser, 2011, p. 18.

<sup>73</sup> Pariser, 2011, p. 65.

<sup>74</sup> Pariser, 2011, p. 55.

## 4 Democracy

### 4.1 Necessities for a democracy

Since in this thesis the matter whether social networks change our view of politics is under discussions, it is necessary to look at the political systems as well. Do social networks interfere immensely in the political process? First, we defined what algorithmic culture means and then established the functions of social networks. But if we want to see whether these requirements change people's opinions on politics, we need to look at the political foundations. Obviously, these are very different throughout the globe. Thus, the focus will lie on the western culture and hence, democracy in western countries.

However, there is still another problem. Similar to the term “culture,” as stated in chapter 1, the term “democracy” is difficult to define. Starting with the word itself, “dêmos” translated from Greek means “people” or “population. The second part, “kratia” in Greek or “cratia” in Late Latin stands for “strength and power” and has been used to describe a government. Keeping this in mind, one can translate the word “democracy” as “government by the people.”<sup>75</sup> This would be a very plain definition without explaining any structure or guidelines of how democracy actually works. As mentioned above, there are many different ideas of how a democracy should function – in theory. And even by looking at the western countries, the way each one of them executes their own democratic strategies varies. Thus, the idea of a government run by its people will be the foundation for this part, since the focus also lies on elections. In order to be able to vote, one needs information on the topic. Thus, we will first look at the term “Post-Democracy” by Colin Crouch to investigate the interference of Social Network-Sites in the political system and then turn to the access of information and value of information in a democratic country.

---

<sup>75</sup> <https://www.merriam-webster.com/dictionary/democracy>, last accessed: 29. June 2018.

In his book “Post-Democracy,” Colin Crouch himself does not mention what a perfect democracy should look like despite that the participation has to be “in a lively way,”<sup>76</sup> people engaging interestingly in the matters which affect them and their fellow human beings.

“Democracy thrives when there are major opportunities for the mass of ordinary people actively to participate through discussion and autonomous organizations, in shaping the agenda of public life, and when they are actively using the opportunities.”<sup>77</sup>

In addition, he says that democracy in this sense is “an ideal model, which can almost never be fully achieved.”<sup>78</sup> Interestingly, however, and this is the main reason why his book will be part of the theoretical groundwork in this thesis when investigating the interference of Social Networking-Sites in democracy: He points out current phenomena happening in western democracies, which are definitely not incorporated in the structures of democracy. Instead, these happenings are moving the political structures towards a post-democracy.

## **4.2. Post-Democracy**

In his book, “Post-democracy”, Colin Crouch focuses mainly on the United States of America and their political system. The 20<sup>th</sup> Century was a rise for democratic countries. They seemed to pop up almost everywhere. According to Crouch, there was a change in the Reagan years. The reduction of inequality seemed to reverse itself. The gap between rich and poor grew bigger. Crouch even compared the situation of the impoverished to the ones of Third World countries.<sup>79</sup>

“At the same time, US concepts of democracy increasingly equated it with limited government within an unrestrained capitalist economy and reduced the democratic component to the holding of elections.”<sup>80</sup>

---

<sup>76</sup> Crouch, Colin, Post-Democracy, Cambridge: Polity Press 2004, p. 3.

<sup>77</sup> Crouch, 2004, p. 2.

<sup>78</sup> Crouch, 2004, p. 3.

<sup>79</sup> Crouch, 2004, p. 11.

<sup>80</sup> Crouch, 2004, p. 11.

According to Crouch, capitalism pushed away from the democratic process, by leaving only the framework: The elections. This conclusion he derives by observing the benefits big corporations receive through their strategic lobbyism. Politics seem to focus mainly on the economy. As if the well-being of the state's population is entirely based on its economy.

“Further, as government out-sources and sub-contracts ever more of its activities – usually doing so on the advice of persons from the corporate sector – so the potential value of such access in winning government contract increases. [...] It suggests that the politics of the lobby will be shifting ever further towards the enhancement of the power of major corporations and those who hold key offices within them. The power that they already possess within their firms becomes translated into a far more extensive political power. This challenges severely the democratic balance.”<sup>81</sup>

This movement during the Reagan years endangered the democratic process in Crouch's eyes. It is the lobbyist of big firms who started to rupture this political system. For him, the power of the corporations is the beginning of a post-democracy. In our society, economic success counts more than any good-doing by any NGO, since they do not bring along as much money, which means, less wealth, financially.<sup>82</sup>

An important economic factor is taxes. Especially in the USA, it is a major topic which can be found in any election. Firms who invest in a country, usually ask for tax cuts. American firms such as Facebook settled their European offices in Ireland, where the taxes are relatively low. In order to keep the businesses in the country, the state might offer a big firm tax-reductions.

“As governments oblige them, the fiscal burden shifts from firms to individual taxpayers, who in turn become resentful of high tax levels. The major parties respond to this by conducting general elections as tax-cutting auctions; the electorate duly favours the part offering the biggest tax cuts, and a few years later discovers that its public services have severely deteriorated. But they had voted for it; the policy had democratic legitimacy.”<sup>83</sup>

Thus, someone who wants to pay less taxes as an individual person, might not see the benefits – the public services – which one gets out of this procedure. The big corporations, the wealthy part of an economy, gets the profit instead of the ones who would need assistance. In Crouches eyes, this power increases the bigger and thus, more important, the company gets. Especially, when the government outsources some of its activities and hands the contract over to the before

---

<sup>81</sup> Crouch, 2004, p. 46.

<sup>82</sup> Crouch, 2004, p. 17.

<sup>83</sup> Crouch, 2004, p.33f.

mentioned firms. “In addition to dominating the economy itself, they also become the class that also dominates the running of the government.”<sup>84</sup> This conclusion brings us back to lobbying. A business, which is entirely focused on its own sector. It has “little interest in widespread citizen involvement.”<sup>85</sup> Big companies can afford not only more lobbyists but also the ones with the best connections to politicians or public officials.

“Precisely because there is no final privatization of assets in contracting out services or in public-private financial partnerships, the relationship between public authority and private provider becomes a continuing one, and therefore the lobbying and temptations of mutual exchanges of favours become permanent.”<sup>86</sup>

By proceeding like this, they create their own elitist bubble. Helping each other out or forcing the one party to do something for one’s own benefits. This influence on politics, the companies have through lobbying, is not included in the original idea of democracy. Thus, the Reagan-era is the beginning of a post-democracy in Crouch’s eyes.

“In many respects this resembles the situation in pre-Revolutionary France, where the monarchy and aristocracy were exempt from taxation but monopolized political power, while the middle classes and peasantry paid taxes but had no political rights.”<sup>87</sup>

The resemblance to pre-democratic times seems obvious. In addition, elections look more like games of who got the best keywords to convince voters. “This prioritizes extreme simplification and sensationalization, which in turn degrade the quality of political discussion and reduce the competence of citizens.”<sup>88</sup> A significant matter in current politics, where there is more focus on a person and keywords than actual facts:

“[V]ery brief messages requiring extremely low concentration spans; the use of words to form high-impact images instead of arguments appealing to intellect. Advertising is not a form of rationale dialogue. It does not build up a case based on evidence, but associates its products with a particular imagery. You cannot answer it back. Its aim is not to engage in discussion but to persuade to buy. Adoption of its methods has helped politicians to cope with the problem of communicating to a mass public; but it has not served the cause of democracy itself.”<sup>89</sup>

---

<sup>84</sup> Crouch, 2004, p. 43.

<sup>85</sup> Crouch, 2004, p.3.

<sup>86</sup> Crouch, 2004, p. 95.

<sup>87</sup> Crouch, 2004, p. 33.

<sup>88</sup> Crouch, 2004, p. 47.

<sup>89</sup> Crouch, 2004, p. 26.

Even though, the possibility to vote should open up opportunities for the population itself. In election times the party-program is delivered in similar ways as a product on the market. The voters are the buyers who are going to be manipulated into voting for something they actually do not want. The discussion and deliverance of facts are being reduced. This is the marketing strategy: Buy a product one does not actually need. Crouch sees here the adaption of the persuasion business for markets in politics. Heavily used in election-times.<sup>90</sup>

As stated before, Crouch focuses in his book primarily on the political system in the United States, in which there is no restriction on whom much a party may have for its election campaign.

“If no restrictions are placed on the funds which parties and their friends may use to promote their cause and on the kinds of media resources and advertising which may be purchased, then parties favoured by wealthy interests will have major advantages in winning elections. Such a regime favours liberalism but hinders democracy, because there is nothing like a level playing field of competition as required by the equality criterion.”<sup>91</sup>

No regulations in party funds again help the elite to become wealthier. The lobby-matter mentioned above is similar money-oriented and not in the sense of the original idea of a democracy. It is not in the interests of the majority but the wealthy on the top. And even though, journalists should deliver the news objectively, Crouch sees a biased news market, since the organizations are owned by a “very small number of extremely wealthy individuals.”<sup>92</sup> And regardless of their own opinions, they “tend to share certain political perspectives, and have a very strong interest in using the resource at their command to fight for these.”<sup>93</sup>

Capitalism seems to interfere with the democratic process. For Crouch, it is the focus on the economy, the money-flow, which ignores the actual necessities of the population and the environment and only helps the few people on the top, that moves a democracy to post-democracy. Thus, social networks on the internet did not start the shift towards a post-

---

<sup>90</sup> Crouch, 2004, p. 25.

<sup>91</sup> Crouch, 2004, p. 17.

<sup>92</sup> Crouch, 2004, p. 50.

<sup>93</sup> Crouch, 2004, p.-50.

democracy, according to Crouch. However, they may amplify it. A matter, which will be further discussed.

### 4.3. The value of Information in a democracy

In his article “Democracy and filtering,” Cass R. Sunstein writes about the reduction of the *public sphere* when it comes to the filtering process of algorithms on the internet.

“One of the important features of these spaces is that they tend to ensure that people will encounter materials on important issues, whether or not they have specifically chosen the encounter.”<sup>94</sup>

Important issues such as the Brexit-referendum, after which – as discussed in the Introduction – many complained about not having had all the information to decide properly on the matter. “And when people see material they have not chosen, their interests and even their views might change as a result.”<sup>95</sup> This means the *public sphere* opens up the opportunity for people to broaden their horizons. If this will be reduced, it ends in narrow-mindedness. A concern, both, Galloway and Pariser, mentioned in their writings. If we stay in the filter bubble, our learning effect will diminish, since we are not presented with complex or different topics. Pariser writes: “In the filter bubble, the public sphere – the realm in which common problems are identified and addressed – is just less relevant.”<sup>96</sup>

For Pariser, the existence of a *public sphere* is one of the main criteria of a functioning democracy. A political system like this can only work if the “citizens are capable of thinking beyond [their] narrow self-interest.”<sup>97</sup> Thinking back to the translation of the word “democracy” as the “the government by the people,” one can see that practice in elections. When there is a matter, a society or a nation have to decide about, the people may vote on how to proceed. It might be that the matter does not affect one specifically, but others. However, this person may still vote. Thus, it is important to gain information on that matter in order to decide and then vote appropriately. “We need to come into contact with other people’s lives

---

<sup>94</sup> Sunstein, Cass R., “Democracy and filtering“, *Communications of the ACM*, 47 (12), December 2004, p. 58f.

<sup>95</sup> Sunstein, 2004, p. 58f.

<sup>96</sup> Pariser, 2011, p. 148.

<sup>97</sup> Pariser, 2011, p. 164.

and needs and desires. The filter bubble pushes us in the opposite direction – it creates the impression that our narrow self-interest in all that exists.”<sup>98</sup> A point of view shared by Sunstein as well. For him the filter bubble can have positive effects, “but from the standpoint of democracy, filtering is a mixed blessing”<sup>99</sup> because of the reduction of the *public sphere*. “Unanticipated encounters, involving topics and points of view we have not sought out and perhaps find irritating, are central to democracy and even to freedom itself.”<sup>100</sup> For Sunstein, this is a necessity for a free society.<sup>101</sup>

Coming back to voting, missing out on information “prohibit[s] individuals from being properly informed and rational democratic citizens.”<sup>102</sup> Meaning, citizens cannot anticipate accordingly, if they do not have all the information. In addition, as discussed above, people might just be interested in only a few topics. And it might be this one topic one decides on for whom to vote in the end. Another concern Pariser mentions in his book.

“In some way, personalization poses a threat to the public itself. [...] filter-bubble politics could effectively make even more of us into single-issue voters. [...] And if a congressional campaign can determine that this is the issue on which it’s most likely to persuade me, why bother filling me in on all the other issues?”<sup>103</sup>

Here he is talking about political targeting. A strategy, which has been developed already before the existence of the internet, but perfectionalized by harvesting data. This will be discussed in the next sub-chapter.

#### **4.4. Political Targeting**

Obviously, when running a campaign, one needs to follow certain strategies. One of them is an old method, which has gained significant importance throughout media inventions: Political targeting. This means sending specific advertisements to possible voters, in order to convince

---

<sup>98</sup> Pariser, 2011, p. 164.

<sup>99</sup> Sunstein, 2004, p- 58.

<sup>100</sup> Sunstein, 2004, p. 58.

<sup>101</sup> Sunstein, 2004, p- 59.

<sup>102</sup> Haim, Mario/Andreas Graefe/Hans-Bernd Brosius, “Burst of the Filter Bubble?“, *Digital Journalism* 6(3), 2018, p 333.

<sup>103</sup> Pariser, 2011, p. 154.

them. This means, “choosing, in advance, which voters to contact and devoting time and money to increasing the quality and quantity of that contact.”<sup>104</sup> Although, it is not deliberately known, whether it works profoundly, and which method is the best.<sup>105</sup> In addition, especially when it comes to a presidential campaign in the United States of America, the assumption was that people would hear an equal amount of messages by the different candidates. Since political targeting is highly practiced in Northern America to gain the votes from so-called swing-voters,<sup>106</sup> the matter discussed here will almost entirely be focused on this region.

“For every message received from one candidate, there is a message from the other candidate to offset it. Candidates are thought to allocate their resources to the same locations, generally, the half dozen or so battleground states, and the presence of public financing in the general election campaign since the 1970s has helped to ensure that neither the Democratic nor Republican nominee had a large message advantage during the last weeks of the race. Thus, one-sided flows of information – a necessary condition to find advertising effects – were thought to be a rare occurrence in presidential campaigns.”<sup>107</sup>

However, in the 1990s, most advertisements have been bought on local broadcasting stations. “Television advertising is a key element of contemporary political campaigns.”<sup>108</sup> Although, they are not only “used to influence elections, but to influence public policy as well. Many political ads are directed at affecting policy decisions, not electoral outcomes.”<sup>109</sup> As mentioned before, advertisement time is the time bought by political campaigns. Thus, a campaign which has more money can, first of all, buy more spots – and assumedly better ones as well – but also the best airing times. This is what Colin Crouch sees as an interference in democracy when there is no limitation towards campaign-money. Obviously, there are advertisements which run on the national broadcasting station. However, programs on local television have increased since the 1990s. In a big country such as the United States, the views

---

<sup>104</sup> Garecht, Joe, *Political Targeting – The Beginner’s Guide*, <https://www.localvictory.com/strategy/political-targeting-guide.html>, last accessed: 06.06.2018.

<sup>105</sup> Goldstein, Ken/Paul Freedman, “Lessons Learned: Campaign Advertising in the 2000 Elections”, *Political Communication*, 19, 2002, p. 24.

<sup>106</sup> Comment by the author: In the United States there are two major parties: The Democratic Party and the Republican Party. Swing-voters are usually the one’s which switch between voting for either party from election to election.

<sup>107</sup> Ridout, Travis N./Michael Franz/Kenneth M. Goldstein/William J. Fetus, “Separation by Television Program: Understanding the Targeting of Political Advertising in Presidential Election”, *Political Communication*, 29 (1), 2012, p. 2.

<sup>108</sup> Goldstein, 2002, p. 5.

<sup>109</sup> Goldstein, 2002, p. 8.

and needs of people vary increasingly. Thus, the programs voters are exposed to, especially before an election, vary immensely on a demographic basis.<sup>110</sup> Buying money on local television stations means targeting voters with certain opinions, needs, and views in that location. However, this is not the only strategy campaigns follow when targeting via television. It is also a matter of when and between which programs the advertisement is being aired.<sup>111</sup> For example, if a documentary on nature is being shown, the political ad might mention environmental issues. Likewise, if it is a family program, then the content of the ad will probably talk about education or health care. “Such a strategy is a dramatic improvement over the more traditional geo-targeting in which candidates identify precincts, neighborhoods, or streets ‘most likely’ to be for or against the candidate.”<sup>112</sup> This was a time the running candidates went to each house of possible voters, talked to the people personally, and shook their hands. Of course, in the United States, the running candidate is still visiting places. Notably, the swing states during a presidential election. However, by targeting audiences via television, they can reach far more at the same time, without having to be personally present. It does not matter that the television-audience might be small in this case. By targeting many little groups, the eventual number of voters might be more than sending out an advertisement for everyone at any time, which only speaks to a view.<sup>113</sup>

*“Strategic decisions matter. Even in a presidential race, which is typically assumed to be evenly matched, temporal and geographic targeting decisions create unbalanced flows of information and create the conditions necessary to discover advertising effects.”<sup>114</sup>*

In their study, Ken Goldstein and Paul Freedman found out that “in 2000 citizens in different markets where exposed to strikingly different campaigns.”<sup>115</sup>

*“Thus, a form of microtargeting has increasingly entered into the realm of political advertising buys. In fact, a better word for this phenomenon might be ‘macrotargeting’ given that groups of individuals, not specific individuals, are targeted by these ad-buy strategies.”<sup>116</sup>*

---

<sup>110</sup> Goldstein, 2002, p. 10.

<sup>111</sup> Ridout, 2012, p. 2.

<sup>112</sup> Ridout, 2012, p. 3.

<sup>113</sup> Ridout, 2012, p.4.

<sup>114</sup> Goldstein, 2002, p. 25.

<sup>115</sup> Goldstein, 2002, p. 9.

<sup>116</sup> Ridout, 2012, p. 19.

However, each campaign has to start doing their research on this, since swing voters – which is usually their focus – are interested in different topics from year to year.

Looking at political campaigns in the age of the World Wide Web, they have the chance to perfectionalize their political targeting. First of all, it is affordable to distribute messages, plus, one can reach a bigger audience and in addition, target young voters.

“Without investing heavily on expensive mass marketing, political marketers have a chance to reach potential voters attractively over digital channels with messages that are specifically targeted to target audience needs and interests of the target audience.”<sup>117</sup>

Now almost every running politician has their own web page. In the Finnish General election “the number of candidates who had their own Web page during the general election rose from 37% in 2003 to 62% in 2007.”<sup>118</sup>

The most significant factor here is probably the usage of data when researching possible voters, in order to target them even more specifically online. This brings us back to a more extreme version of micro-targeting. It can mean “that you and your neighbour might get different campaign literature from the same candidate. The ad you see when you click on a party’s website may be different from the one that your spouse sees.”<sup>119</sup> A technique, which became visible first in the re-election of George W. Bush in 2004. It is comparable to an individual handshake, just more efficient, since it offers to target several possible voters at the same time, and rather inexpensive. But where does this data come from, the campaigners need in order to succeed in targeting?

“In the US, data analytics and micro-targeting can rely on the incomparable variety and volume of personal data openly available in the American economy. Voter registration data is available in every state and is widely distributed — not only to parties and candidates but also to commercial data brokers who can combine it with other ‘public’ data like real estate records,

---

<sup>117</sup> Leppäniemi, Matti/Heikki Karjaluo, Heikki Lehto, Anni Goman, “Targeting Young Voters in a Political Campaign: Empirical Insights into an Interactive Digital Marketing Campaign in the 2007 Finnish General Election”, *Journal of Nonprofit & Public Sector Marketing*, Vol. 22, 2010, P. 29.

<sup>118</sup> Leppäniemi, 2010, p. 25.

<sup>119</sup> Bennet, Colin, *How campaign ,micro-targeting‘ works – and why it probably doesn‘t*, September 9, 2015, <https://ipolitics.ca/2015/09/09/how-campaign-micro-targeting-works-and-why-it-probably-doesnt/>, last accessed: 10.06.2018.

and with commercial marketing lists. Social media also provide important insights into the networks.”<sup>120</sup>

If a campaign distributes advertisement on a Facebook page, it can actually choose the region and the kind of people who should get the post – or in this case: the political ad.

The screenshot shows the 'Boost Post' interface. At the top, it says 'Boost Post' and 'Boost Your First Post'. Below this, a message states: 'Sarah, boosting a post is a quick way to create an ad and reach more people'. The 'AUDIENCE' section is highlighted. It contains three radio button options: 'People you choose through targeting' (selected), 'People who like your Page', and 'People who like your Page and their friends'. The first option is expanded, showing 'Location - Living In: Germany: Berlin' and 'Age: 18 - 65+'. An 'Edit' link is next to the first option. At the bottom right, there is a link that says 'Create New Audience'.

(Picture 1, Facebook Post Promotion, Screenshot: 10.06.2018)

The screenshot shows the 'Audience Definition' interface. It starts with 'Gender' and 'Age' filters. 'Gender' has buttons for 'All', 'Men', and 'Women'. 'Age' has a range from '18' to '65+'. Below these is the 'Locations' section, which shows 'Germany' and 'Berlin' selected. The 'Detailed Targeting' section is expanded, showing 'INCLUDE people who match at least ONE of the following'. There is a text input field with the placeholder 'Add demographics, interests or behaviors' and two buttons: 'Suggestions' and 'Browse'. At the bottom, there is a link that says 'Exclude People'.

(Picture 2, Facebook Audience Definition, Screenshot: 10.06.2018)

<sup>120</sup> Bennet, 2015, last accessed: 10.06.2018.

Picture 1 shows the possibilities one can click on when “boosting,” thus, promoting, a Facebook-post. The ones who see this post can be either people who already clicked on the page’s like button, or their friends, or an entirely different audience, based on location and age. The latter are people the Facebook-page administrator chose as the targeting audience. However, the button “Create new audience” opens up picture 2. Here one can define the audience in more detail. It is possible to choose between gender, define a certain age and location. In addition, keywords which include the interests or behaviors of the targeted audience can be added as well. This is information delivered to the user of a Social Network, not because an algorithm decided it might be of interest to the person, but because the algorithm collected the information of the user in the first place.

Jumping forward to the presidential election in the United States in 2016, it was the political consulting firm which claimed to have won the election for Donald Trump by using data. However, looking at the blueprint The Guardian had access too, it became apparent, that they relied on micro-targeting. “Intensive survey research, data modelling and performance-optimising algorithms were used to target 10,000 different ads to different audiences in the months leading up to the election.”<sup>121</sup>

Whether political targeting works or not, it is obvious, that a campaign which has great financial support, has higher chances to succeed. Thus, in Colin Crouches definition of democracy, this would interfere in the process and be, therefore, a post-democracy. However, it is inevitable to point out, that the strategies mentioned above have derived from the political system in the United States of America.

#### **4.5. Journalism within democracy**

Last but not least, it is necessary to look at how journalism works in a democracy. What kind of work does a journalist or a news organization have to accomplish within a democracy?

---

<sup>121</sup> Lewis, Paul/Paul Hilder, “Leaked: Cambridge Analytica’s blueprint for Trump victory. Exclusive: Former employee explains how presentation showed techniques used to target voters“, *The Guardian*, March 23, 2018, <https://www.theguardian.com/uk-news/2018/mar/23/leaked-cambridge-analyticas-blueprint-for-trump-victory>, last accessed: 24.04.2018.

“[W]hat might be considered to be high-quality news journalism from the perspective of one model of democracy might not be the same when taken from the perspective of another.”<sup>122</sup> In his article “In Search of a Standard: four models of democracy and their normative implications of journalism,” Jesper Strömbäck speaks of a social contract between journalists and the citizens of a country.

“ [The journalists have to] fulfill their part of the social contract by providing citizens with the information they need in order to be free and self-governing, the government with the information it needs in order to make decisions in the common interest sensitive to public sentiments, an arena for public discussion, and by acting as a watchdog against abuse of power in politics and other parts of society.”<sup>123</sup>

In order to succeed in this, freedom of speech is necessary. Thus, journalism in this way can only exist within a democracy, since it is the only form of government – so far – which respects “freedom of speech, expression and information, and the independence of media from the state.”<sup>124</sup> Keeping these values under protection is the social contract between the government and its citizens, according to Strömbäck. In their article “Burst of the Filter Bubble?”, Mario Haim, Andreas Graefe and Hans-Bernd Brosius appeal for a balanced journalism to keep the public informed in the best way. This means, delivering diverse content, and perspective by using multiple and trustful sources and thus, “providing citizens with a broad variety of information.” Access to information is necessary for decision-making. In a democracy, it is the people who vote on certain issues or select representative who will govern in their name. In order to decide profoundly, citizens need access to information, and within a democracy, it is the journalist’s job report truthful and complete on a matter. This is the social contract between journalist and citizen within a democracy, according to Strömbäck.

---

<sup>122</sup> Strömbäck, Jesper, “In Search of a Standard: four models of democracy and their normative implications for journalism“, *Journalism studies* 6(3), 2005, p. 332.

<sup>123</sup> Strömbäck, 2005, p. 332.

<sup>124</sup> Strömbäck, 2005, p. 332.

## 5 Social Networks

Since this thesis investigates, whether Social Networks change our view of politics, it first has to be established, what one understands when mentioning ‘Social Networks.’ This is very important, since ‘Social Networks,’ ‘Social Networking Sites,’ and ‘Social Media’ are sometimes used interchangeably.

Social Networks “are applications that enable users to connect by creating personal information profiles, inviting friends and colleagues to have access to those profiles, and sending e-mails and instant messages between each other.”<sup>125</sup> Danah M. Boyd and Nicole B. Ellison explain in great detail why they do not use the term ‘Social Networking Site’ since it is not networking what happens on these platforms but rather an engagement with friends, acquaintances, and others. Networking itself “emphasizes relationship initiation, often between strangers.”<sup>126</sup> In their understanding, Social Network Sites are:

“[W]eb based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site. [...] What makes social network sites unique is not that they allow individuals to meet strangers, but rather they enable users to articulate and make visible their social networks”<sup>127</sup>

Thus, people primarily use it to stay in touch. However, businesses saw the chances to increase their audience by being present on such sites as well. Therefore, one can find not

---

<sup>125</sup> Kaplan, Andreas M./Michael Haenlein, “Users of the world, unite! The challenges and opportunities of Social Media”, *Business Horizons*, 53 (1), 2010, p. 63.

<sup>126</sup> Boyd, Danah M./Nicole B. Ellison, “Social Network Sites: Definition, History, and Scholarship“, *Journal of Computer-Mediated Communication*, 13 (1), October 2007, p. 211.

<sup>127</sup> Boyd, 2007, p. 211.

only people on Social Network Sites but also coffee shops, publishers, and others. The definition set by Boyd and Ellison will be the one used in this thesis when mentioning Social Network Sites. Furthermore, to discuss whether they influence the citizen's opinion, we will look at one platform in particular. Since Facebook, with its 2.234 million active users in the second quarter of 2018, is the most popular Social Network,<sup>128</sup> this thesis will focus on its news access and distribution. In addition, despite the decrease in accessing news via Facebook, it is still the to-go-to platform for people to stay informed on current events.<sup>129</sup>

## 5.1. Facebook

This part of the thesis delivers only a quick overview of the company and how users engage on the platform itself, to serve a better understanding of the following discussion. Launched in 2004 by former Harvard student Mark Zuckerberg, Facebook was first only accessible to students of his University but then opened up to other campuses due to popularity. In 2006, everyone above the age 13 was able to sign up.<sup>130</sup> Firstly, Facebook supports interaction between its users in a very attractive way, since, in order to communicate with each other, it is necessary to become “friends” on Facebook. The platform “allows access to a set of tools for sharing news, information, and ideas, and is very powerful and versatile at this.”<sup>131</sup> One could say, whatever is discussed in the offline social life, can happen in the online social life as well. On the platform, one can either engage in a private conversation by writing a personal message or write publicly on the so-called wall. The private message is a feature, which got separated on the smartphone. Now one can access Facebook via the Facebook App, but in order to write private messages on the smartphone to another person, one needs to install Facebook Messenger. On the wall, the posts from friends or liked Facebook-pages become visible. However, as stated in chapter 3.1, the platform needed some organizational structure, since too many people have entered it and the wall would have become unmanageable. Hence, an algorithm was introduced, to sort the posts accordingly. Unfortunately, that algorithm is classified, which Eli Pariser criticizes heavily:

---

<sup>128</sup> <https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>, last accessed: July 14, 2018.

<sup>129</sup> Newman, Nic, “Section 1. Executive Summary and Key Findings“, in: *Reuters Institute Digital News Report 2018*, Hg. Nic Newman, <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/digital-news-report-2018.pdf>, last accessed June 29, 2018, p. 12.

<sup>130</sup> Alves, 2016, p. 198.

<sup>131</sup> Alves, 2016, p. 198.

“Facebook, Google, and their filtering brethren claim that to reveal anything about their algorithms processes would be to give away business secrets. But that defense is less convincing than it sounds at first. Both companies’ primary advantage lies in the extraordinary number of people who trust them and use their services (remember lock.in?). According to Danny Sullivan’s Search Engine Land blog, Bing’s search results are ‘highly competitive’ with Google’s, but it has a fraction of its more powerful rival’s users. It’s not a matter of math that keeps Google ahead, but the sheer number of people who use it every day. [...] Google has argued that it needs to keep its search algorithm under tight wraps because if it was known it’d be easier to game. But open systems are harder to game than closed ones precisely because everyone shares an interest in closing loop-holes.”

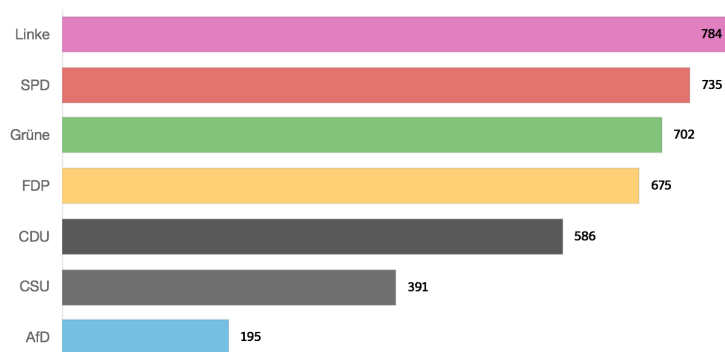
Despite the matter of classification, the essential factor here is the organization of one’s Facebook wall by an algorithm. Depending on what the user does, specific content will be delivered. But what kind of content is this?

## **5.2. What do (not) people see on Facebook?**

The introduction of an algorithm within a Social Network Site organizes one’s social interactions. As mentioned in chapter 3, posts from friends with whom we interact frequently will be present in our news feed on the wall. As well as topics we are interested in. Keeping the topic of this thesis in mind, it is worth to look at a Facebook-profile from a political point-of-view. Especially, when investigating the availability of information in political matters. The German newspaper “Die Süddeutsche” created an online-test of Facebook users to check whether their profile is biased.

### Wie links oder rechts ist Ihre Facebook-Welt?

Sie haben bei 712 Seiten auf Facebook auf "Gefällt mir" geklickt. 167 davon können wir durch unsere Rechercheergebnisse politisch einordnen. Auf Basis Ihrer Facebook-Likes ergeben sich diese Überschneidungen mit den Fans der Parteien:



[Mehr zur Punktevergabe](#)

(Picture 3: Süddeutsche filter-test-example, Screenshot: 24.06.2018)

Here they connect the user's page likes with the ones from political parties. The Title of picture 3 read "How left of right-wing is your Facebook-world?" Then below it shows that out of 712 page-likes (by the user), 167 could be allocated to a political direction. However, despite the claim of the newspaper, this does not show whether one's Facebook profile is biased. It rather shows similar interests which might not even be out of political nature, such as being a fan of a soccer club, or a coffee shop. Is it even possible to measure something like this? Eli Pariser describes the overtaking of the filter bubble as such:

"First, the bubble surrounds us with ideas with which we're already familiar (and already agree), making us overconfident in our mental frameworks. Second, it removes from our environment some of the key prompts that make us want to learn. To understand how, we have to look at what's being balanced in the first place, starting with how we acquire and store information. Filtering isn't a new phenomenon. It's been around for millions of years – indeed, it was around before humans even existed. [...] Nassim Nicholas Taleb says, 'Information wants to be reduced,' and every second we reduce a lot of it – compressing most of what our eyes see and ears hear into concepts that capture the gist. Psychologists call these concepts *schemata* (one of the is a *schema*). [...] Schemata can actually get in the way of our ability to directly observe what's happening. [...] In some cases. Schemata are so powerful they can lead to information being fabricated. [...] Once we've acquired schemata, we're predisposed to strengthen them. Psychological researchers call this confirmation bias – a tendency to believe things that reinforce our existing views to see what we want to see."<sup>132</sup>

<sup>132</sup> Pariser, 2011, p. 84ff.

This shows the invisibility and immeasurability of the filter bubble even more clearly. In addition, as Pariser describes, it slowly *enters our world*. Gaining more data and eventually taking over, step by step., without us noticing. Thus, for a Facebook user, only the visible posts are known posts. The person does not know what he or she is missing since there is no comparison possible. The next step now is to look at how people access news, which will follow in the continuing chapter.

## **6 Gathering News**

In order to discuss, whether Social networks are changing the people's view of politics because of their usage of algorithms, it is necessary to look at how and where people actually access news. Especially, since before an election people gather news to decide appropriately when voting in a certain matter. In this chapter, we will first look at how people gather news, focusing on the gateway to news. Continuing this, we will then look at the actions of media organizations. Do they work within an algorithm? Or are they trying to fight against it?

### **6.1. Internet and social media penetration**

In this year's Digital News Report, a high internet penetration has been shown. Norway being on Top with over 99% of the population having an internet connection. The lowest in Europe is Turkey with 70%, in Latin America, it is Mexico with 65%, and in Asia Pacific, Taiwan measuring 88%.<sup>133</sup> Considering that the African continent has not been included, the countries known as democratic ones have a high internet penetration. Without the internet, one cannot access any social media platform. The next step now is to establish how many people are on social media and whether they use it for accessing news. As visible in the table below, more than half of the population in the UK access social media. In total it is 66% of the population. However, since smartphone usage is increasing, even here more than half of the population access social media on their mobile devices.

---

<sup>133</sup> Newman, 2018, p. 6.

|                                  | Total number of users (in millions) | Share of population (%) |
|----------------------------------|-------------------------------------|-------------------------|
| Active social media users        | 44                                  | 66                      |
| Active mobile social media users | 38                                  | 57                      |

(Picture 4: Table from Statista.com showing social media use in the UK in 2018)<sup>134</sup>

Looking at social media use in the United States, the numbers are even greater. In 2017 over 80% of the population access social media platforms.

|      | Percentage of U.S. population |
|------|-------------------------------|
| 2008 | 10%                           |
| 2009 | 21%                           |
| 2010 | 44%                           |
| 2011 | 53%                           |
| 2012 | 57%                           |
| 2013 | 63%                           |
| 2014 | 66%                           |
| 2015 | 70%                           |
| 2016 | 77%                           |
| 2017 | 80%                           |

(Picture 5: Table showing social media use in the USA in 2018)<sup>135</sup>

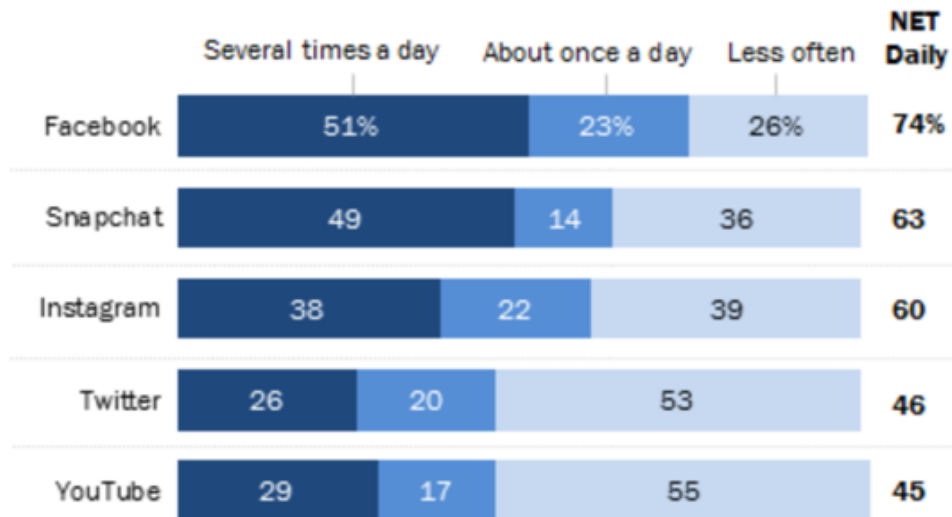
As visible in these two statistics, more than half of the population access social media. Therefore, social media is part of over half of the population's life in the United States of America. Looking closer at the numbers, the importance of social media platforms in these people's lives might become more visible.

<sup>134</sup> <https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/>, last accessed: June 21, 2018.

<sup>135</sup> <https://www.statista.com/statistics/273476/percentage-of-us-population-with-a-social-network-profile/>, last accessed: June 21, 2018.

## A majority of Facebook, Snapchat and Instagram users visit these platforms on a daily basis

Among U.S. adults who say they use \_\_\_, the % who use each site ...



Note: Respondents who did not give answer are not shown. "Less often" category includes users who visit these sites a few times a week, every few weeks or less often.

Source: Survey conducted Jan. 3-10, 2018.

"Social Media Use in 2018"

PEW RESEARCH CENTER

(Picture 6: Table showing the amount of social media by users)<sup>136</sup>

In picture 6 the daily usage of social media users in the US is depicted. Facebook is outnumbering the other platforms by far, having 74% of its users accessing it daily. Over half of them even several times a day. And 23% about once a day. Thus, one might say the platform is of quite some importance in people's lives and hence, has a certain amount of influence.

<sup>136</sup> <https://www.statista.com/statistics/273476/percentage-of-us-population-with-a-social-network-profile/>, last accessed: June 21, 2018.

## 6.2. Social media use for news

For the last seven years, the Digital News Report by the Reuters Institute recorded growth in social media for news. However, this year's Digital News measured a downfall of social media use for news.

“Looking in more details at these declines, we can see that they are almost entirely due to changes in the use of Facebook, consistently the most widely used social network for news in almost every country. News consumption via Facebook is down 9 percentage points in the United States and 20 points with younger groups.”<sup>137</sup>

The “average news usage for Facebook has fallen from 42% in 2016 to 36%.”<sup>138</sup> This might be due to Facebooks algorithm change, preferring posts from family and friends over news.<sup>139</sup> In addition, since Donald Trump's presidential election in the United States, there are concerns about the credibility of news among the audience. According to the report, people have the impression that Facebook attracts false news or misinformation.<sup>140</sup>

“Many people instinctively think of misinformation as an online problem, but all of our categories can be found offline too. It is striking that there is little difference in self-reported exposure to misinformation between those that mainly consume news offline and those that mainly consume news online.”<sup>141</sup>

Picture 7 shows that there is no significant difference between the exposure to misinformation online and offline. Thus, this refutes the overall impression that because of the internet and social media, the distribution of false news has increased.

---

<sup>137</sup> Newman, 2018, p. 11.

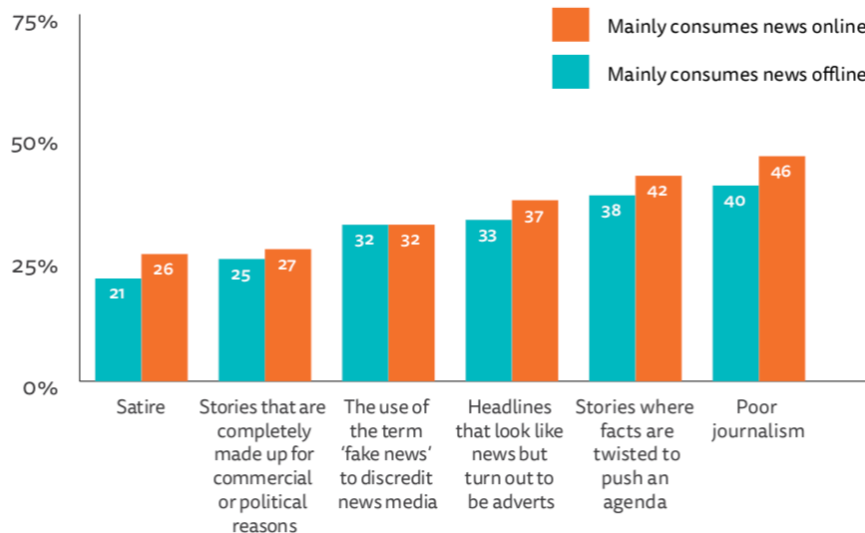
<sup>138</sup> Newman, 2018, p. 11.

<sup>139</sup> <https://newsroom.fb.com/news/2018/01/news-feed-fyi-bringing-people-closer-together/>, last accessed: June 21, 2018.

<sup>140</sup> Newman, 2018, p. 10.

<sup>141</sup> Fletcher, Richard, „Misinformation and Disinformation Unpacked“, in: *Reuters Institute Digital News Report 2018*, Hg. Nic Newman, <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/digital-news-report-2018.pdf>, last accessed June 29, 2018, p. 40.

### PROPORTION WHO WERE EXPOSED TO EACH TYPE OF MISINFORMATION IN THE LAST WEEK BY MAIN SOURCE OF NEWS – ALL MARKETS



**Q4.** You say you've used these sources of news in the last week, which would you say is your MAIN source of news? **Q\_FAKE\_NEWS\_3.** In the LAST WEEK which of the following have you personally come across? Base: All that mainly consume news offline/online: All markets = 39595/32567.

(Picture 7 showing the proportion of exposure to misinformation divided by online and offline news)

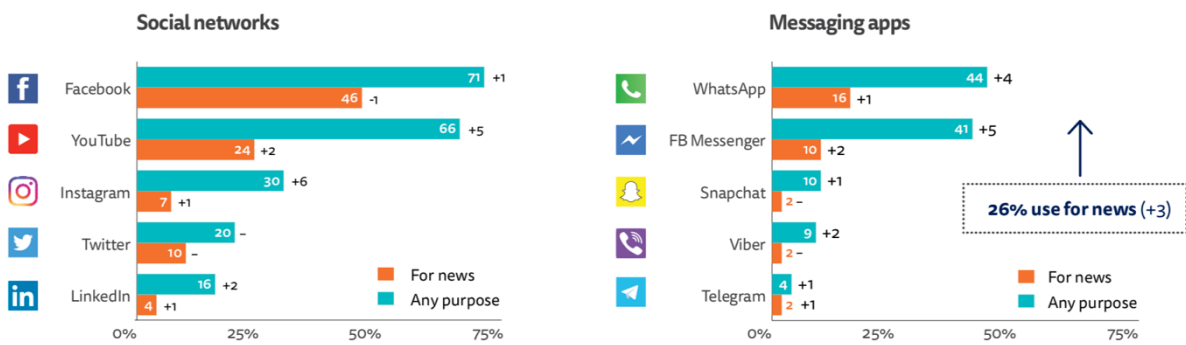
As mentioned before, the use of Facebook for news has decreased in the last year in many countries. This might be due to the change in the algorithm's preferences; however, the report also found a correlation between the amount of misinformation in the public debate.

“Especially in some that have been affected by public debate over misinformation. At the same time, more people have been using messaging apps such as WhatsApp for any purpose (44%), while average usage for news has more than doubled to 16% in four years.”<sup>142</sup>

Since messaging apps are included in the term social media and applications such as Instagram are a platform which also allows sending messages privately, the Digital News Report 2018's definition of messaging apps solely includes apps which are primarily for sending messages, such as WhatsApp and Facebook Messenger. Overall, 26% now use messaging apps for news (Picture 8).

<sup>142</sup> Kalogeropoulos, Antonis, “The Rise of Messaging Apps for News”, in: *Reuters Institute Digital News Report 2018*, Hg. Nic Newman, <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/digital-news-report-2018.pdf>, last accessed June 29, 2018, p. 52.

#### PROPORTION THAT USED SELECTED SOCIAL NETWORKS AND MESSAGING APPS IN THE LAST WEEK – ALL MARKETS



Q12A/B. Which, if any, of the following have you used for any purpose/news in the last week? Base: Total sample in all markets. Note: Also showing change from 2017.

(Picture 8: Tablet showing the use of social networks and messaging apps for any purpose and for gathering news)

However, despite the shift of political discussion towards messaging apps, Facebook is still the primary platform for any purpose and also, for gathering news.

“Facebook is most likely to be used for reading or discovering news, either by glancing at headlines or clicking to read a full story. On WhatsApp, users are more likely to take part in a private discussion about news (24%) or to take part in a group set up specifically to discuss a news topic (16%).”<sup>143</sup>

Because of this, the focus in this thesis to investigate whether social networks change our view of politics since they sort information via algorithms lies on Facebook. The report also found that even though the discussions moved to messaging apps, Facebook is “still largely used for finding and reading news stories.”<sup>144</sup> That is especially true for the younger generation, who are responsible for the shift toward messaging apps.

### 6.3. Newsrooms and algorithms

Before we have established that a majority of people in western, democratic countries, have access to the internet and access social media on a regular basis. Plus, even though the access of news via Facebook has decreased in the last year, it is still outnumbering other platforms and therefore, has to be under consideration. Equally important is to look at the actions of newsrooms. Are they working within the algorithm or against it?

<sup>143</sup> Kalogeropoulos, 2018, p. 53.

<sup>144</sup> Kalogeropoulos, 2018, p. 54.

Michael A. DeVito investigated in a study the measurement of news value. Formerly, it was editors who put a certain value on a news story, DeVito says, the algorithm has overtaken this job now. Thus, in his study, he investigated how Facebook's algorithm values stories.

“The service's heart, the News Feed, carries content from the personal to the professional in many different formats, and does not operate directly in parallel with the story selection process at a traditional news organization.”<sup>145</sup>

He continues explaining his concern and decision to investigate in this by writing:

“A platform that delivers news through a filter that is heavily weighted towards the personally focused algorithmic values identified here may bake this potential for polarizing personalization directly into its design. [...] This leaves us with a combination of a business and a personal concern as the core of Facebook's algorithmic values, in direct contrast to the combination of a novelty and a societal concern that drive news values.”<sup>146</sup>

Thus, even though media corporations are businesses as well, they still valued certain news stories differently, as Facebook's algorithm does, according to DeVito. Looking at Facebook at its algorithm changes for their News Feed, newsrooms had to adapt to attract people to their own web pages and generate traffic to maintain their business. In another study, Edson C Tandoc Jr. and Julian Maitra investigated the reaction of newsrooms after Facebook announced a change in the algorithm, prioritizing native videos in June 2014.<sup>147</sup>

“Facebook's thrusting of video into the heart of all its services also fundamentally affected many news organizations that, at least prior to the tweak, were used to publishing text and photo-based link posts on their Facebook Pages to refer traffic to their websites. Following the tweak, these news organizations had to adapt and publish more Native Videos or else they risked losing reach on the world's largest social media platform.”<sup>148</sup>

Looking at the beginning of this chapter, which established that a vast majority uses social media for news daily and Facebook despite the decrease is still the platform on the top, news

---

<sup>145</sup> DeVito, Michael A., “From Editors to Algorithms”, *Digital Journalism*, 5 (6), 2017, p. 753.

<sup>146</sup> DeVito, 2017, p. 767.

<sup>147</sup> Tandoc Jr, Edson C./Julian Maitra, “News organizations' use of Native Videos on Facebook: Tweaking the journalistic field one algorithm change at a time”, in: *New Media & Society* 20 (5), 2018, p. 1679.

<sup>148</sup> Tandoc, 2018, p. 1680.

organizations will have to be working with the changes to keep up in the business world. Their power in controlling their own content on Facebook only goes so far:

“To some extent, news organizations can control what they upload on Facebook and observe how their content is distributed. They have the editorial prerogative to decide what story they will post when and in which format. They can also follow how their posts are performing through the vast amounts of analytics data that Facebook provides to Page owners, such as the extent of audience reach and number of interactions generated, that journalists can use to guide their subsequent decisions.”<sup>149</sup>

However, it is up to Facebook’s algorithm to decide who will have which story in their News Feed. During the TechCrunch Disrupt SF 2016 days, the writer Josh Constine and Facebook’s head of News Feed talked about the company’s timeline.

“Mosseri shared a new statistic, which is that the average Facebook user reads a little over 200 stories a day on their feed, which is about 10 percent of the 2,000 possible stories Facebook has to show them each day.”<sup>150</sup>

This content – back in 2016 – has been consumed within 45 minutes. Meaning, the user will have had to scroll. What Mosseri did not say was, whether these 200 have already been filtered out of the 2000 posts.

#### **6.4. Newsrooms using algorithm**

Interestingly, there are newsrooms which turn towards an algorithm on their own sites. In his Blog post “Ten effective ways to personalize news platforms,” former John S. Knight Fellow at the Stanford University, Titus Plattner, writes: “The average online reader opens only 5 out of 1,000 stories published every day by larger news organizations.”<sup>151</sup> This still does not state,

---

<sup>149</sup> Tandoc, 2018, p. 1681.

<sup>150</sup> Tepper Fitz, “Facebook denies it’s a media company despite censorship decisions“, Sep 14, 2016, <https://techcrunch.com/2016/09/14/facebook-denies-its-a-media-company-despite-censorship-decisions/?guccounter=1>, last accessed: June 26, 2018.

<sup>151</sup> Plattner, Titus, “Ten effective ways to personalize news platforms  
A few pioneering media organizations have started to personalize their user experience. Here is what they did and what the next steps should be.”, *Medium*, April 23, 2018, <https://medium.com/jsk-class-of-2018/ten-effective-ways-to-personalize-news-platform-c0e39890170e>, last accessed: June 12, 2018.

whether the person actually reads the article. In another Blog post on personalized news feeds, Plattner writes:

“First, the attention span has completely changed: Users are overloaded with information, social network posts, notifications, emails, etc. Second, the size of mobile screens (70–80 percent of the consumption now) allows space to tease only four or five stories on the landing page. For the readers who open their news app, scrolling down is often too much effort—journalists may accept it or not.”<sup>152</sup>

Plattner writes of the challenge that not every story listed on the front page of a news platform is actually of interest to the reader. Thus, if the publishers want the audience to come back frequently, they need to personalize it to a certain degree, according to Plattner. Something, the New York Times started in 2013 already before dropping this idea for a couple of years. Each reader got a personalized recommendation based on their reading history.<sup>153</sup> Now they have picked up the original idea and put it into perfection:

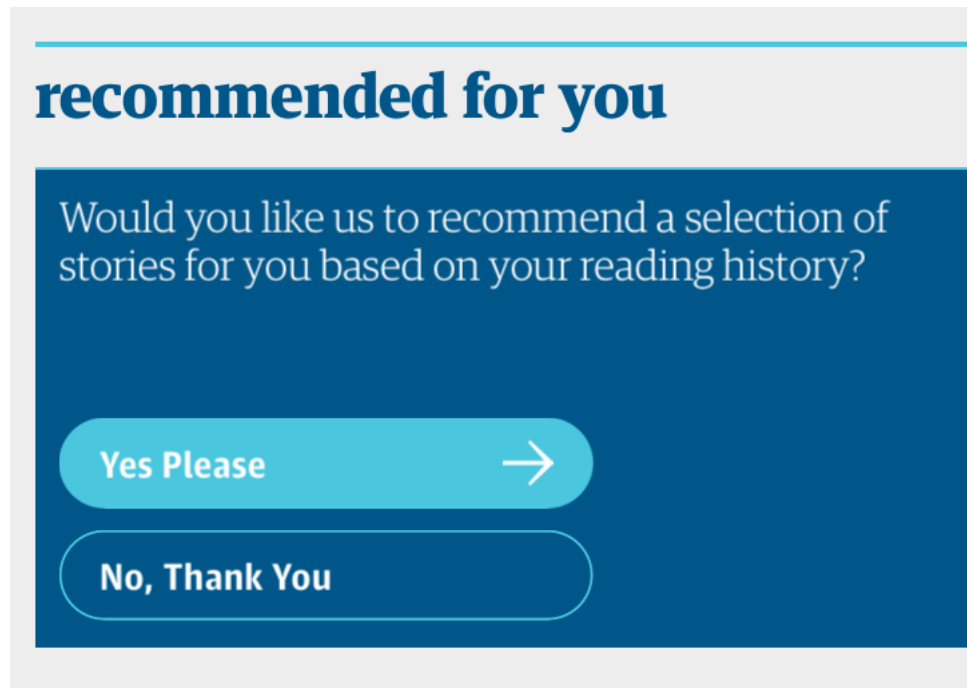
“[V]ery recently the organization created a Personalization Team, with the goal to create a more user-centered experience. The team started with a brand new user dashboard. Now, one of its roles is to develop new machine learning algorithms for its products. This should include recommendations, rankings, page generation and article selection, etc. It wouldn’t be surprising if at the end, the home page is different for each reader.”

However, not only the New York Times did start with a personalized home page. Other prestigious newspapers as well. In the application by The Guardian for mobile phones (Picture 9), the publishers ask you beforehand, whether one prefers a personalized selection of stories or not. Interestingly, it is rather difficult to reverse this effect after having pressed the button “Yes, Please.”

---

<sup>152</sup> Plattner, Titus, Why personalization will be the next revolution in the news industry. The shift in news from a one-size-fits-all model to a personalized model will happen fast and will be brutal.”, *Medium*, December 15, 2017, <https://medium.com/jsk-class-of-2018/personalization-3a4cf928a875>, last accessed: June 12, 2018.

<sup>153</sup> Plattner, 2018, <https://medium.com/jsk-class-of-2018/ten-effective-ways-to-personalize-news-platform-c0e39890170e>, last accessed: June 12, 2018.



(Picture 9: Screenshot of The Guardian application for mobile phones)

Plattner forecasts a different kind of personalized news story in the future, which is not entirely based on one's reading history. He predicts that next to the reading history, the personal interests, the ZIP code of places one likes, the scrolling time while reading, the interest for older news and what affects one's life or the lives of relatives and friends will be included as well.<sup>154</sup>

Plattner's prediction sounds like a putting the *preference algorithm*, which is used in social networks or search-sites such as Google, onto news sites. The two news publishers above are not the only ones offering a personalized news page. There are many others in addition, such as The Huffington Post and The Washington Post.<sup>155</sup> This might even increase the personalized view a person might have on current events.

---

<sup>154</sup> Plattner, 2018, <https://medium.com/jsk-class-of-2018/ten-effective-ways-to-personalize-news-platform-c0e39890170e>, last accessed: June 12, 2018.

<sup>155</sup> Pariser, 2012, p. 39.

## 7 Discussion

In this chapter the collected facts and theories will be put into discourse for further discussion, whether social networks, which are run with a *preference algorithm* are shaping people's political beliefs.

Starting with algorithms and their influence on the user's themselves. It seems to be inevitable that there is at least some influence on how a person perceives the virtual world and the effects on the real world. Thus, what happens when politics take advantage of these algorithms? In a recently published article, the Observer warns of a crisis in democracy: "The dangers of using social media in election campaigns are all too real and must be curbed."<sup>156</sup> The editorial especially comments on the Leave-Campaign, which has been mentioned in the Introduction of this thesis.

"Everything that has come to pass in the two years since the referendum – the abject lack of honesty from the government about the trade-offs the country faces; and its failure even to arrive at an agreed negotiating position – shows what a mistake it was to put such a complex issue to a simple yes/no referendum. It has created nothing short of a crisis in our political system, with the government unable to build a consensus around a way forward."<sup>157</sup>

Despite the accusation of untruths being told during this campaign, the Observer editorial is especially concerned about campaigns which are run online:

"Digital campaigning has changed the way election campaigns are run. Political campaigning via social media allows parties to 'microtarget' voters, with ads aimed at small groups of voters based on their values, demographics, location and even, with 'psychographic' targeting, based on their personality.

---

<sup>156</sup> The Observer editorial, "The Observer view on digital campaigning being an existential threat to democracy", <https://www.theguardian.com/commentisfree/2018/jul/29/the-observer-view-on-digital-campaigning-threat-to-democracy>, *The Observer*, last accessed: August 08, 2018.

<sup>157</sup> The Observer editorial, 2018.

It's not clear how prevalent or effective these techniques are at the moment, but experts have warned they are likely to become more sophisticated and commonplace in the future."<sup>158</sup>

The editorial comments on the possibilities of microtargeting on the web. A phenomenon explained in chapter 4. However, this is an entirely different technique used on the internet but has little to do with algorithms. It refers to the usage of data collection online. While algorithms collect data as well, they use the information differently than advertisements. Although, the greatest difference would be the payment behind a post or an ad. The more advertisement of a company appears on the web depends on how much money they spend. A friend on Facebook did not spend money to boost his or her post. If the post of a friend is visible on the personal "home" page of Facebook is entirely up to the data collected and whether specific questions fit: Is the user in frequent contact? Is the topic of the post interesting to the user?

Another discussion rose after whistleblower Chris Wylie talked to the newspaper *The Observer* about the involvement of the Company "Cambridge Analytica" in the US presidential elections in 2016. Again, the algorithm was involved in the discussion too. However, as Cambridge Analytica's Blueprint of the campaign shows, the company used political targeting as their strategy. That included posting different ads on pages such as YouTube. This means a person who was considered as a swing voter got a different advertisement than the one who was clearly a Republican. Still, this is something – the ad placement – what the company bought. It is not because the algorithm, which sorts the videos, thinks it might be of interest. It might be the same data used, but it is a different code.<sup>159</sup>

However, there is a data collection of YouTube videos during the US-presidential election. It was done by former Google software engineer, Guillaume Chaslot. The approach was to find out which videos the algorithm promotes. Even though Chaslot knew the outcome, he wanted to prove the algorithm's preference for conspiracy theories. He created a software, which simulates an average user and observed his search for over 18 months.<sup>160</sup> In the published

---

<sup>158</sup> The Observer editorial, 2018.

<sup>159</sup> Lewis, Paul/Paul Hilder, "Leaked: Cambridge Analytica's blueprint for Trump victory. Exclusive: Former employee explains how presentation showed techniques used to target voters", *The Guardian*, March 23, 2018, <https://www.theguardian.com/uk-news/2018/mar/23/leaked-cambridge-analyticas-blueprint-for-trump-victory>, last accessed: 24.04.2018.

<sup>160</sup> Lewis, Paul, "Fiction is outperforming reality: how YouTube's algorithm distorts truth", *The Guardian*, February 02, 2018, <https://www.theguardian.com/technology/2018/feb/02/how-youtubes-algorithm-distorts-truth>, last accessed: June 25, 2018.

database he investigated the amount videos have been recommended in the 12 days before the election. The focus lied on videos which were either pro- or anti-Trump or pro- or anti-Clinton.<sup>161</sup> If the algorithm works similar, which can be assumed since Facebook's algorithm follows the same purpose as the YouTube's, it will have precisely this effect on general posts on Facebook as well. This coincides with Eli Pariser's theory that scandalous news goes viral since people are more interested in these – or animals.<sup>162</sup> Pariser pressures for prioritization of importance instead of popularity or the focus of a person's preferences.

Looking at the gateway of offline news, people can buy or even subscribe to a newspaper, or watch the news on TV. However, Sunstein points out that "People who read newspapers do not all read the same newspaper."<sup>163</sup> Meaning, if one fancies Fox news on TV or reads The Time, they will get a more conservative perspective than when reading The Guardian. Plus, if a person's sole interest lies in sport, skipping to the sport's pages is probably the more likely action he or she might do.

Thus, the algorithm on social networks might enhance the polarization of topics. Especially, since it is on a platform one usually shares with their friends. This can evolve to group polarization.

"It involves like-minded people going to extremes. More precisely, group polarization means that after deliberating with one another, people are likely to move toward a more extreme point of view in the direction to which they were already inclined."<sup>164</sup>

Yet, Sunstein points out, that group polarization does not have to be a terrible phenomenon, to begin with.

"We cannot say, from the mere fact of polarization, that there has been a movement in the wrong direction. Perhaps the more extreme tendency is better; indeed, group polarization is likely to have fueled many movements of great value, including, for example, the ones for civil rights, abolishing slavery, and gender equality. All were extreme in their time, and within-

---

<sup>161</sup>[https://docs.google.com/spreadsheets/d/1eJS3c9FAG40e0N3Q4Lr29YbhzLgP1\\_y4DgAElu3fElA/edit#gid=464783976](https://docs.google.com/spreadsheets/d/1eJS3c9FAG40e0N3Q4Lr29YbhzLgP1_y4DgAElu3fElA/edit#gid=464783976), last accessed: June 23, 2018.

<sup>162</sup> Pariser, 2012, p. 65.

<sup>163</sup> Sunstein, 2004, p. 58.

<sup>164</sup> Sunstein, 2004, p. 59.

group discussion bred greater extremism. Still, extremism needs to be a word of opprobrium.”<sup>165</sup>

Thinking back of Pariser’s call for prioritization of important, newsworthy topics: Does it help to push against the algorithm here? According to linguist George Lakoff, it is unlikely that people will change their minds when they are being confronted with different news, which does not coincide with their beliefs. He calls this the frame of a person. In his book “don’t think of an elephant. Know your values and frame the debate”<sup>166</sup> he explains the concept of frames:

“A huge number of people in the country still believe that Saddam Hussein was behind September 11. There are people who will believe this because it fits their understanding of the world. It fits their worldview. Given that, it is appropriate for them to believe. They still believe that Saddam Hussein and Al-Qaeda are the same thing, and that by fighting the war in Iraq we are protecting the country from terrorism. They believe this – in spite of the report by the 9/11 Commission. It is not that they are stupid. They have a frame and they only accept facts that fit that frame.”<sup>167</sup>

Whatever fits in a person’s frame, even though, it might not be true. Confronting them with facts might not convince them. Instead, he sees two things, which are fundamental when it comes to convincing a voter: Identity and Repetition.

“People do not necessarily vote in their self-interest. They vote their identity. They vote their values. They vote for who they identify with. They may identify with their self-interest. That can happen. It is not that people never care about their self-interest. But they vote their identity. And if their identity fits their self-interest, they will vote for that.”<sup>168</sup>

A matter, which has been thoroughly discussed in chapter 4.4. Yet, one needs to clarify that this especially accounts for the United States of America. The other feature, Lakoff mentions is using keywords and repeating these constantly.

“It has long been right-wing strategy to repeat over and over phrases that evoke their frames and define issues their way. Such repetition makes their

---

<sup>165</sup> Sunstein, 2004, p. 59.

<sup>166</sup> Comment: The first word of this book’s title is not in capital letters.

<sup>167</sup> Lakoff, George, “don’t think of an elephant! Know your values and frame the debate”, White River Junction, VT: Chelsea Green Publishing 2004, p. 18.

<sup>168</sup> Lakoff, 2004, p. 19.

language normal, everyday language and their frames normal, everyday ways to think about issues.”<sup>169</sup>

Lakoff even accuses Democrats and the media of adapting the keywords used by the Republicans – in the US. Thus, this has little involvement with the algorithm. However, a campaign may use or work with the algorithm by sending videos users are more likely to share and watch. This way they can influence the number of appearances the promotional video, article, or post may have.

---

<sup>169</sup> Lakoff, 2004, p. 50.

## 1 Conclusion

In Conclusion, one can say that algorithms in social networks do have an influence on people's lives. Yet, any new media has an influence. When it comes to changing the view people have on politics, it looks rather as if different features come to account. Some are of linguistic nature, as George Lakoff points out when he mentions the repetition of keywords. Here I would like to point out another quote by Cass R. Sunstein:

“Emerging technologies, including the Internet, are hardly an enemy here. They hold out at least as much promise as risk, especially because they allow us all to widen our horizon.”<sup>170</sup>

Because of the huge personal data collection, political targeting can be done like never before. This is precisely because of a lack of laws, which protect them, and in addition a lack of people's understanding of how computers, the internet, software, and especially social networks, and search engines work. Media comprehension starting at early ages in school is necessary. It is a matter of how people use social networks. An algorithm has its positive effects as well. When it comes to news, a person needs to learn to look elsewhere as well.

---

<sup>170</sup> Sunstein, 2004, p. 59.

## 9 References

**Alves**, Liliana/ Nuno Antunes/Olga Agrici/Carlos M. R. Sousa/Célia M. Q. Ramos, “Click Bait: You won’t Believe What Happens Next!”, *Journal of Social*, December 2016, 5(2), p.196-213.

**Balatsoukas**, Panos/Ian Ruthven, “An Eye-Tracking Approach to the Analysis of Relevance Judgments on the Web: The Case of Google Search Engine”, *Journal of the American Society for information and technology* 63 (9) 2012, p. 1728 – 1746.

**Bennet**, Colin, *How campaign ,micro-targeting‘ works – and why it probably doesn‘t*, September 9, 2015, <https://ipolitics.ca/2015/09/09/how-campaign-micro-targeting-works-and-why-it-probably-doesnt/>, last accessed: 10.06.2018.

**Blom** Jonas Nygaard/ Kenneth Reinecke Hansen, “Click bait: Forward-reference as lure in online news headlines”, *Journal of Pragmatics*, January 2015, Vol. 76, p. 87-100.

**Boyd**, Danah M./Nicole B. Ellison, “Social Network Sites: Definition, History, and Scholarship“, *Journal of Computer-Mediated Communication*, 13 (1), October 2007, p. 210 – 230.

**Crouch**, Colin, *Post-Democracy*, Cambridge: Polity Press 2004.

**DeVito**, Michael A., “From Editors to Algorithms”, *Digital Journalism*, (5)6, 2017, p. 753-773.

**van Dijck**, José, *The Culture of connectivity. A critical history of social media*, New York: Oxford University Press 2013.

**Dourish**, Paul, “Algorithms and their others: Algorithmic culture in context“, *Big Data & Society*, July-December 2016.

**Fairchild**, Henry Pratt (Ed.), *Dictionary of Sociology*. New York: Philosophical Library 1944.

**Fletcher**, Richard, „Misinformation and Disinformation Unpacked“, in: *Reuters Institute Digital News Report 2018*, Hg. Nic Newman, <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/digital-news-report-2018.pdf>, last accessed June 29, 2018, p. 38 – 41.

**Galloway**, Alexander R., *Gaming. Essay on Algorithmic Culture*, Minneapolis: University of Minnesota Press 2006.

**Galloway**, Alexander R., *The Interface Effect*, Cambridge/Malden: Polity Press 2012

**Garecht, Joe**, *Political Targeting – The Beginner’s Guide*, <https://www.localvictory.com/strategy/political-targeting-guide.html>, last accessed: 06.06.2018.

**Gerjets, Peter/Yvonne Kammerer**, “The Role of Search Result Position and Source Trustworthiness in the Selection of Web Search Results When Using a List or a Grid Interface”, *International Journal of Human-Computer Interaction*. 30, 2014, p. 177 – 191.

**Gillespie, Tarleton**, “#trendingistrending. When algorithms become culture”, *Algorithmic cultures: essays on meaning, performance and new technology*, Hg. Jonathan Roberge/Robert Seyfert, New York: Routledge 2016.

**Goldstein, Ken/Paul Freedman**, “Lessons Learned: Campaign Advertising in the 2000 Elections”, *Political Communication*, 19, 2002, p. 5-28.

**Haim, Mario/Andreas Graefe/Hans-Bernd Brosius**, “Burst of the Filter Bubble?“, *Digital Journalism* 6(3), 2018, p. 330 – 343.

**Kalogeropoulos, Antonis**, “The Rise of Messaging Apps for News”, in: *Reuters Institute Digital News Report 2018*, Hg. Nic Newman, <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/digital-news-report-2018.pdf>, last accessed June 29, 2018, p. 52 – 54.

**Kaplan, Andreas M./Michael Haenlein**, “Users of the world, unite! The challenges and opportunities of Social Media”, *Business Horizons*, 53 (1), 2010, p. 59 – 68.

**Kushner, Scott**, “The freelance translation machine: Algorithmic culture and the invisible industry“, *New Media & Society* 15(8), 2013

**Lakoff, George**, “don’t think of an elephant! Know your values and frame the debate”, White River Junction, VT: Chelsea Green Publishing 2004.

**Leppäniemi, Matti/Heikki Karjaluo, Heikki Lehto, Anni Goman**, “Targeting Young Voters in a Political Campaign: Empirical Insights into an Interactive Digital Marketing Campaign in the 2007 Finnish General Election”, *Journal of Nonprofit & Public Sector Marketing*, Vol. 22, 2010, P. 14 – 37.

**Lewis, Paul**, “‘Fiction is outperforming reality’: how YouTube’s algorithm distorts truth”, *The Guardian*, February 02, 2018, <https://www.theguardian.com/technology/2018/feb/02/how-youtubes-algorithm-distorts-truth>, last accessed: June 25, 2018.

**Lewis, Paul/Paul Hilder**, “Leaked: Cambridge Analytica’s blueprint for Trump victory. Exclusive: Former employee explains how presentation showed techniques used to target voters“, *The Guardian*, March 23, 2018, <https://www.theguardian.com/uk-news/2018/mar/23/leaked-cambridge-analyticas-blueprint-for-trump-victory>, last accessed: 24.04.2018.

**Newman, Nic**, “Section 1. Executive Summary and Key Findings“, in: *Reuters Institute Digital News Report 2018*, Hg. Nic Newman,

<https://reutersinstitute.politics.ox.ac.uk/sites/default/files/digital-news-report-2018.pdf>, last accessed June 29, 2018, p. 8 – 31.

**The Observer editorial**, "The Observer view on digital campaigning being an existential threat to democracy", <https://www.theguardian.com/commentisfree/2018/jul/29/the-observer-view-on-digital-campaigning-threat-to-democracy>, *The Observer*, last accessed: August 08, 2018.

**Pariser**, Eli, *The Filter Bubble. What the Internet is Hiding from You*, London: Penguin Books 2012.

**Plattner**, Titus, "Why personalization will be the next revolution in the news industry. The shift in news from a one-size-fits-all model to a personalized model will happen fast and will be brutal.", *Medium*, December 15, 2017, <https://medium.com/jsk-class-of-2018/personalization-3a4cf928a875>, last accessed: June 12, 2018.

**Plattner**, Titus, "Ten effective ways to personalize news platforms  
A few pioneering media organizations have started to personalize their user experience. Here is what they did and what the next steps should be.", *Medium*, April 23, 2018, <https://medium.com/jsk-class-of-2018/ten-effective-ways-to-personalize-news-platform-c0e39890170e>, last accessed: June 12, 2018.

**Ridout**, Travis N./Michael Franz/Kenneth M. Goldstein/William J. Fetus, "Separation by Television Program: Understanding the Targeting of Political Advertising in Presidential Election", *Political Communication*, 29 (1), 2012, p. 1 – 23.

**Roberge**, Jonathan/Robert Seyfert, "What are algorithmic cultures?“, *Algorithmic cultures: essays on meaning, performance and new technology*, Hg. Jonathan Roberge/Robert Seyfert, New York: Routledge 2016.

**Simo**, Hervais, "Big Data: Opportunities and Privacy Challenges", in: *Privatheit, Öffentlichkeit und demokratische Willensbildung in Zeiten von Big Data*, Hg. Philipp Richter, Baden-Baden: Nomos 2015, p. 13 – 44.

**Striphas**, Ted, *The Late Stage of Print. Everyday Book Culture from Consumerism to Control*, New York: Columbia University Press 2011.

**Striphas**, Ted, "Algorithmic culture“, *European Journal of Cultural Studies*, Vol. 18(4-5) 2015.

**Strömbäck**, Jesper, "In Search of a Standard: four models of democracy and their normative implications for journalism“, *Journalism studies* 6(3), 2005, p. 331 – 345.

**Sunstein**, Cass R., "Democracy and filtering“, *Communications of the ACM*, 47 (12), December 2004, p. 57 -59.

**Tandoc Jr**, Edson C./Julian Maitra, "News organizations' use of Native Videos on Facebook: Tweaking the journalistic field one algorithm change at a time", in: *New Media & Society* 20 (5), 2018, p. 1679 – 1696.

**Tepper Fitz**, “Facebook denies it’s a media company despite censorship decisions“, Sep 14, 2016, <https://techcrunch.com/2016/09/14/facebook-denies-its-a-media-company-despite-censorship-decisions/?guccounter=1>, last accessed: June 26, 2018

<http://journal.media-culture.org.au/0005/meaning.php>, last accessed: May 20, 2018.

<https://en.oxforddictionaries.com/definition/algorithm>, last accessed: May 20, 2018.

<https://open.spotify.com/user/spotify/playlist/4hOKQuZbraPDIfaGbM3lKI>, last accessed: May 20, 2018.

<https://www.thelateageofprint.org/2010/06/14/how-to-have-culture-in-an-algorithmic-age/>, last accessed: May 23, 2018.

<https://www.merriam-webster.com/dictionary/democracy>, last accessed: June, 29 2018.

<https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>, last accessed: July 14, 2018.

<https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/>, last accessed: June 21, 2018.

<https://www.statista.com/statistics/273476/percentage-of-us-population-with-a-social-network-profile/>, last accessed: June 21, 2018.

<https://newsroom.fb.com/news/2018/01/news-feed-fyi-bringing-people-closer-together/>, last accessed: June 21, 2018.

[https://docs.google.com/spreadsheets/d/1eJS3c9FAG40e0N3Q4Lr29YbhzLgP1\\_y4DgAElu3fElA/edit#gid=464783976](https://docs.google.com/spreadsheets/d/1eJS3c9FAG40e0N3Q4Lr29YbhzLgP1_y4DgAElu3fElA/edit#gid=464783976), last accessed: June 23, 2018.